



Energy for
generations



POWERING THE TRANSITION TO A CLEAN ENERGY FUTURE

ESB ANNUAL REPORT AND
FINANCIAL STATEMENTS 2019

POWERING THE TRANSITION TO A CLEAN ENERGY FUTURE

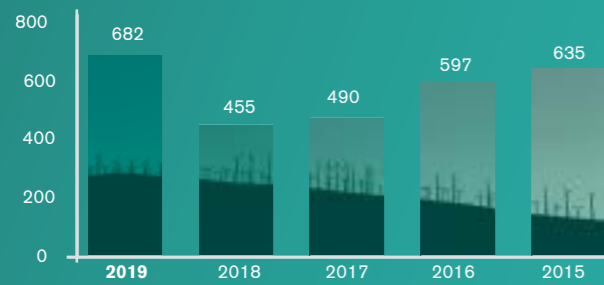
ESB is making a stand for Ireland's future, a future powered by clean, sustainable electricity. We are committed to leading the transition to a reliable, affordable, low-carbon energy future, a future that protects our customers and the economy by maintaining the security and affordability of energy. We are investing and innovating across our business to make this a reality; we are developing new, renewable sources of generation and flexible, low-carbon backup. We are also reinforcing and enhancing our network to accommodate unprecedented volumes of distributed energy resources and developing customer-led solutions that will empower everyone in society to live cleaner, more sustainable lives, powered by electricity.

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.

KEY FACTS AND FIGURES

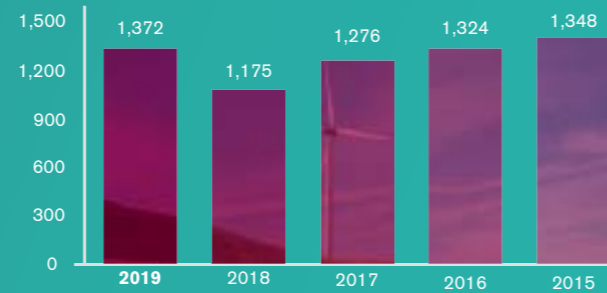
OPERATING PROFIT* €'M



€227 million

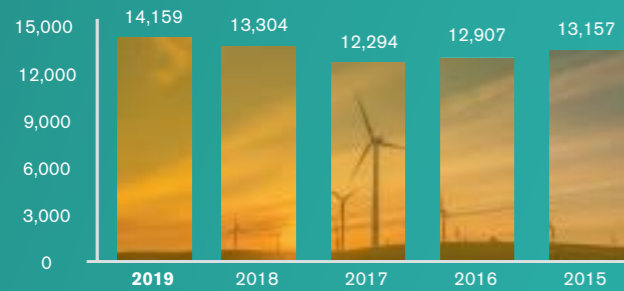
* Before exceptional items. See Financial Review page 50.

EBITDA* €'M



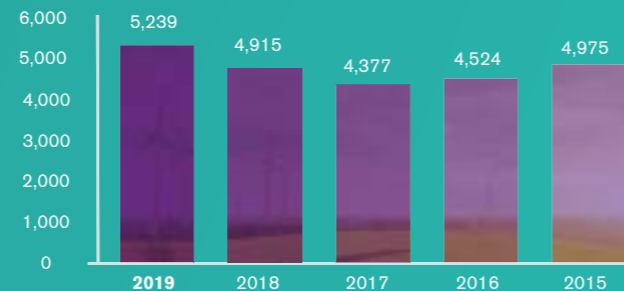
€197 million

TOTAL ASSETS €'M



€855 million

NET DEBT €'M



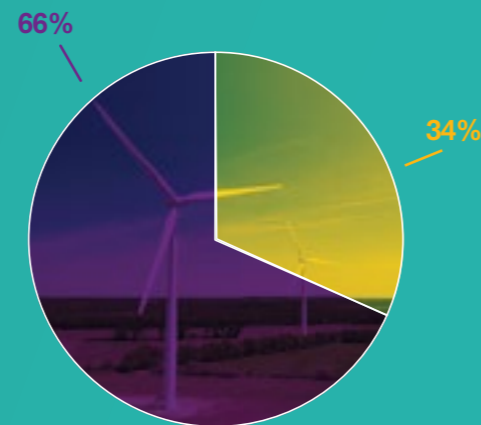
€474 million

GENERATION ALL-ISLAND MARKET SHARE



OTHER POWER SUPPLIERS
ESB

SUPPLY ALL-ISLAND MARKET SHARE



OTHER POWER PRODUCERS
ESB

CONTENTS

CHAPTER 1 STRATEGY AND PERFORMANCE

BUSINESS OVERVIEW

Chairman's Statement	10
Chief Executive's Review	12
ESB at a Glance	14
Highlights	15

STRATEGY, BUSINESS MODEL, RISK REPORT, AND KEY PERFORMANCE INDICATORS (KPIs)

Strategy	17
Business Model	22
Risk Report	24
Key Performance Indicators (KPIs)	38

OPERATING AND FINANCIAL REVIEW

Executive Team	42
Market Structure and Operating Environment 2019	44
Financial Review	48
Generation and Trading (GT)	54
ESB Networks	56
Northern Ireland Electricity Networks (NIE Networks)	58
Customer Solutions	60
Engineering and Major Projects	62
Enterprise Services	63

RESPONSIBLE BUSINESS REPORT

Overview	66
People	66
Safety	68
Corporate Social Responsibility (CSR)	70
Environment and Sustainability	73
Using our Profits in a Sustainable Way	76

CHAPTER 2 CORPORATE GOVERNANCE

The Board in 2019	80
Chairman's Corporate Governance Statement	84
The Board's Governance Report	86
Audit and Risk Committee Report	95
The Board Committees in 2019	101
Board Members' Report	104

CHAPTER 3 FINANCIAL STATEMENTS

Statement of Board Members' Responsibilities	109
Independent Auditor's Report to the Stockholders of Electricity Supply Board (ESB)	110
Financial Statements	117
Prompt Payments Act	211
Glossary	212



CHAPTER 1

STRATEGY AND PERFORMANCE

- 9** Business Overview
- 16** Strategy, Business Model, Risk Report and Key Performance Indicators (KPIs)
- 41** Operating and Financial Review
- 65** Responsible Business Report

BUSINESS OVERVIEW

- 10** Chairman's Statement
- 12** Chief Executive's Review
- 14** ESB at a Glance
- 15** Highlights

CHAIRMAN'S STATEMENT



Ellvena Graham OBE
Chairman

I am delighted as Chairman to present the 2019 Annual Report and Financial Statements for ESB.

FINANCIAL PERFORMANCE AND DIVIDEND

As we transition to a low carbon energy future, ESB delivered improved financial results in 2019 with operating profit of €682 million and profit after tax of €419 million (both before exceptional items). ESB successfully issued its inaugural Green Bond in June 2019 – the first public corporate green bond in Ireland. We maintained our Credit Ratings at A-/A3 (BBB+ standalone) – which is critical for our ambitious investment programme over the next decade.

In line with ESB's dividend policy, the Board is recommending a final dividend of €49.8 million for 2019, which will bring the total dividends for 2019 to €88 million and to €1.2 billion over the last decade. Our dividend policy provides for a dividend target of 40% of adjusted profit after tax each year.

ESB STRATEGY AND BUSINESS ENVIRONMENT

In 2019 climate change and decarbonisation has moved centre stage. In the Brighter Future Strategy, the Board has set out its long-term vision of the transformation required to address the challenges of climate change and decarbonisation. Our Purpose is clear - to create a brighter future for the customers and communities we serve by leading the transition to

reliable, affordable, low-carbon energy. Under the Chief Executive's leadership, the organisation is well positioned to deliver the strategy and has the resources, skills and talent in place to seize the opportunities presented by the transition. Significant progress was made in 2019.

We are very encouraged by the ambition and targets set out in the Government's National Climate Action Plan. The Board is committed to playing its part by investing in critical national infrastructure and in the development of renewables.

NETWORKS

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 Board welcomes the Regulator's proposal that the submission should provide for the resources and capability required to deliver on the National Climate Action Plan and we look forward to working constructively with the Regulator to finalise the proposal during 2020.

During 2019, ESB Networks connected another 550 MW of new renewable generation to the network, bringing the volume of renewables connected to over 4,600 MW. This renewable energy is critical to the displacement of carbon in heat, transport and industry.

The transition to reliable, affordable, low carbon energy can be seen in the choices people are making. Nearly all new homes being connected to the network have heat pumps or solar panels fitted and are wired to enable electric vehicles to be charged at home. Over 34,000 new customer connections were made by our Networks businesses in 2019. Meanwhile, ESB Networks commenced the installation of smart meters - 15,000 were installed in 2019 and all 2.3 million domestic meters are due to be replaced by 2025. Helping our customers to take control and become more sustainable in their use of electricity is at the core of our strategy.

RETAIL

2019 has been a very successful year in Customer Solutions. Electric Ireland has grown

its market share in ROI in 2019 by offering competitive pricing and discounts that endure. We consolidated our retail market position in Northern Ireland and ESB Energy in Great Britain where our ESB Energy brand is attracting new customers. Our Smart Energy Services business won significant contracts in 2019 with innovative solutions to help business customers lower their carbon footprint. Electrification of transport will be a key enabler of the transition to a low carbon future. 2019 saw a tripling of the number of new battery electric vehicles sold relative to 2018 and in 2019 we introduced pricing for Fast Charging as we expand the motorway charging infrastructure nationwide. Continually improving our customer service experience and offering competitive products and services ensures that the customer is at the heart of everything we do.

GENERATION

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 tough 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.

The Board is conscious of the impact that these accelerated changes have for our staff, suppliers and for the communities where we have had operations for many decades. The Board is satisfied that a process of engaging with staff and stakeholders to prepare for an orderly closure of the stations is underway. ESB continues to be committed to the Midlands where we will still be a significant employer.

GOVERNANCE AND VALUES

The Board is committed to the highest standards of corporate governance and ethics. ESB has 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 where reasonably applicable to ESB as a statutory corporation) with the revised UK Code of Corporate Governance 2018 (effective 1 January 2019) and the Irish Corporate Governance Annex.

(Please also see my Corporate Governance Report on page 84).

Delivering a high-performance culture is one of ESB's five strategic objectives. The Board is continually monitoring culture because we want ESB to be a vibrant, modern and attractive place to work. As we transition to a low-carbon future, it is important that we continue to be guided by Our Values, which encourage us to be courageous, caring, driven and trusted.

HEAD OFFICE REDEVELOPMENT

The design and build work for Fitzwilliam 27, our new Head Office, is progressing very well. More importantly the building will be highly energy efficient helping ESB to meet both its energy efficiency and carbon improvement targets by 2030.

ESB STAFF

Our staff have a key role to play as we transition to a clean energy future. We will continue to grow our future leaders and invest in the development of the capabilities needed for a very different tomorrow. Safety continues to be a focus for the Board and *Safe and Sound*, a major safety culture initiative, is achieving excellent engagement from our staff.

The Board was delighted to visit Cathleen's Fall and Aghada generating stations during 2019 and to see first-hand the commitment of our staff to safety performance improvement and behaviour change.

The Board was also updated on the 2019 Employee Survey "Our Voice" and was encouraged by the levels of participation. The Board will further consider the insights emerging from the survey during 2020.

ENVIRONMENT

While the company has enjoyed many successes in 2019, there have also been challenges especially on environmental issues which the Board and Management are working hard to address. We accept that our activities impact the environment and we are committed to working with all stakeholders to ensure that ESB's impact on the environment is minimal and that we achieve the highest standard of environmental stewardship.

CHIEF EXECUTIVE AND MANAGEMENT

I want to thank the Chief Executive Pat O'Doherty, and all of his Executive Team for their hard work and commitment throughout 2019, and to welcome Marie Sinnott who was appointed as our Company Secretary in July following the retirement of John Redmond. The Board would like to thank John for his exceptional service to ESB.

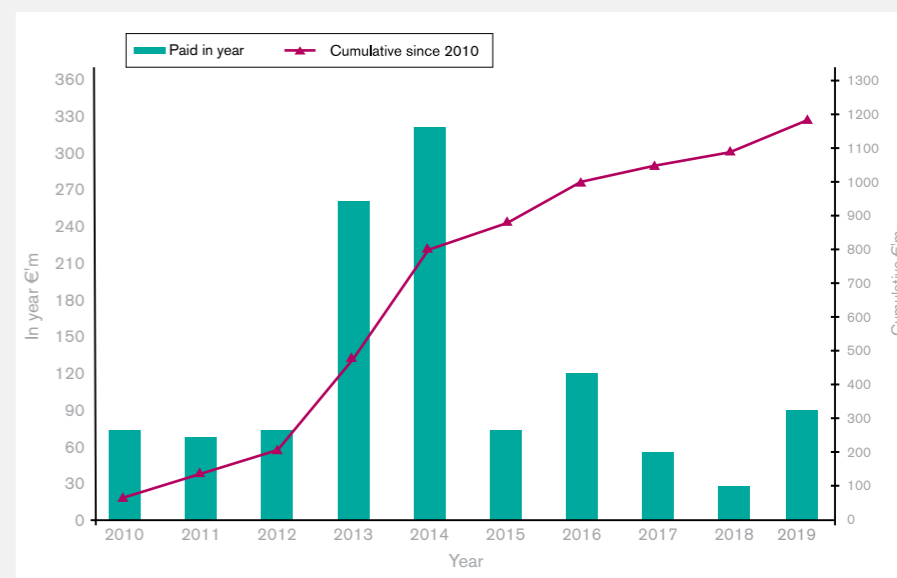
CONCLUSION

2019 has been another year of change for the Group. We are heading into a new decade with confidence and strength, building on our accomplishments of the past and consolidating our position for the future - a Brighter Future for all.

In accordance with the ESB Acts 1927-2014, the Board presents the Annual Report and Financial Statements for the year ended 31 December 2019.

Ellvena Graham OBE Chairman
27 February 2020

DIVIDEND PAYMENTS FROM 2010 UNTIL 2019



CHIEF EXECUTIVE'S REVIEW



Pat O'Doherty
Chief Executive

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.

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.

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.

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.

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

ESB AT A GLANCE



BUSINESS SEGMENT	GENERATION AND TRADING (GT)	ESB NETWORKS	NORTHERN IRELAND ELECTRICITY NETWORKS (NIE NETWORKS)	CUSTOMER SOLUTIONS	OTHER SEGMENTS
REVENUE	€1,518m	€1,156m	€303m	€2,069m	€326m
OPERATING PROFIT*	€198m	€344m	€61m	€59m	€20m
CAPITAL EXPENDITURE	€424m	€581m	€154m	€28m	€55m
AVERAGE EMPLOYEE NUMBERS	914	3,490	1,208	551	1,811
LINK TO OTHER SECTIONS IN THE REPORT	→ See page 54 GT Operational Review	→ See page 56 ESB Networks Operational Review	→ See page 58 NIE Networks Operational Review	→ See page 60 Customer Solutions Operational Review	→ See page 62 and 63 For Engineering and Major Projects and Enterprise Services Operational Reviews

SEE NOTE 2 (SEGMENT REPORTING) IN THE FINANCIAL STATEMENTS FOR FURTHER DETAIL.
 * BEFORE EXCEPTIONAL ITEMS (SEE NOTE 5 IN THE FINANCIAL STATEMENTS FOR FURTHER DETAIL).

HIGHLIGHTS

SHAREHOLDERS

DIVIDEND OF €88 MILLION FOR 2019

RE-AFFIRMED CREDIT RATING OF A-

RETURN ON CAPITAL EMPLOYED OF 5.9%

CUSTOMERS

ENDURING SAVINGS OF UP TO 8.5% FOR RESIDENTIAL ROI CUSTOMERS

CUSTOMER SATISFACTION OF 84%

NATIONAL CUSTOMER CONTACT CENTRE ACCREDITED WITH CUSTOMER CONTACT GLOBAL STANDARD.

ELECTRIC IRELAND AGAIN VOTED CUSTOMER CHAMPION IN THE UTILITIES SECTOR

OVER 15,000 SMART METERS INSTALLED

OVER 34,000 NEW CUSTOMER CONNECTIONS

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

STRATEGY, BUSINESS MODEL, RISK REPORT AND KEY PERFORMANCE INDICATORS (KPIs)

- 17 Strategy
- 22 Business Model
- 24 Risk Report
- 38 Key Performance Indicators (KPIs)

STRATEGY

During 2017, the Board undertook a review of ESB's strategy to test and validate the underlying assumptions, reaffirm the overall strategic direction of the Group and extend the planning horizon out to 2030. Based on this analysis, a new multi-year strategic framework was approved by the Board in November 2017. Since then, the Board has kept the key external drivers informing this Strategy under continuous review including, for example, Board Strategy Review days were held during May and November 2019 – as well as a series of updates throughout the year of key emerging issues.

STRATEGY 2030

ESB's strategy to 2030 (Strategy 2030) is anchored in ESB's ambition to create a brighter future by leading the transition to reliable, affordable, low-carbon energy. It sets out a path to achieve this ambition in a way that will ensure that ESB continues to grow as a successful business while maintaining the financial strength to invest in a low-carbon future at the necessary pace and scale. It also recognises the potential for new business growth arising from the transition.

The Strategy highlights the importance of being adaptable, responsive and opportunistic in an era of unprecedented uncertainty and having a presence of scale across the utility value chain, with a mix of regulated and unregulated businesses, while maintaining a strong investment grade credit rating.

Since its establishment in 1927, ESB has been characterised by a commitment to driving society forward and creating opportunities for the communities it serves. The challenge for ESB today is to be a leader in the transition to reliable, affordable, low-carbon energy and so serve its customers better and achieve sustainable growth.

ESB'S VALUES

ESB's values to be courageous, caring, trusted and driven are deeply rooted in the organisation and encapsulate the integrity and ambition that ESB stands for. They are integral to the development and delivery of Strategy 2030 – they inform ESB's day-to-day behaviour and decisions and they underpin our commitment to earning the trust that customers and communities place in ESB.

STRATEGIC FRAMEWORK

The strategic framework for Strategy 2030 (see page 20) will ensure that ESB's strategic objectives, which are outlined further below, are

commercially driven and are consistent with ESB's overarching purpose and values, as described above.

STRATEGY STATEMENT

Through our diverse businesses across the Republic of Ireland, Northern Ireland and Great Britain we aim to meet customer energy needs by bringing the best of our capabilities together to deliver innovative and value-driven solutions for a low-carbon world

STRATEGIC OBJECTIVES

Strategy 2030 sets out the following five strategic objectives described in further detail on page 21:

1. Put customers' current and future needs at the centre of all our activities
2. Produce, connect and deliver clean, secure and affordable energy
3. Develop energy services to meet evolving market needs
4. Grow the business while maintaining ESB's financial strength
5. Deliver a high-performance culture that supports innovation and collaboration.

ESB'S BUSINESS ENVIRONMENT

A summary of the key business environment factors that significantly impact on the ESB Strategy are set out below.

1. Climate and energy policy
2. Advances in technology
3. Changing customer needs
4. Emergence of new business models
5. Broader economic and political developments (e.g. Brexit).

1 CLIMATE AND ENERGY POLICY

Climate change is one of the biggest challenges facing humanity and there is a critical need to reduce global greenhouse gas (GHG) emissions to protect current and future generations. This is acknowledged in a range of international agreements and national policies that set ambitious targets to curtail global warming.

In the near term, under the EU 2020 framework, there are legally binding targets at national levels to decrease carbon emissions for sectors such as transport, agriculture and buildings. The Republic of Ireland (ROI) and the United Kingdom (UK) have also set targets for the proportion of electricity to be produced from renewable sources at 40%

and 30%, respectively. Current EU policy aims to reduce total GHG emissions produced by 80–95% by 2050.


However, the level of ambition for 2030 and 2050 is expected to increase at EU level with the advent of the European Commission recently published European Green Deal. It is expected that Europe will legislate for a net zero emission target for 2050 with the interim budget for emission reduction by 2030 expected to increase also. There will be more clarity expected on this during 2020.

Over the past year, the policy impetus towards addressing global warming has continued to grow in all of ESB's markets. In the Republic of Ireland, the Irish Government published its Climate Action Plan – which will be critical in setting the long-term direction of Irish energy policy over the next decade. The major features of this plan, which is highly aligned with the ESB Brighter Future Strategy, are summarised in Figure 1 – and are part of an ambition to set Ireland on a trajectory to achieve a net zero GHG emission energy system by 2050. This trend is also mirrored in the UK, which in June 2019 also passed legislation requiring the net zero greenhouse gas emissions by 2050.

A pan-European Emissions Trading Scheme (ETS) imposes quotas on the quantity of permissible emissions from large installations including electricity generation stations. These quotas are being progressively lowered each year to drive the technological innovation necessary to achieve full decarbonisation by 2050. The legal and market structures of the ETS make individual companies, not governments, liable for reducing emissions. The electricity sector, which accounts for 15% of emissions in Ireland in 2018, is on track to achieve the targets that have been set. This is illustrated in Figure 3 which sets out the progress already made in ROI in reducing the carbon content of the electricity sector and the projected further progress.

In contrast to the ETS, the responsibility and associated compliance costs of reducing emissions from agriculture, transport and buildings rests with each national government. Together, these sectors account for around 75% of national emissions, significantly more than those from the electricity sector as illustrated in Figure 4. Government policy in both ROI and the UK now explicitly recognises

FIGURE 1: CLIMATE ACTION PLAN




ELECTRIFICATION

- Increase the number of EVs to 936,000 (including passenger EVs, vans, truck and buses) by 2030
- Renewable heating sources in 600,000 residential & 25,000 commercial building by 2030
- Ban oil and gas boilers by 2025 and petrol/diesel car from 2030

SERVICES/SMARTGRID

- Replace all mechanical meters by 2024
- "Facilitate very high penetration of variable renewable electricity through system services and market arrangements"
- Support microgeneration, allowing excess electricity to be sold back to the grid
- 15% of demand met by corporate PPAs



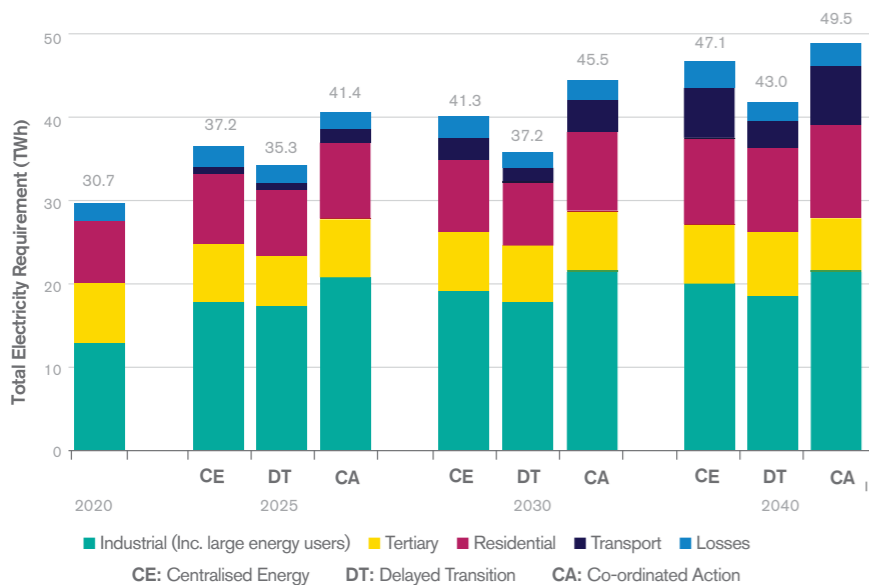
RENEWABLES

- 70% Renewable electricity by 2030 (up from 55%)
- > 3.5 GW offshore
- > 8.3 GW onshore
- > 1.5 GW solar

THERMAL GENERATION

- "Early and complete phase-out of coal & peat-fired electricity generation"
- Carbon price of €80 per tonne by 2030

FIGURE 2: EIRGRID SCENARIOS FOR FUTURE ENERGY DEMAND



Source: Eirgrid 'Tomorrow Energy Scenarios'. (October 2019)

that removing carbon from transport and heat is key to meeting national emissions targets and addressing climate change. As part of the Climate Action Plan, Ireland has committed to a steadily increasing carbon tax on the non-ETs sector which will reach €30/tonne in 2030. Consideration is also being given to how the most equitable redistribution of carbon tax revenues can be achieved.

2 ADVANCES IN TECHNOLOGY

Rapid advancements in technology have impacted the cost and pace of change in the utilities sector across the value chain. The EU Clean Energy Package of 2017 cites an 80% reduction in solar-photovoltaic costs between 2009 and 2015 and a 30–40% reduction in wind generation costs (both onshore and offshore) over the same period. During the past year, these trends have continued as both the cost and competitiveness of low-carbon power generation technologies (and of the battery and other storage technologies required to support their usage) have continued to improve. For example, during the second half of 2019, Bloomberg New Energy Finance (BNEF) has estimated that globally the cost of power generated by solar, off-shore wind and on-shore technologies fell by 11%, 12% and 6% respectively compared to the start of the year. In the medium to long-term, there are choices to be made to cover the intermittent sources of electricity generation and the best technologies to deliver the end result are not yet obvious – there is a range of options but no single solution.

The application of communications and digital technologies such as data analytics, the integration of business IT systems with operational technology systems, cloud computing and artificial intelligence all have the potential to drive significant change in the design and operation of electricity networks. Technological advances will also enable a greater level of electricity production, storage and control, either directly by customers, or by service providers controlling and managing energy demand on their behalf.

3 CHANGING CUSTOMER NEEDS

Emerging technologies present a range of new options for customers to engage with the electricity system in different ways. This is creating a shift in the energy landscape and the willingness and ability of people to adapt their lifestyles and adopt new technologies will be at the heart of the transition to a low-carbon future. Customer expectations are increasingly influenced by their experiences beyond the utility sector – such as digitally based service offerings including real-time responses. These changing preferences are all in addition to, not instead of, customers' ongoing expectations

about secure, affordable and increasingly low-carbon energy. In addition, technology is creating new types of customer and business opportunities for ESB. For example, the advent of cloud computing and the rise of large 'hyperscale' data centres is increasing the demand for electricity and associated energy services in Ireland with the latest Eirgrid 'Tomorrow's Energy Scenarios' suggesting that power demand from such centres could grow significantly over the next decade. Another example is the electrification of transport and heating, which will create new customer segments (e.g. EV drivers, fleet owners and residential heat pumps) that can be served with ESB services and products. Taken together, recent scenarios published by Eirgrid see aggregate electricity demand in Ireland growing by between 40% and 61% over 2020 to 2040 (see Figure 2)

4 EMERGENCE OF NEW BUSINESS MODELS

ESB sees advances in technology, energy and regulatory policy combined with changing customer preferences resulting in a range of new business models. The business models create an increasingly competitive landscape, leading to both challenges and opportunities for traditional utilities as well as an imperative to respond quickly. ESB expects that this new landscape will see an increased focus on services both at a customer "energy as a service" level and at a wholesale level for the system to complement energy delivery. ESB also expects that the traditional distinction between generation, supply and network assets will become less easily defined as business models seek to extract value from technologies such as storage or demand response. To address this trend, and the other major changes to our landscape, in 2018 ESB completed a major review of organisational effectiveness and implemented a new reporting structure and key business processes in order to enhance agility and focus on emergent customer needs. These continued to be embedded over the course of 2019.

5 BROADER ECONOMIC AND POLITICAL DEVELOPMENTS

In addition, ESB Strategy is continuously shaped to respond to developments in the broader societal context beyond the energy sector. In the period since 2017, this has included consideration of such factors as:

FIGURE 3: CARBON INTENSITY OF ELECTRICITY IN ROI - HISTORIC AND PROJECTED

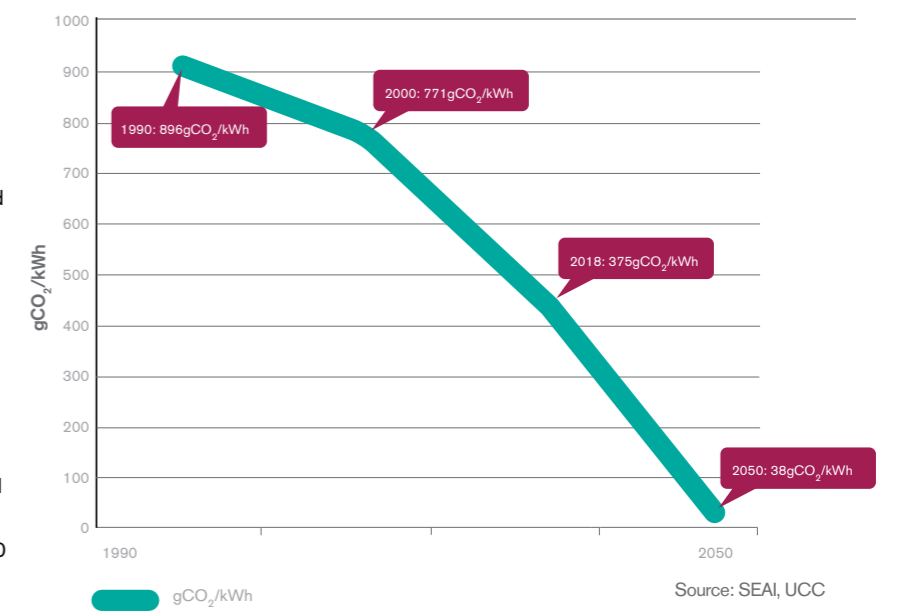
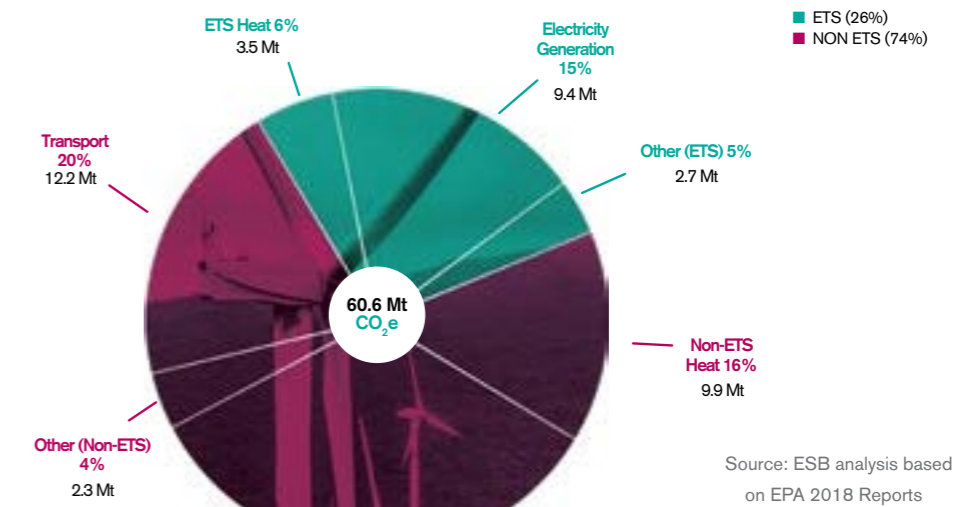


FIGURE 4: ROI GREENHOUSE GAS EMISSIONS IN 2018



BREXIT:

Following the 2016 referendum on the UK's membership of the European Union, there has been significant uncertainty regarding Britain's future trading arrangements with Ireland and other European markets. During 2019, this uncertainty was amplified with potential macroeconomic, political and regulatory implications for ESB in the various markets in which it operates. On 31 January 2020, the UK left the EU. A transition agreement is in place but is due to expire on 31 December 2020 unless extended by agreement.

GLOBAL AND EUROPEAN MONETARY POLICY:

The period since 2017 has been marked by the continuation of Quantitative Easing by the

European Central Bank and other global central banks. This has translated into significant downwards pressure on Bond Yields and increased the supply of low-cost capital available to participants in the power utility industry. While increasing the access to funding, these factors are also putting additional competitive pressures on the returns that can be generated from large-scale investment projects within the industry – as well as underpinning the movement of non-traditional players such as pension and infrastructure funds into the power sector.

STRATEGIC FRAMEWORK

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

OUR VALUES

WE'RE COURAGEOUS

Every one of us has a responsibility and the opportunity to shape ESB into a business we can all be proud of

WE'RE CARING

We want to look the next generation in the eye knowing that we have done all we can to leave a positive legacy and have built a brighter future for everyone

WE'RE DRIVEN

We do our very best to make a genuine difference for our customers, our colleagues and our communities, continuously looking for ways in which we can improve our services to them

WE'RE TRUSTED

Trust is precious – we must continue to earn and be worthy of it

STRATEGY STATEMENT

Through our diverse businesses across the Republic of Ireland, Northern Ireland and Great Britain we aim to meet customer energy needs by bringing the best of our capabilities together to deliver innovative and value-driven solutions for a low-carbon world

STRATEGIC OBJECTIVES

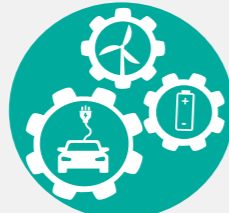
PUT CUSTOMERS' CURRENT AND FUTURE NEEDS AT THE CENTRE OF ALL OUR ACTIVITIES



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



STRATEGIC OBJECTIVES

2019 BUSINESS ENVIRONMENT

- Climate and Energy Policy
- Advances in Technology
- Changing Customer Needs
- Emergence of New Business Models
- Broader economic and political developments

Icon	Objective	Key Initiatives
	Put customers' current and future needs at the centre of all our activities	<ul style="list-style-type: none"> ESB will adopt a customer-centric culture across all of its business activities which will not only build on our reputation for customer service and trust, but proactively look beyond traditional services to develop new and innovative insight-driven solutions to meet diverse customer needs
	Produce, connect and deliver clean, secure and affordable energy	<ul style="list-style-type: none"> 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 We will strengthen and adapt our traditional business models, and actively encourage and adopt new business models which leverage existing and new generation and networks assets to develop other products and services
	Develop energy services to meet evolving market needs	<ul style="list-style-type: none"> The transition away from fossil fuels and the development of new technologies is creating a demand for new services to both balance the grid and give customers more control over their energy use This presents an opportunity for ESB to capture value in this rapidly growing market – both in terms of system services for the grid and energy services for supply customers
	Grow the business while maintaining ESB's financial strength	<ul style="list-style-type: none"> Maintaining a strong financial performance is key to ESB's strategy as it will determine our ability to raise capital to invest in the transition to a low-carbon future ESB will continue to ensure activities are aligned to upholding its strong investment grade credit rating target (BBB+ on a stand-alone basis) It will seek to maximise the value of its existing assets in order to maintain acceptable levels of financial headroom
	Deliver a high performance culture that supports innovation and collaboration	<ul style="list-style-type: none"> Our ambition to lead the transition to a low-carbon future will depend on our ability to harness the talents, creativity and intrinsic motivation of our people to deliver on our strategy ESB will cultivate a high-performing, innovative and customer-focused culture that encourages collaboration to share knowledge and insights on industry developments

STRATEGY IN ACTION - SEE PAGES 54 TO 63 FOR DETAILS OF PROGRESS ON STRATEGIC OBJECTIVES BY BUSINESS UNIT

STRATEGIC PERFORMANCE INDICATORS (SPIs)			
INDICATOR	METRIC	2019	2030 TARGET
Scale Across the Value Chain	EBITDA* €Bn's	€1.37 billion	>€1.9 billion
Market Shares	%	30% of SEM Generation 34% of SEM Supply 42% SEM System Services	>30% SEM Generation c.40% SEM Supply ≥40% SEM System Services
Carbon Intensity of the Electricity ESB Produce	gCO ₂ /kWh	406g CO ₂ /kWh	≤200g CO ₂ /kWh
Scale of Low-Carbon Energy Connected to our Networks	GW of Renewables Connected	4.6 GW in ROI 1.6 GW in NI	5GW in ROI 2GW in NI
Strong Investment Grade Credit Rating	Rating Equivalents	Credit ratings of A- or equivalent and BBB+ on a stand-alone basis	BBB+ on a stand-alone basis
Return on Capital Employed	ROCE (%)	5.9%	ROCE >WACC
Staff Engagement [^]	Staff Survey Response Rate	6.9	7.3
Safety Culture	Lost Time Incidents (LTIs)	43 employee LTIs	0 LTIs

See page 54 to 63 for short to medium-term priorities in the business unit sections.

*Earnings before interest, taxation, depreciation, impairment, amortisation (including revenue from supply contributions)

[^]In 2019 ESB introduced a new digital approach to measuring employee engagement. As part of this change, the company has evolved the way in which engagement is measured, adopting a standard approach based on loyalty, satisfaction and belief. The score is represented as the average score on a 0 to 10 basis.

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

See page 54 for further detail

TRANSMIT

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

See pages 56 and 58 for further details

SUPPLY

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

See page 60 for further details

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



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

RISK REPORT

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.

RISK CULTURE

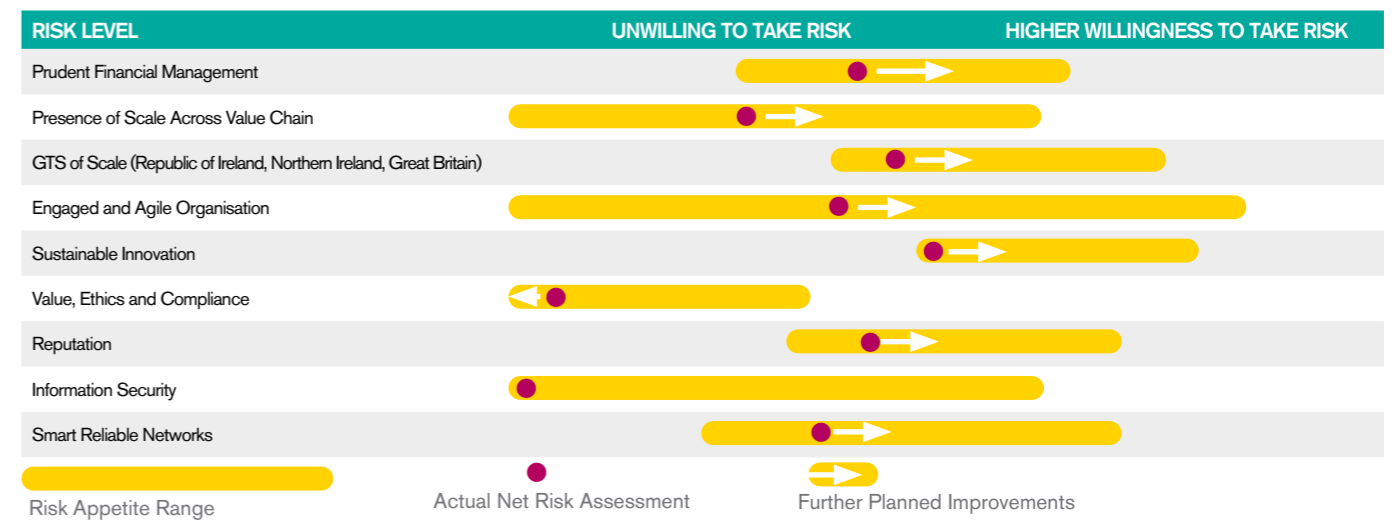
ESB's risk culture determines the way in which employees identify, understand, discuss and act on the risks they take and are faced with on a daily basis. (See Our Values on page 20).

To enhance risk awareness, ESB's values continue to be a focus for discussions with all employees to ensure we create a clear and consistent understanding of how we will work. To support the embedding of risk culture, ESB has adopted policies which facilitate and encourages an environment where people can feel comfortable in raising issues and where management treat concerns seriously, professionally and in accordance with legal obligations that apply under the Protected Disclosures Act 2014. ESB's Whistleblowing and Protected Disclosure Policy was revised during 2019 to ensure the framework for reporting concerns is adequate and sufficiently clear.

Decision making is supported by having clear authority levels, the conduct of rigorous risk analysis as part of business/project planning and consideration of the alignment between investments and our risk appetite detailed for all Board approved submissions. Specific training is provided for high-risk activities including cyber risk awareness, network operations, data privacy and energy trading activities. This approach has ensured that risks and uncertainties are highlighted at an early stage so that prompt action can be taken to minimise any impact they might have on employees and other stakeholders.

The Board is ultimately responsible for setting the tone at the top of the organisation. The approaches outlined have provided the Board with assurance that the risk culture supports the effective management of enterprise risk. A Culture

CURRENT RISK APPETITE



Dashboard introduced during 2019 provides assurance to the Board on the effectiveness with which the desired culture, aligned to ESB's values, has been embedded throughout the organisation.

RISK APPETITE

ESB's Risk Appetite Framework is focussed on setting the risk appetite at the Group level across different risk dimensions and provides the basis for communicating risk appetite down through the organisation. Consideration is given to its presence across all aspects of the industry value chain, its commitment to prudent financial management and the strong ethical approach to how ESB does business.

Risk appetite guides the annual business planning process by defining the desired forward-looking risk profile of the group in achieving strategic objectives. It is embedded in day-to-day risk management decisions through the use of risk tolerances and limits for material risk types (e.g. energy trading and treasury operations). This ensures the risk profile remains aligned with risk appetite, balancing risk and returns.

The Group Risk Appetite Statement is approved by the Board on the advice of the Audit and Risk Committee. The Brighter Future Strategy is consistent with the Risk Appetite signed off by the Board in 2017 in terms of focus of investment, geographies, technology and customer focus. The principal risks continued to be monitored by reference to the approved Risk Appetite Statement throughout 2019.

A full review of the Risk Appetite will be undertaken by the Board in 2020.

GROUP PRINCIPAL RISKS 2019

The 2019 Group Risk Plan takes at its starting point the Board's approved strategy "A Strategy for a Brighter Future – ESB 2030" (Strategy 2030). Additional external considerations included the 'National Risk Assessment 2018'¹ and '2019 Global Risks Report'², external market developments and other legal and regulatory considerations that can impact the business model. Emerging Risks are included, insofar as this is possible, for the period 2020 to 2023, to help identify exposures as early as possible.

The Principal Risks for 2019 are set out on page 28. These risks are considered material to understanding how ESB creates value. A number of principal risks remain constant over 2019, including health safety and environment risk, cyber/data leakage risk, infrastructure delivery risk, financial performance risk and political/economic risk. Other risks, as detailed below are considered to be increasing over the year.

The Group Risk Plan for 2019 is designed to provide adequate assurance that:

- specific consideration has been given to the risks of achieving our strategic objectives
- risks have been properly identified and measured on a bottom-up basis by the businesses and adequately challenged and reviewed on a top-down basis by Group Risk, the Risk Management Committee and the Executive Director Team Risk Forum
- risks and risk appetite have been aligned
- appropriate controls and risk mitigations to reduce the probability of risks emerging and recovery mechanisms to reduce the impact of an event are in place
- emerging risk developments over time are being tracked
- management preparedness to manage risk is understood

- responsibility for risk is allocated to ensure accountability
- A Communications Plan is in place to apprise the Board and the relevant sub-committees on key risk topics throughout the year.

FINANCIAL RISKS

The main financial risks faced by the Group relate to liquidity, foreign exchange, interest rate, and commodity (electricity and fuel) price movements. 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 (and the details are outlined in note 28 of the financial statements).

EMERGING RISKS

The risk management framework enables the Group to identify, analyse and manage emerging risks to help identify exposures as soon as possible. This is managed as part of the same process that identifies the principal risks. These are monitored and reviewed in conjunction with principal risks. While a core element of ESB's strategy seeks to address climate change challenges, an emerging risk recognises that the pace of change is accelerating, particularly in the context of an increasing number and range of obligations.

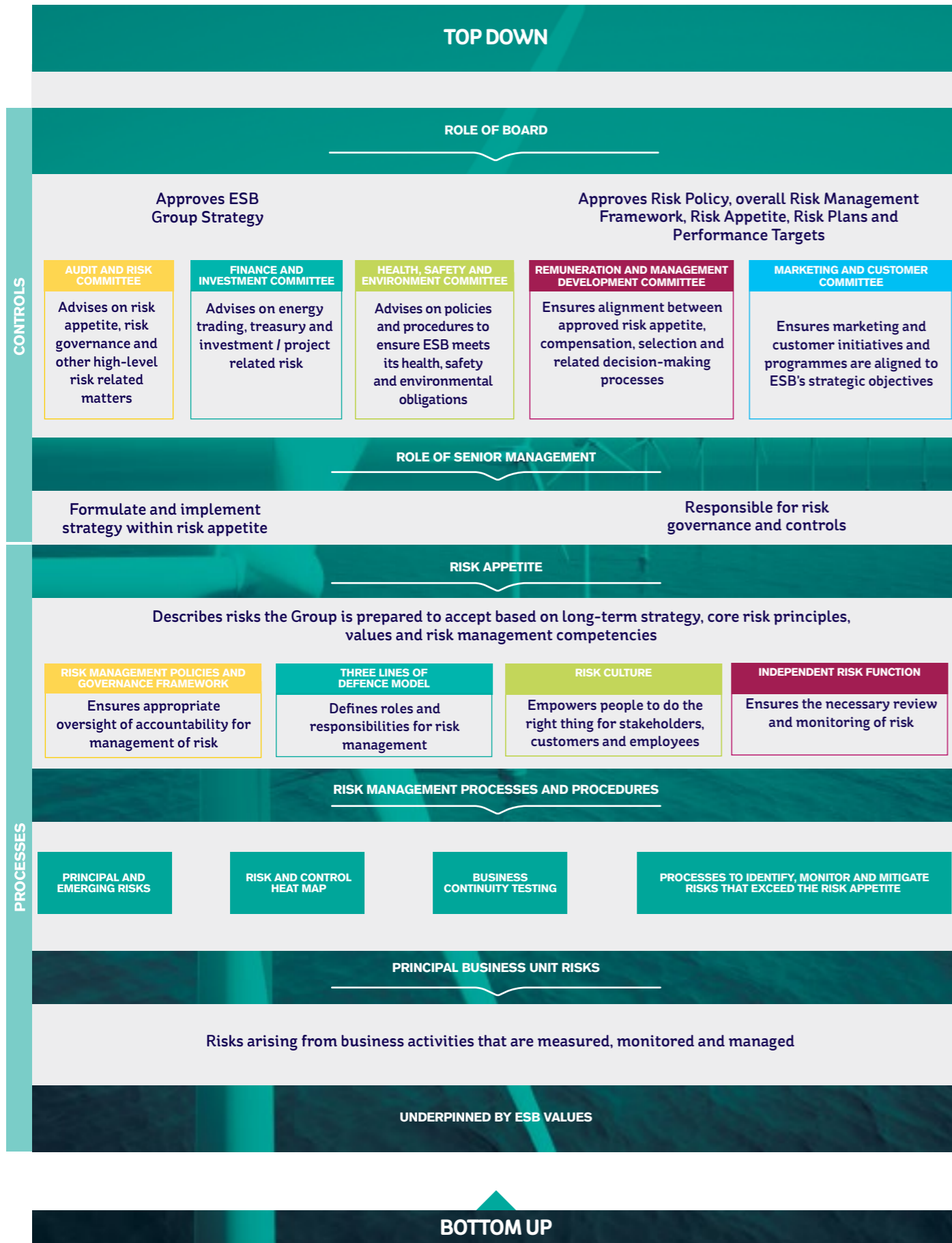
BUSINESS CONTINUITY

ESB is responsible for the provision of critical infrastructure and disruptions to certain services and operations are potentially damaging to the economy, to society and to ESB's business. ESB has in place a robust set of business continuity plans and processes to ensure that our responses are well managed and executed. The exercising and testing of these plans is key to ensuring ESB's preparedness.

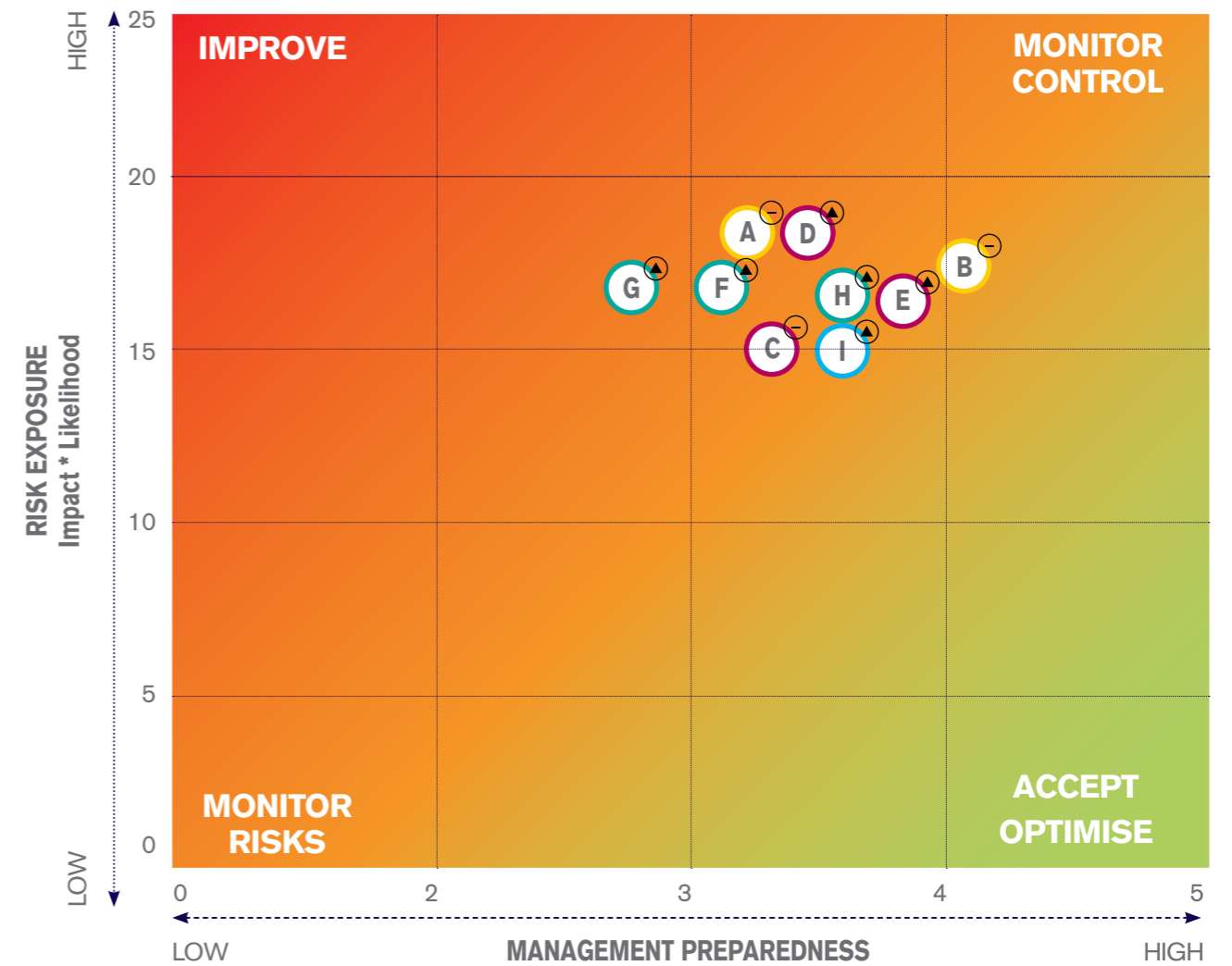
¹ Published by Department of the Taoiseach

² Published by World Economic Forum

RISK MANAGEMENT FRAMEWORK



RISK AND CONTROL HEAT MAP



OPERATIONAL:

- A Health, Safety and Environment
- B Cyber and Systems Availability
- C Project Delivery / Infrastructure

REGULATORY:

- E Brand / Reputation
- F Regulatory / Market Development
- G Political / Economic Uncertainty
- H Governance / Compliance

FINANCIAL:

- D Financial Performance

STRATEGIC:

- I Organisational Transformation

Risk Climate

- ▲ INCREASE
- UNCHANGED
- ▼ DECREASE

PRINCIPAL RISKS

The principal risks and opportunities that have the potential to have a significant impact upon the Group's strategic objectives are set out below, together with an indication of the strategic objective to which they relate, any change in the risk climate during the year, who is responsible for monitoring the risk, the principal mitigations, developments in relation to the risk during 2019 and areas of focus for 2020.

OPERATIONAL					
A. HEALTH, SAFETY AND ENVIRONMENT			Risk Climate ↔		Oversight: Health, Safety & Environment Committee
What is the risk?	Risk Drivers	Mitigations	Developments in 2019	2020 Area of Focus	
Risk of serious injury or death to employees, contractors or the public or damage to the environment arising from ESB's operations	<ul style="list-style-type: none"> Inadequate policies and procedures Inadequate competence (training, knowledge & experience) Lack of compliance with standards & procedures Failure to maintain assets Involvement in new sectors e.g. solar, offshore wind, marine safety Defective/unsafe third-party infrastructure Security risks at home and abroad Delay in actions to reduce top environmental risks 	<p>To prevent the risk materialising:</p> <ul style="list-style-type: none"> Setting of Group Standards Detailed training, development and approvals processes Safety Culture Transformation Programme Engagement programmes for employees, contractors and the public Confidential disclosures facilitated via confidential helpline (Managed by Group Internal Audit) Maintenance management systems, equipment inspection and certification, statutory inspections Assurance & audit processes (external and internal) External certification e.g. ISO External benchmarking of environment and sustainability performance level Completion of risk assessments pre-staff business travel or mobilisation overseas Consolidation of group-wide security responsibilities in a new central Enterprise Security Manager role Reporting on environment and sustainability performance indicators Public safety programmes 	<p>If the risk materialises:</p> <ul style="list-style-type: none"> Critical incident management and response procedures Scenario testing Crisis management/business continuity processes Deployment of Occupational Health & Wellbeing Services to support employees Incident Investigation standard procedures Monitoring, tracking and reporting of serious incident action completions 	<p>Developments in 2019</p> <ul style="list-style-type: none"> Improvements noted in the reduced number of serious safety incidents Improvements noted in key performance indicators, including leading indicators e.g. on time closure of actions from serious investigations and good catches Ensuring public awareness of dangers of electricity continued to be a key focus, against the backdrop of one public fatality Continued focus on mitigations, to address incidents of third party interference and theft of electricity assets Implementation of agreed reporting protocol in respect of cable fluid leakage Full review of all EPA licence conditions and related business risks completed in every Generation and Trading location and improvement plans have been developed as necessary Establishment of Environment and Sustainability leadership team Ongoing monitoring of EPA 'Candidate National 'Priority' site lists 	<p>2020 Area of Focus</p> <ul style="list-style-type: none"> Health, safety and the environment will continue to be a central focus for the Group in 2020 and ESB strive to embed a high-performance culture as part of the Brighter Future Strategy Separate focus on Environmental and Climate risk under the 2020 risk register
STRATEGIC					
B. CYBER AND SYSTEMS AVAILABILITY			Risk Climate ↔		Oversight: Audit & Risk Committee
What is the risk?	Risk Drivers	Mitigations	Developments in 2019	2020 Areas of Focus	
Risk of extended outage of critical Information Technology (IT)/ Operational Technology (OT) systems arising from malicious or non-malicious IT infrastructure failures or successful cyber-attack and/or significant data leakage	<ul style="list-style-type: none"> Successful cyber attack, including ransomware or phishing attack on ESB/outsource partners systems Significant hardware issue, software error, networking failure resulting in failure of IT infrastructure /systems Availability of expertise Increasing reliance on technology/systems for business processes Increasing frequency and sophistication of attacks Third party mobile network/ telecommunication failure Human error Suboptimal data management processes Inadequate controls for third- party 'shadow' IT solutions Inadequate business continuity arrangements for core IT/OT systems Significant number of large-scale projects going live towards the end of 2020 - SAP upgrade, Smart Metering etc. 	<p>To prevent the risk materialising:</p> <ul style="list-style-type: none"> Continuous monitoring of ESB's cyber environment Regular review of IT systems & their resilience Suite of IT policies/procedures, in line with best industry standards IT security awareness across the organisation Timely upgrade of key IT systems and applications Disaster recovery and failover arrangements External maturity assessments with Cyber 2020 Action Plan being implemented over 2019/2020 to improve maturity ratings Liaise with relevant national security experts and key infrastructure providers Risk assessments for new or upgraded systems Implementation of a data deletion project 	<p>If the risk materialises:</p> <ul style="list-style-type: none"> Activate crisis management plans Implement lockdown of firewall, if appropriate Implement cyber incident response plan and recovery plans Continue to strengthen IT security's response and recovery capability Provide accurate and timely communications to Regulators, stakeholders, employees and customers in accordance with ESB's values Conduct immediate review of business process to identify root cause of breach and remedy Implementation of Data Breach Action Plan/process and notify Office of Data Protection Commission (ODPC) if appropriate for data leakage incident 	<p>Developments in 2019</p> <ul style="list-style-type: none"> ESB Cybersecurity Programme being implemented (due for completion by end of H1 2020) Significant ongoing investment in prevention and detection capabilities Preparations underway for Network and Infrastructure System (NIS) Directive implementation Implementation of 24 X 7 SIEM (Security Incident & Event Monitoring) system New OT cybersecurity roles identified Embedding new cyber organisational effectiveness roles Two cyber crisis management exercises carried out at Enterprise Services and Executive Director Team (EDT) level Dedicated integration planning role put in place in project delivery to ensure strong planning around the multiple project go-live dates 	<p>2020 Areas of Focus</p> <ul style="list-style-type: none"> As a key national infrastructure provider, cyber risk is a priority for the Board. The aim is to maintain top quartile maturity. Successful delivery of SAP 4 Hana upgrade project and the IT and data aspect of SMART Metering programme



C. PROJECT DELIVERY / INFRASTRUCTURE



Risk Climate ↔

Oversight: Audit & Risk Committee

What is the risk?	Risk Drivers	Mitigations	If the risk materialises:	Developments in 2019	2020 Areas of Focus
Challenges to the build out of electricity infrastructure	<ul style="list-style-type: none"> Step change in demand growth over a short time frame, both commercial (e.g. data centre) and domestic Procurement or supply chain challenges Privacy concerns related to roll-out of Smart Metering Issues that may arise related to deployment of new technologies Increased reliance on key outsource/ third-party partners Challenges to managing cost and time allocation in the context of scale of delivery challenge Public resistance to infrastructure Timeliness of delivery of legislative changes required to support offshore wind development Disruption arises during transition to new Engineering & Major Projects business unit Pressures related to connection of renewable generation within the timelines expected in Renewable Electricity Support Scheme (RESS) and Electricity Connection Policy (ECP) 	<p>To prevent the risk materialising:</p> <ul style="list-style-type: none"> Robust project management frameworks, systems and processes in place Collaborative development of a 10-year plan to determine Dublin's infrastructure and reinforcement requirements between ESB Networks and EirGrid Detailed transition plan developed and delivered to establish Engineering & Major Projects to deliver major infrastructure projects Develop a Renewables Delivery schedule Review contracting strategy / possible contractor engagements Establish a clearly defined Smart Metering Project with appropriate governance structures and controls Preparation of a Strategic Resource Plan to ensure optimal resource model 	<p>If the risk materialises:</p> <ul style="list-style-type: none"> Consider alternative innovative approaches to connections Review optimal resource model to deliver work programmes Wider stakeholder engagement as part of Brighter Future Strategy to secure support for infrastructural development Development of turnkey capabilities in ESB to deliver large customer connection projects. Implement temporary connections while deeper reinforcement work is underway Consider legislative options for Smart Metering 	<ul style="list-style-type: none"> Work continued to transition to New Engineering and Major Projects over 2019 Data centre demand growth (particularly in Dublin) has remained high Despite significant challenges during its construction phase programme, Oweninny wind farm (89 MW) (Phase 1) in North Mayo successfully entered commercial operation ahead of schedule Grousemount wind farm (114 MW) in Co. Kerry is substantially progressed with the wind farm exporting 50 MW's of commissioning power in Q4 2019 ESB's application to An Bord Pleanála seeking planning permission to transition West Offaly Power from peat to biomass was rejected 	<p>ESB will continue to innovate and engage with all stakeholders to understand and respond to their infrastructural needs for the benefit of the economy, society and the environment</p>

FINANCIAL

D. FINANCIAL PERFORMANCE



Risk Climate ↑

Oversight: Finance & Investment Committee

What is the risk?	Risk Drivers	Mitigations	If the risk materialises:	Developments in 2019	2020 Areas of Focus
Failure to maintain the financial strength required to underpin the long-term viability of ESB	<ul style="list-style-type: none"> Risk of exceeding regulatory allowances Fail to negotiate financeable new price control contract Lower generation energy market revenues and spreads in 2019 due to commodity market movements and / or regulatory changes Inability to secure or deliver the pipeline of projects required to renew and grow the Generation portfolio, particularly in relation to renewables Existing generation portfolio fails to meet performance targets Failure to deliver required performance improvement initiatives Increased competitor activity 	<p>To prevent the risk materialising:</p> <ul style="list-style-type: none"> Implement business planning and budgeting processes focused on delivery of ESB's Brighter Future Strategy and protecting financial strength Setting of appropriate hurdle rates for investment decisions Continue to seek cost efficiencies Continued focus on identifying new businesses /technologies to drive future growth opportunities Keep capital allocation under review across the ESB Group Continued focus on delivery of regulatory contracts Continue to investigate and assess all opportunities to develop a pipeline of options to ensure generation asset growth targets are achievable Optimise Generation Trading Strategy to capture all market opportunities Proactively monitor competitor behaviour and adjust customer strategies appropriately 	<p>If the risk materialises:</p> <ul style="list-style-type: none"> Revise ESB Group Strategy in order to rebuild financial strength Address regulatory challenges through direct engagement with regulatory authorities Consider approach to future investment plans Consider range of financial management options 	<ul style="list-style-type: none"> ESB issued Ireland's first corporate public Green Bond in June 2019, successfully placing a €500 million 1.125% fixed-rate green bond maturing in June 2030 Submissions were made for the ESB Networks Regulatory Period 5 (2020 – 2024) (PR5), with a draft determination due by Q2 2020 ESB and Equinor announced a partnership to deliver potential offshore wind projects ESB invested to take a 50% stake in 448 MW Neart na Gaoithe (NnG) UK offshore wind farm project Proactive management of challenging performance improvement targets set by the Board for all businesses 	<ul style="list-style-type: none"> Ongoing regulatory and stakeholder engagement in respect of ESB Networks' PR5 submission Continued focus on identifying new businesses / technologies and developing a pipeline of generation assets options to drive future growth opportunities Delivery of business plans Delivering a high performance culture that supports innovation and collaboration



REGULATORY

E. BRAND / REPUTATION



Risk Climate ↑

Oversight: Marketing & Customer Committee

What is the risk?	Risk Drivers	Mitigations	If the risk materialises:	Developments in 2019	2020 Areas of Focus
Risk of damage to brand or reputation	<ul style="list-style-type: none"> Materialisation of any of our Principal Risks, Emerging Risks or High Impact-Low Probability Risks Storm fatigue and erosion of tolerance by customers to storm related outages Risk that ESB's suppliers or partners behave in a way that is inappropriate / misaligned with ESB's values Adverse regulatory findings Failure to respond to a crises or negative media/social media campaign or actual event in a timely manner with accurate information Sustained negative public reaction to ESB activities that are contributing to climate change or damaging environment 	<p>To prevent the risk materialising:</p> <ul style="list-style-type: none"> Corporate Communications Team in place External support available on brand, public relations (PR) and media Social Media and Digital Communications Strategy Active monitoring of social media Integrated stakeholder communication and reputation programme Regularly review, update and test crisis and stakeholder management plans Stringent process for partner and supplier selection and clarity regarding expectation/values Ongoing monitoring of customer satisfaction and reputation metrics External Communications Strategy/Policy in place. Ongoing engagement with media to facilitate open and clear communication Formally assess key activities through the lens of reputation, purpose and corporate values Proactive engagement with business units to identify emerging opportunities and issues 	<p>If the risk materialises:</p> <ul style="list-style-type: none"> Activate relevant emergency plans, storm action plans, crisis and stakeholder management/communications plans, as appropriate Corporate Communications activate external PR support arrangements, as appropriate Supplement resources of Corporate Communications Team in a crisis situation Timely and accurate response to issues with the fullest information possible provided Ensure response to any crisis is consistent with our purpose and values 	<ul style="list-style-type: none"> A protected disclosure was made during 2019 alleging a number of breaches by ESB Networks. While many of the issues raised in the disclosures were already being addressed, a full investigation was undertaken to ensure all issues are identified and addressed ESB's values have been clearly articulated and communicated to all employees Delivered full programme of brand, communications and sponsorship activities to raise awareness of ESB's Brighter Future Strategy Continue to engage with relevant stakeholders in relation to all principal and emerging risks 	<ul style="list-style-type: none"> ESB will strive to enhance its reputation in 2020 through continued investment in its brands, leading the conversation about the transition to a low carbon energy future and excellence in stakeholder engagement In depth research with priority stakeholders planned for 2020 Reputation workshops with business units scheduled to identify opportunities to further build reputation among priority stakeholders

F. REGULATORY / MARKET DEVELOPMENT



Risk Climate ↑

Oversight: Finance & Investment Committee

What is the risk?	Risk Drivers	Mitigations	If the risk materialises:	Developments in 2019	2020 Areas of Focus
Failure to anticipate / react to regulatory or market developments	<ul style="list-style-type: none"> Lack of financial support mechanism for transition to biomass Legislative changes required to support the development of offshore wind is not forthcoming or not sufficiently timely Lack of clarity regarding policy on continued use of coal Lack of policy support for fabric upgrading of homes, the transition to electric heating and e-transport Flexibility (ancillary services) not adequately rewarded in the I-SEM market I-SEM market does not provide sustainable, predictable revenues Capacity remuneration mechanism found to be unlawful in Ireland (similar to GB) Adverse transposition and implementation of Clean Energy Package (CEP) Risk of adverse regulatory finding against ESB Risk of required regulatory reporting timelines being missed 	<p>To prevent the risk materialising:</p> <ul style="list-style-type: none"> Experienced project team established in ESB Networks to prepare for and negotiate PR5 Continued engagement with policy makers regarding their advocacy and support for: <ul style="list-style-type: none"> appropriate new building and retrofit standards clarity regarding the regime for facilitating offshore wind financial support arrangements for biomass arrangements for transposition and implementation of the Clean Energy Package Participate in regulator-led consultation processes Licence monitoring and reporting to regulators to demonstrate ongoing compliance 	<p>If the risk materialises:</p> <ul style="list-style-type: none"> Modify ESB's investment plans and Strategy accordingly Continued engagement with regulatory authorities and policy makers, as appropriate, being mindful in the latter case of obligations under the Lobbying Act 2015 	<ul style="list-style-type: none"> The Irish Government launched a Marine Planning Policy Statement in June 2019, and a Marine Planning and Development Management Bill is being progressed, which is a key enabler of the development of offshore wind Following rejection of ESB's application to transition West Offaly Power from peat to biomass, ESB undertook a review of the options for peat stations post 2020. Having considered the key planning, environmental and commercial issues associated with peat and biomass, regrettably there is no viable business model beyond 2020. Ongoing consideration of options for Moneypoint power station Almost a year after the UK power capacity market was suspended by the European Commission, the regulator reinstated the programme in October 2019, freeing up around £1 billion in deferred payments to energy providers ESB eCars announced the introduction of pricing on a phased basis for the public electric vehicle charging network in November 2019 ESB Networks continues to engage with Department of Communications, Climate Action and Environment regarding implementation of the CEP 	<p>ESB will continue to carefully monitor regulatory and market developments with a view to ensuring ESB continues to meet its regulatory obligations, anticipates any material changes that will affect it, engaging with Regulatory Authorities and policy makers as appropriate in the context of the Lobbying Act 2015 obligations and is prepared to respond appropriately to developments</p>



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

G. POLITICAL OR ECONOMIC UNCERTAINTY



Risk Climate ↑

AUDIT AND RISK COMMITTEE

What is the risk?	Risk Drivers	Mitigations	Developments in 2019	2020 Areas of Focus
Political and economic uncertainty creates market volatility	<ul style="list-style-type: none"> The risk of a disorderly or hard Brexit, including risk that it results in severe political turbulence in Great Britain, which impacts on market principles Risk of another financial crisis erupting, or moderating GDP growth and hoped-for-inflation fails to materialise Global uncertainty and strengthening popular discontent with existing political and economic order Severe energy price shock Acceleration of the Climate Change agenda or perceived unfairness of cost-sharing burden for climate change Under-estimation of impact of social media/role of activists on shaping the political agenda 	<p>To prevent the risk materialising:</p> <ul style="list-style-type: none"> Preparation of Brexit contingency plans, including continued engagement with key counterparties to ensure trading can continue post- Brexit Closely monitor global geopolitical and economic changes Continue to monitor credit worthiness of counterparties and headroom with banks providing credit facilities to identify any increase in exposure Continue to deliver on our renewables and Electric Vehicle infrastructure plans 	<p>If the risk materialises:</p> <ul style="list-style-type: none"> Modify ESB's investment plans and strategy accordingly in order to address geo-political /economic volatility Review and revise trading strategy 	<p>2020 Areas of Focus</p> <p>ESB will continue to proactively monitor political and economic developments over 2020 in order to ensure that ESB is positioned to mitigate any risk that materialises and leverage any related opportunities</p>

H. GOVERNANCE / COMPLIANCE



Risk Climate ↑

AUDIT & RISK COMMITTEE

What is the risk?	Risk Drivers	Mitigations	Developments in 2019	2020 Areas of Focus
Governance or compliance failure arising from increasing obligations and external scrutiny	<ul style="list-style-type: none"> Increasing levels of legal obligations in terms of volume, complexity and interconnectivity, which ESB's policy or compliance framework fails to keep pace with Compliance fatigue increases risk of governance failure Increasing levels of external scrutiny Failure of governance and compliance controls for existing statutory or legal obligations, including environmental, or licence responsibilities Legitimate concerns raised by employees are not appropriately addressed 	<p>To prevent the risk materialising:</p> <ul style="list-style-type: none"> Ongoing monitoring of legal and compliance requirements Appropriate frameworks for compliance with laws and regulations established and resourced Continued enhancement of the Group Policy framework, including communication and training to ensure compliance with obligations Continued refinement of internal control frameworks, including evidence-based signoff processes Ongoing oversight of regulatory licence compliance arrangement Engage with Regulatory Authorities to review in detail all licence related complaints and challenges raised Submission of ESB perspectives into consultations regarding regulatory or legislation changes, where possible and appropriate Appropriate confidential reporting mechanisms and investigation procedures in place and operated 	<p>If the risk materialises:</p> <ul style="list-style-type: none"> Investigate incidents or breaches and ensure actions identified are implemented Activate communications plans to update key stakeholders Review the adequacy of current policies and procedures Review the adequacy of current monitoring arrangements Roll-out additional awareness training, if required Share learning across the organisation Ongoing monitoring of reportable incidents for patterns of events that may signify an underlying issue or exposure Ongoing engagement with relevant external stakeholders, including regulatory authorities (CRU, NIAUR, Central Bank of Ireland), OCEI, ODPC, SIPO, DCCAE Regulatory Inspections Manual established and communicated 	<p>2020 Areas of Focus</p> <p>ESB will continue to evolve and strengthen its compliance arrangements to ensure they are sufficiently robust to meet current and emerging obligations</p>



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

STRATEGIC

I. ORGANISATIONAL TRANSFORMATION



Risk Climate ↑

ESB BOARD

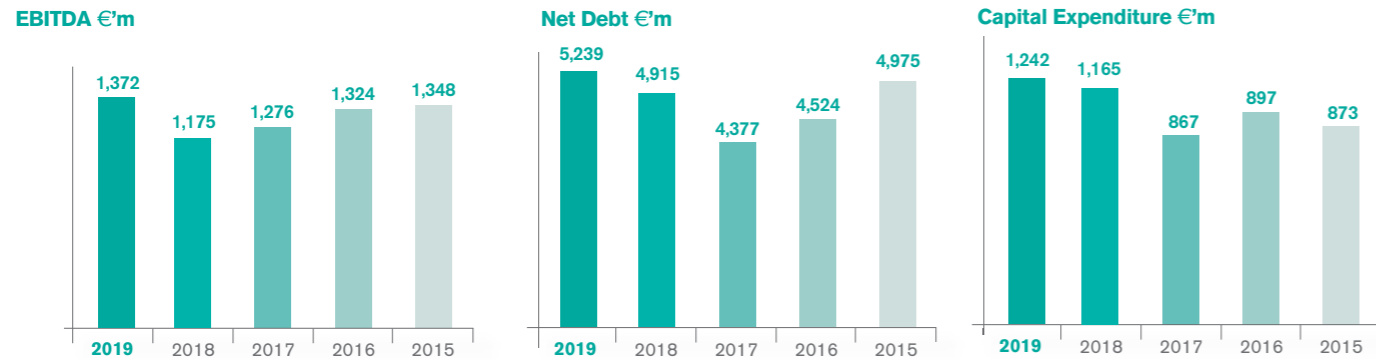
What is the risk?	Risk Drivers	Mitigations	If the risk materialises:	Developments in 2019	2020 Areas of Focus
Fail to embed ESB's new organisational design and achieve the required transformation	<ul style="list-style-type: none"> Fail to enable strategy delivery and achieve the expected benefits of ESB's organisational re-design due to the slow adoption or ineffective use of new technologies and / or process improvements Failure to respond sufficiently to new forms of competition and innovation that threaten the established business models and capabilities Failure to grow and integrate ESB brands Failure to recruit or retain employees, especially for specialised skill sets, resulting in a failure to develop and sustain our organisational capability 	<p>To prevent the risk materialising:</p> <ul style="list-style-type: none"> Continued efforts across the Group to further embed organisational effectiveness (OE), including work to evolve ESB's culture Drive out Digital Accelerator programme and related process improvements effectively through a newly created centre of excellence Complete and implement the strategic resource plan (SRP) for key skill sets, highlighting resource requirements in the short-to medium-term Implement succession planning Delivery of Senior Manager workshops on "Leading the Way we Work at ESB", which focused on how values guide behaviours so that managers can shape an employee experience that enables employees to reach their potential, and in turn supports delivery of the Brighter Future Strategy 	<ul style="list-style-type: none"> Review Brighter Futures Strategy in the context of the risk that has materialised Review options for short-term resourcing for critical capabilities or skill sets, including options for short-term redeployment of resources to key vacancies based on key skill sets from previous roles and, in parallel, fast track training of replacements for the critical roles within the businesses 	<ul style="list-style-type: none"> Arrangements to monitor cultural changes are being established, with the introduction of a new culture dashboard. Ongoing focus on strengthening of strategic resource planning processes and governance frameworks to ensure skills and competencies requirements are identified and sourced in a timely manner 	<ul style="list-style-type: none"> ESB will continue to monitor its organisational design over 2020 to ensure we are appropriately organised to efficiently and effectively deliver on the Bright Future Strategy ESB will roll-out additional leadership and communication programmes to its management teams ESB will continue to refine strategic resource planning approaches



KEY PERFORMANCE INDICATORS (KPIs)

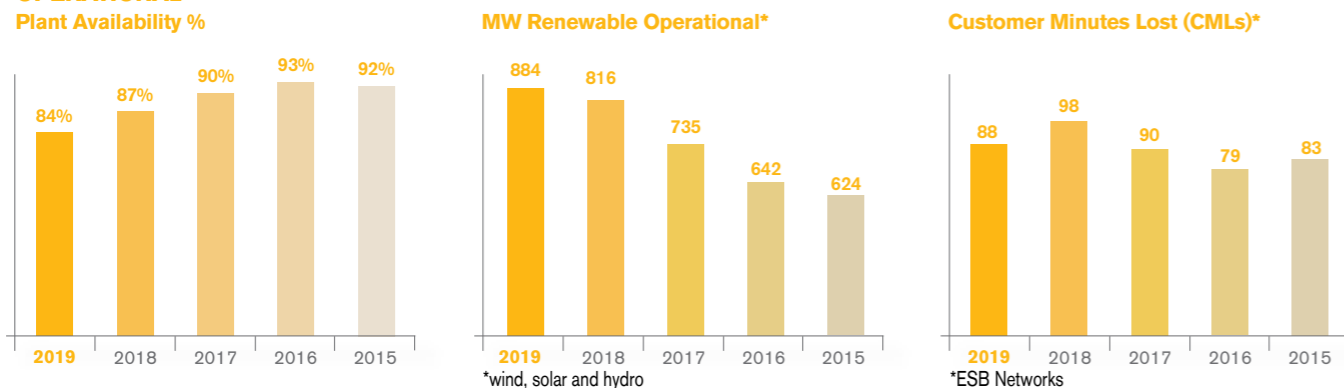
ESB employs financial and non-financial key performance indicators (KPIs), which signify progress towards the achievement of ESB's Strategy to 2030 (Strategy 2030). Each business unit has their own KPIs, which are in direct alignment with those of the Group.

FINANCIAL



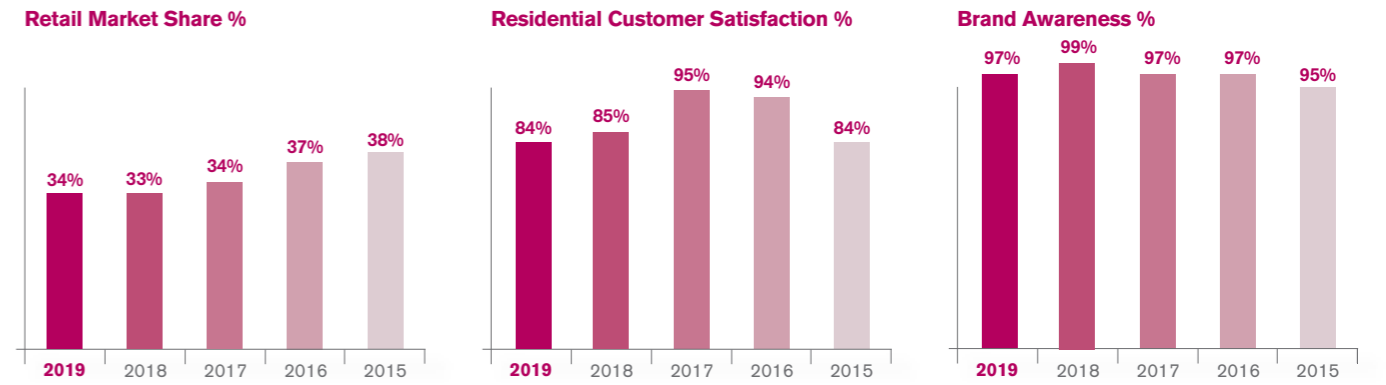
KPI	DEFINITION	STRATEGIC RELEVANCE	PERFORMANCE	STRATEGIC PRIORITY
EBITDA	Operating profit before interest, taxation, depreciation, impairments (including non-trading net impairment losses on financial assets), amortisation and revenue from supply contributions.	EBITDA is a key measure of the cash generated in the Group during the year which is then available for strategic investments, repayment of debt and dividend payments.	The increase in EBITDA is driven by factors impacting on operating profit. For further detail, see financial review on page 48.	
Net Debt	Borrowings and other cash and cash equivalents. 2019 includes the impact of IFRS 16 leases which became effective 1 January 2019.	Net debt is a measure of how leveraged the Group is and is included in assessing its key covenants. Net debt will continue to grow as ESB partly funds its capital investment programmes with borrowings.	Net debt has increased reflecting continued capital investment, strengthening of GBP, finance costs, dividends impact of IFRS 16 Leases and tax payments offset by EBITDA. For further detail see financial review on page 48.	
Capital Expenditure	Additions for property, plant and equipment, intangible assets and financial asset investments. 2015 to 2017 figures are net of capital contributions, from 2018 onwards Capital expenditure is shown gross of capital contributions in line with IFRS 15 Revenue from Contracts with Customers.	ESB is in a period of significant capital investment for both its networks businesses and Generation and Trading (GT). This is so that ESB can develop the electricity network and compete within the all-islands environment.	For further detail see financial review on page 48. The increase in capital expenditure primarily reflects ESB's investment in the 448 MW Nearth na Gaoithe wind farm.	

OPERATIONAL



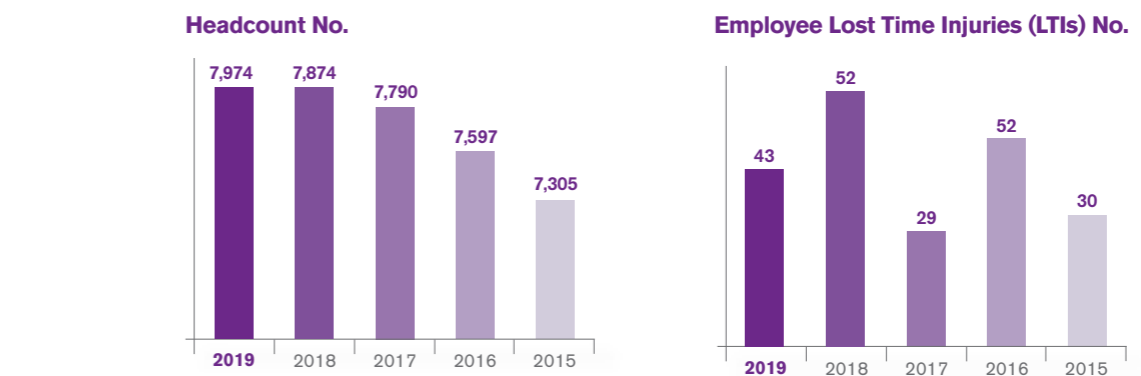
KPI	DEFINITION	STRATEGIC RELEVANCE	PERFORMANCE	STRATEGIC PRIORITY
Plant Availability	Percentage of the time in the year that generation plant was available to produce electricity, whether they generated or not.	Delivering strong operational performance across ESB's generation plant through best practice operations and maintenance and timely completion of overhauls is critical to ESB's commercial performance.	Plant availability reduced in 2019 due to a number of technical issues at Moneypoint. For further detail see GT business unit section page 54.	
MW Renewable Operational	Total MW's of renewable generation where the assets have reached their commercial operation date includes wind, hydro and solar.	Renewable generation is key to ESB's objective to reduce the carbon intensity of its generation fleet.	The increase primarily relates to ESB's 50% share of Owenduff wind farm (89 MW) and 47% share of Tilbury biomass plant (40%) which were both commissioned in 2019. For further detail see GT business unit section on page 54.	
Customer Minutes Lost (CMLs) ESB Networks	The average duration of unplanned interruptions for all customers during the year.	The reliability of the grid and minimising interruptions to customers is of key importance to ESB.	The decrease in CMLs in 2019 is due in part to a reduced number of storms in 2019 compared to 2018 and the intensive focus and interventions of ESB Networks. For further detail see ESB Networks business unit section on page 56.	

CUSTOMER AND MARKET



KPI	DEFINITION	STRATEGIC RELEVANCE	PERFORMANCE	STRATEGIC PRIORITY
Retail Market Share	Total Single Electricity Market (SEM) all-island market share.	Retention and growth of market share is key to ESB so that it can compete within the all-island competitive environment.	Overall market share increased by 1% during 2019 primarily as a result of customer gains in the industrial and commercial market sectors. For further detail, see Customer Solutions business unit on page 60.	
Residential Customer Satisfaction	Provides a measure of residential customer satisfaction (Source: Research Perspective Monthly Survey Results).	ESB strive to provide excellent customer service and introduce new initiatives to improve the customer experience in order to retain market share.	Residential Customer Satisfaction continued to perform strongly in 2019 despite considerable competitive pressure. Electric Ireland continues to outperform competitors in areas such as brand, customer focus and new smart solutions. The long term value campaign appears to be enhancing loyalty among customers, while a range of initiatives designed to enhance customer experience have also been rolled out.	
Brand Awareness	Awareness of Electric Ireland as an Energy Supplier (Source: IPSOS mri and Amárach Customer Survey Results).	Maintain the Electric Ireland brand as the leading energy supply brand in Ireland.	Brand awareness performance remained strong in 2019, with near universal awareness of Electric Ireland. Sponsorship activity in particular helped to drive the brand presence and the launch of the new Brighter Together campaign towards the end of the year should see Electric Ireland maintain and develop this position in 2020.	

PEOPLE



KPI	DEFINITION	STRATEGIC RELEVANCE	PERFORMANCE	STRATEGIC PRIORITY
Headcount	Average number of employees in the year including temporary employees employed by ESB.	The delivery of the strategy will require an organisation that is of a certain scale and is flexible, highly motivated and adaptable.	Headcount has increased in 2019 as a result of recruitment for new business lines along with apprentice and graduate recruitment. For further detail, see note 9 of the financial statements.	
Employee LTIs	Employee LTIs are work-related injuries that involve an absence of at least one day (not including the day the injury occurred).	Safety is at the centre of what we do. ESB continues to focus on reducing risks in the business that gives rise to injurious incidents. For further detail, see safety on page 68.	The reduction in LTIs is linked to improvement plans, projects, training and auditing programmes where the focus is on injury prevention.	

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

OPERATING AND FINANCIAL REVIEW

- 42** Executive Team
- 44** Market Structure and Operating Environment 2019
- 48** Financial Review
- 54** Generation and Trading (GT)
- 56** ESB Networks
- 58** Northern Ireland Electricity Networks (NIE Networks)
- 60** Customer Solutions
- 62** Engineering and Major Projects
- 63** Enterprise Services

EXECUTIVE TEAM

The Executive Team focuses on the execution of the ESB Strategy to 2030 (Strategy 2030), technological and commercial developments, programme execution, financial and competitive performance, people development, governance, organisational development and Group-wide policies.



Pat O'Doherty
Chief Executive

Appointed: December 2011, term extended by a further 3 years, effective 1 December 2018.

Career Experience: Pat joined ESB in 1981. Prior to his current role, Pat headed up ESB's largest businesses as Executive Director of ESB International, Managing Director of ESB Networks DAC and Executive Director of ESB Power Generation. Pat holds both primary and master's degrees in engineering from University College Dublin. He completed the Advanced Management Programme at Harvard Business School. He is Vice President of Eurelectric, Director of Energy UK, Chair of the Apprenticeship Council of Ireland and former trustee of The Conference Board of the United States.



Jerry O'Sullivan
Deputy Chief Executive

Appointed: October 2014

Career Experience: Prior to his current role, Jerry was Managing Director of ESB Networks DAC. He joined ESB in 1981 and held a number of positions in Power Station Construction, Distribution and Transmission, Retail, Contracting, Marketing and Customer Service. He was appointed Head of Network Services in 2002 and Head of Sustainability and Network Systems in 2008. He holds a primary degree in civil engineering from University College Cork and is a Fellow of Engineers Ireland.



Pat Fenlon
Executive Director Group Finance and Commercial

Appointed: July 2016

Career Experience: Prior to his current role, Pat held a number of senior financial, commercial and general management positions across ESB including Group Finance and Commercial Manager, Group Treasurer, General Manager of Electric Ireland and Corporate Change Manager. He is a Fellow of Chartered Accountants Ireland and worked with PwC in Dublin before joining ESB in 1993.



Paddy Hayes
Managing Director ESB Networks DAC

Appointed: June 2012

Career Experience: Prior to his current role, Paddy was Executive Director of Generation and Wholesale Markets and held various positions in ESB including Head of Independent Generation. Paddy worked with British Steel before joining ESB in 1999. A chartered Engineer, he holds a master's degree from University College Dublin and an MBA from the University of Warwick.



Marguerite Sayers
Executive Director Customer Solutions

Appointed: November 2014

Career Experience: Prior to her current role, Marguerite was Managing Director ESB Networks DAC. Marguerite joined ESB in 1991 and holds a primary degree in electrical engineering from University College Cork. Previously, she was Head of Asset Management for ESB Networks and Customer Service Manager for Dublin South, and has had roles in HR, Network Planning, Operations and Construction. Marguerite was also Manager of ESB Generation where she was responsible for ESB's generation portfolio in Ireland and the UK. She is a chartered engineer and currently President of Engineers Ireland.



Jim Dollard
Executive Director Generation and Trading

Appointed: July 2013

Career Experience: Jim Dollard was appointed Executive Director, Generation & Trading in May 2018. Prior to this he held the position of Executive Director for Business Service Centre and Electric Ireland. A chartered management accountant, Jim began his career at ESB in 1992 and has held a number of senior management positions throughout the Group. Jim holds a bachelor's degree in commerce and a master's degree in business studies from University College Dublin. He completed the Advanced Management Programme at Harvard Business School in 2017.



Geraldine Heavey
Executive Director Enterprise Services

Appointed: June 2018

Career Experience: Geraldine Heavey was appointed to the position of Executive Director Enterprise Services in June 2018. Prior to this she held a number of senior financial and general management positions across ESB Group including Finance Controller, Business Service Centre (BSC) and Electric Ireland, Manager, ESB Trading and most recently Group Financial and Commercial Manager. She is an accountant and holds a master's degree in business administration (MBA) from Dublin City University.



Nicholas Tarrant
Executive Director Engineering and Major Projects

Appointed: June 2018

Career Experience: Nicholas Tarrant was appointed Executive Director, Engineering and Major Projects in June 2018. Prior to this he held the position of Managing Director, Northern Ireland Electricity Networks. Nicholas joined ESB in 1993 where he held a number of senior management positions including Generation Manager with responsibility for ESB's generation portfolio. He is a chartered engineer at the Institute of Engineers of Ireland; he holds an MSc (management) from Trinity College Dublin and completed the Stanford Executive Programme in 2014.



Paul Mulvaney
Executive Director ESB Networks Customer Delivery

Appointed: October 2014

Career Experience: Paul Mulvaney was appointed Executive Director, Customer Delivery ESB Networks in May 2018. Prior to this he held the position of Executive Director, Innovation. Paul joined ESB in 1985 and has held a number of senior management positions, including Manager of Great Island and Moneypoint Generation Stations, Group Manager of Coal/Oil/Gas Stations, Asset Manager Power Generation and Programme Manager, Corporate Change. He was appointed Managing Director of eCars in 2009 and Head of Distribution and Customer Service, ESB Networks in 2012. Paul holds a primary degree in mechanical engineering and has completed the advanced management programme at the Business School of the University of Navarra, Spain. He is also a Chartered Director and a Fellow of the Institute of Directors in the UK.



Marie Sinnott
Company Secretary

Appointed: August 2019

Career Experience: Marie Sinnott was appointed Company Secretary in August 2019. Prior to this, she held the position of Group Head of Compliance and Enterprise Risk Management. Marie joined ESB in 1989 as part of the Business Graduate Development Programme and has held a number of senior management roles in the Company. Marie is a UCD commerce graduate, holds a master's degree in economic policy studies from TCD and a postgraduate diploma in corporate governance from UCD. She also has a certificate in data protection practice from the Law Society. Marie is an external member of DCU's Governing Authority Risk Management Committee.



Pat Naughton
Executive Director People and Organisational Development

Appointed: June 2012

Career Experience: A mechanical engineer, Pat has worked in a variety of roles since joining the Group in 1978. He previously held senior positions as HR Manager in ESB Energy International, Manager Strategy and Portfolio Development, ESB Energy International and Manager of Hydro Stations, ESB Power Generation.

MARKET STRUCTURE AND OPERATING ENVIRONMENT 2019

1. OVERVIEW OF THE ELECTRICITY MARKETS STRUCTURE IN THE REPUBLIC OF IRELAND (ROI), NORTHERN IRELAND (NI) AND GREAT BRITAIN (GB)

The structure of the electricity market in ROI, NI and GB can be divided into four segments: generation, transmission, distribution and supply. Electricity generation and supply are open to full competition throughout ROI, NI and GB. Electricity transmission and distribution are regulated monopolies in ROI, NI and GB, with the respective regulator determining the allowed revenue for the price review period.

ENERGY POLICY AND REGULATION

Energy policies are set by the Minister for Communications, Climate Action and Environment in ROI, the Department for the Economy in NI and the Secretary of State for Business, Energy and Industrial Strategy in GB. Energy policy and regulation are heavily influenced by European Union (EU) law.

The Commission for Regulation of Utilities (CRU) is the independent regulator of the energy market in ROI. The Utility Regulation (UR) is the independent regulator of the energy market in NI. The Office of Gas and Electricity Markets (OFGEM) is the regulator of the energy market in GB.

SINGLE ELECTRICITY MARKET (SEM/I-SEM)

The Single Electricity Market (SEM), which began operation in 2007 migrated to a new set of trading arrangements known as the Integrated Single Electricity Market (I-SEM) on 1 October 2018.

The new I-SEM market arrangements replaced the centralised pool of the SEM with Day-Ahead, Intraday and Balancing Markets as well as a competitive capacity remuneration mechanism in place of the SEM's capacity payment regime. These changes were driven primarily by the requirement to comply with EU harmonised arrangements for cross-border trading of wholesale energy and balancing services across Europe and by EU State aid guidelines for capacity remuneration. ESB had established a suite of I-SEM programmes to ensure that the business was ready for the new market arrangements.

The process for remunerating capacity in I-SEM introduced an element of competition for capacity contracts via an auction process and also effectively imposed reliability penalties on the holders of those contracts (if they are called upon to deliver capacity and are unable to do so). Since the first I-SEM capacity auction, in December 2017 a further three auctions have been held allowing generators to compete for Reliability Options on a 1-year (T-1) and 2-year (T-2) ahead basis as well as a time frame of 4 years (T-4) out.

Final results for the 2019/20 T-1 auction were announced in February 2019. All of ESB's generating units, with the exception of North Wall gas plant (North Wall), received capacity contracts. North Wall continued operation until the end of September 2019 under its existing contract after which it was decommissioned. The T-1 auction cleared at €40.65/kW which represented a reduction of €1.15/kW from the previous year's auction price. The majority of those awarded capacity contracts were existing assets although approximately 130 MW of new capacity was added.

The first T-4 auction for delivery in 2022–2023 was held in March 2019 clearing at a price of €46.15/kW with a total of 710 MW of new capacity successful, comprising gas generation, wind, demand side units and battery storage. While the majority of ESB's existing capacity was successful, 335 MW (derated) capacity was not. This includes Moneypoint Unit 2 (229 MW), the Lough Ree peat station (78 MW) and one gas turbine at Coolkeeragh (48 MW). This unsuccessful capacity was more than offset by 489 MW of new capacity, comprising 75% flexible generation (high-frequency gas turbines) and 25% battery storage, which were awarded 10-year contracts covering the period from October 2022 to September 2032.

In addition, T-1 and T-2 incremental auctions were held in November and December 2019, with results published in January 2020. The T-2 auction cleared at a price of €45.95/kW and provided 183 MW of new capacity. The T-1 auction price was €46.15/kW and provided 156 MW of new capacity. Through the T-1 auction, Aghada station received a 10-year contract for an additional 11 MW following an upgrade earlier this year to increase its capacity. The majority of ESB's existing capacity was successful in both auctions, however, Coolkeeragh's gas turbine (48 MW) did not clear either auction. Moneypoint Unit 2 did not receive a contract from the T-2

auction and Aghada's peaking unit (81 MW) was unsuccessful in the T-1 auction.

ESB is currently assessing options for the Moneypoint and Coolkeeragh units which failed to receive capacity contracts in the T-4, T-2 and T-1 auction. However, following rejection by An Bord Pleanála of the planning application to transition Lough Ree power station from peat to biomass, a review of operations at Lough Ree and West Offaly peat stations was conducted and generation will now cease at the end of December 2020.

BRITISH ELECTRICITY TRADING AND TRANSMISSION ARRANGEMENTS (BETTA)

BETTA is the wholesale electricity market operating in GB. Unlike I-SEM, trading can take place between generators and suppliers either bilaterally or through exchanges, and both physical and financial contracts can be struck to manage price volatility, for time scales ranging from several years ahead to intra-day trading markets. As part of its Electricity Market Reform (EMR) initiative to incentivise investment in low-carbon electricity and improve the security of supply and affordability, the British Government operates a capacity remuneration scheme, where generators are awarded capacity contracts (based on the outcome of an auction) that enable them to receive payments for the provision of generation capacity while also incurring penalties for non-delivery during scarcity events.

In late 2018, the General Court of the Court of Justice of the European Union ruled in favour of a challenge, brought by a demand-side response operator, to the European Commission's decision to approve state aid for a UK capacity market. This resulted in the annulling of the European Commission's State Aid approval for the GB capacity market scheme and introduced a standstill period resulting in a suspension of GB capacity market payments, pending a new application for state aid clearance. The European Commission started its formal investigation in February 2019, resulting in a decision on 24 October 2019 whereby the European Commission confirmed that the GB capacity market scheme is compatible with EU state aid rules, which allowed GB capacity market payments to resume. Suppliers were invoiced for the standstill collection period supplier charge in November 2019 and the UK Government stated that capacity market payments suspended by the General Court decision would reach capacity providers in Q1 2020.

ELECTRICITY NETWORKS

The electricity transmission system is a high-voltage network for the transmission of bulk electricity supplies. The distribution system delivers electricity to individual customers over the 38kV/medium/low voltage networks. In ROI, ESB owns the transmission and distribution system network and operates the electricity distribution system network, while EirGrid operates the transmission system network. In NI, NIE Networks (owned by ESB) owns the electricity transmission and distribution system network and operates the electricity distribution system network. The System Operator for Northern Ireland (SONI) operates the transmission system network.

INTERCONNECTION

For geographical reasons, the electricity transmission systems on the island of Ireland are isolated compared to systems in mainland Europe and GB. The Moyle Interconnector links the electricity grids of NI and Scotland through submarine cables running between converter stations in NI and Scotland; this link has a capacity of 500 MW. However, from 10 November 2017, there has been a limit of 80 MW imposed on exports (West to East flow). This restriction was raised to 307 MW from 1 December 2019.

The East-West Interconnector links the electricity transmission system in ROI to the electricity transmission system in Wales, enabling two-way transmission of electricity. The East-West Interconnector runs between Deeside in north Wales and Woodland, County Meath in ROI. Approximately 260 km in length, the underground and undersea links can transport 530 MW.

In 2019, there was a net import flow on both interconnectors but I-SEM has resulted in some significant periods of exports to GB in periods of high wind and extending across daytime periods. This is a substantial change from SEM arrangements where day imports and night exports were prevalent and is due to harmonised trading arrangements where efficient interconnector flows are driven by price in the respective interconnected markets.

ELECTRICITY GENERATION

The I-SEM generation sector comprises approximately 15,887 MW of capacity connected to the system on an all-island basis. The capacity connected to the system includes a mix of older generation plants alongside modern gas fired CCGT plants and renewable energy sources such as wind power. These stations generate

electricity from fuels such as gas, coal and oil as well as indigenous resources including hydro, wind, peat and biomass.

I-SEM has 5,283 MW of wind installed, which is key to the government's target of 40% of electricity to be generated from renewable sources by 2020, as well as the 40% renewable generation target for Northern Ireland (which was announced as met by the Department for the Economy in September 2019). Wind contributed 29% of generation in 2019, up from 25% in 2018, with a maximum wind output of 3,991 MW being recorded on 18 December 2019. ESB had a 30% generation market share I-SEM in 2019, down 8% from last year due to Moneypoint being out of merit and the unavailability of Lough Ree over the summer months.

2019 saw 78% availability of baseload thermal generation in I-SEM, with gas being the dominant fuel in the market, as coal remained largely out of merit from January onwards driven by the combination of low gas prices coupled with high carbon prices.

ENERGY TRADING

The electricity and gas markets in GB, ROI and NI are linked in two ways, through gas being used for electricity generation and through the physical interconnection of electricity and gas networks. In common with a number of other companies in the Irish market, ESB is active in both Irish and GB markets in gas and electricity.

In addition to ESB's generation interests, ESB is active in all sectors of the gas market, from residential to large commercial and is one of the biggest gas shippers on the island.

2. OPERATING ENVIRONMENT THE GLOBAL ENERGY MARKETS

GAS PRICES

Gas prices have decreased throughout 2019 with an annual average gas price of 34.77 p/therm, down from 58.81 p/therm in 2018. The main driver for this decrease is the supply of cheap LNG (Liquefied Natural Gas) from Asia. Demand was also reduced due to mild weather conditions, leading to large amounts of stored gas which kept prices low. The monthly average gas price in January 2019 was 58.01 p/therm, the price fell steadily throughout the year to 25.67 p/therm in September and rose again in November to 37.48 p/therm.

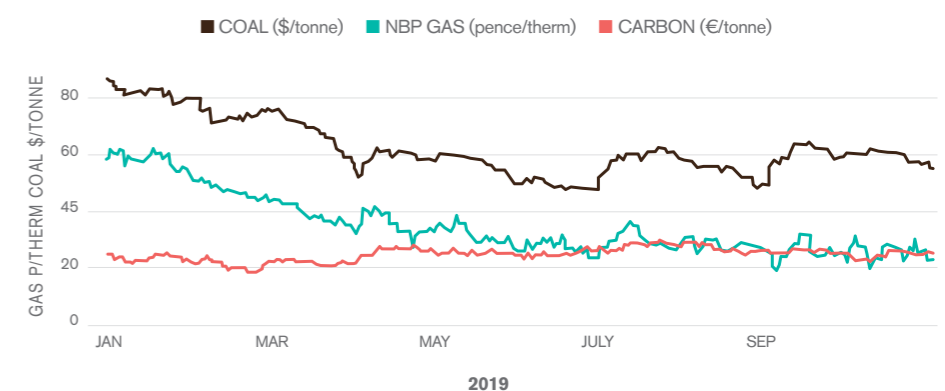
COAL PRICES

Coal prices started the year on a high at c. \$81/tonne before falling in the first half to c. \$49/tonne in June. Global demand for coal was down in 2019. Increasing concerns over the environmental impact of coal has led to decreased demand in the US and Europe and the closure of several coal-fired plants. High carbon prices and low gas prices have also resulted in gas plants being cheaper to run than coal, leading to less running hours for coal plants. Demand was flat in China but increased in South East Asia as these countries still rely on coal for the majority of their power generation. Coal prices increased in the second half of the year to approximately \$60/tonne. The annual average coal price for 2019 was \$60.69/tonne, down from \$91.65/tonne.

CARBON PRICES

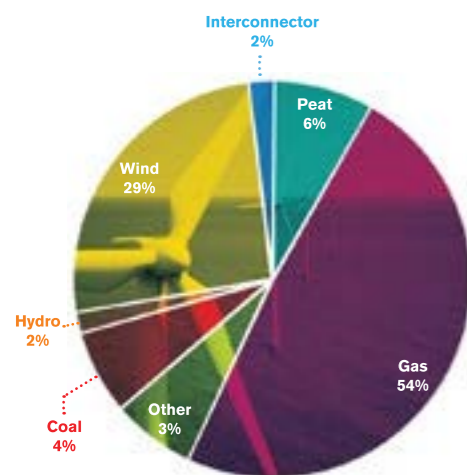
Within the EU ETS, generators are required to buy carbon allowances for the carbon they emit while generating electricity. Carbon prices fluctuated at c€25/tonne mark throughout 2019. This is in comparison to 2018 where carbon started the year at c.€8/tonne and finished at c€20/tonne. Carbon prices rose in 2018 due

FIGURE 1: GAS, COAL AND CARBON PRICES



to the introduction of market reforms aimed at reducing greenhouse gas emissions by at least 40% by 2030. The monthly average carbon price in January 2019 was €23.58/tonne and it reached €28/tonne by July. Increasing concern over a no deal Brexit leading to the UK exiting the EU carbon trading system led to a decrease in prices towards the end of 2019, with carbon prices ending the year with a monthly average of €24.64/tonne in December. The annual average carbon price for 2019 was €24.93/tonne, up from €14.84/tonne in 2018. This higher carbon price was a significant factor for the decrease in coal generation.

FIGURE 2 ELECTRICITY GENERATION IN I-SEM BY FUEL TYPE



I-SEM WHOLESALE ELECTRICITY PRICES

2019 is the first calendar year where the market exclusively operated under I-SEM rules. I-SEM was introduced in October 2018 and consists of Day Ahead, Intraday and Balancing Markets. The most liquid of these markets has been the Day-Ahead Market (DAM) where over 95% of market transactions took place. This trend has continued in 2019, with supply companies seeking to purchase their power requirements and generators selling the vast majority of their generation in the DAM.

In 2019, 64% of metered generation (see figure 2) in I-SEM was met by fossil fuels, almost exclusively gas while coal-fired generation has been out of merit for most of the year due to lower gas prices coupled with higher carbon prices. With large gas-fired units being the most efficient units on the system, the electricity price has historically been very closely linked to the wholesale gas price. Under I-SEM, the Day Ahead Market (DAM) price on average has not

FIGURE 4: DAM (€/MWH)

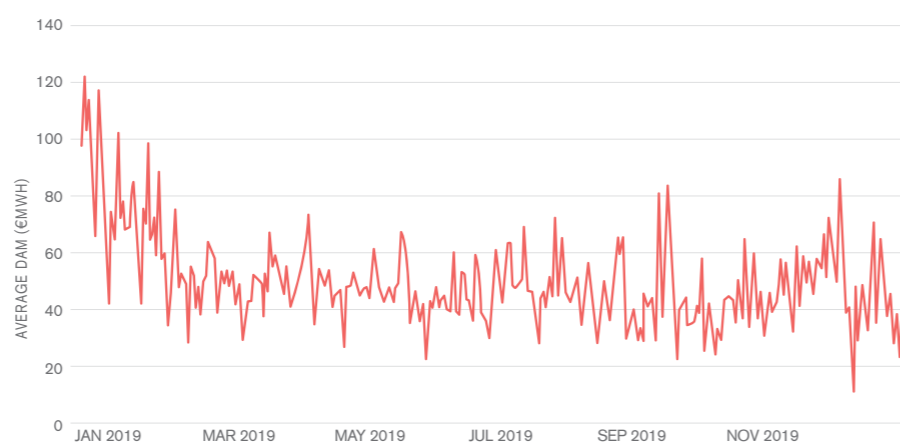
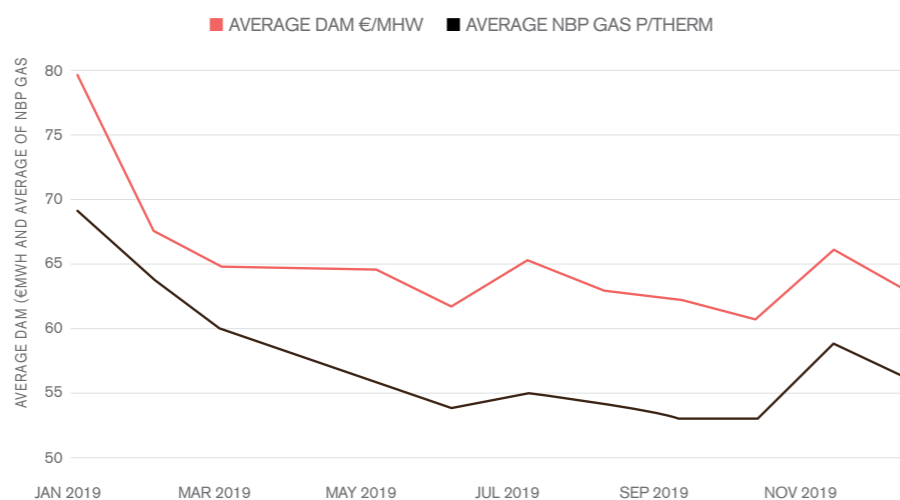


FIGURE 3: DAM VERSUS GAS PRICE, 2019



shown any significant change in this behaviour and is still fundamentally driven by the gas price as can be seen from Figure 3, which shows how the DAM has tracked gas prices across the year. However on a day by day basis several zero or negative price periods sustained over a number of hours coinciding with periods of high wind/low demand (night time).

Year on year, the 2019 DAM (see Figure 4) has decreased by €21% to an annual average value of €50.26/MWh, from €63.39/MWh, which has primarily been driven by decreased gas prices. The year started off with a monthly average DAM price in January of just over €79/MWh, before dropping steadily after Q1 in line with the fall in gas price to c. €43/MWh. The year closed out with a monthly average price of €45.44/MWh in December, compared to €75.50/MWh in December 2018.

I-SEM BALANCING MARKET

One of the most significant changes introduced with the I-SEM trading rules has been the Balancing Market (BM). This market gives the TSO flexibility to secure the system. Under the balancing market the TSO takes control (after generators and suppliers have transacted) to ensure that supply meets demand when there is a deviation from the demand forecast or a change in generator output. Participation in the balancing mechanism is mandatory for all generators who must submit bids and offers in order for the TSO to be able to move them from contracted positions if required to maintain system integrity.

Volatility continues to be a feature of BM market pricing in 2019, as Figure 5 shows prices reaching lows of -€200/MWh and highs in excess of €500/MWh, and on occasion in excess of €3,000/MWh. Trading periods in which the

price exceeds €500/MWh are deemed scarcity events and trigger pay outs from all generators holding Reliability Option contracts. Such events occurred in the first few months of market operation in 2018 and again on 24 January 2019 where the price spike above €3,000 MWh. This situation arose primarily due to the rules around operating the all-island market within the confines of the network between NI and the ROI rather than from any significant scarcity of generation on the island. Consequently, a rule change was instigated to limit similar price spikes from re-occurring. The Balancing Market has, on the whole, been short of power (i.e. system demand has exceeded the volume of generation contracted in the Day Ahead and Intraday markets requiring the TSO to schedule on additional generating plant). However on average, prices have traded at a discount to the Day Ahead Market Price. This may reflect the fact that the majority of balancing actions taken in the BM are due to system security actions taken by the TSO, which generally do not contribute to the setting of the balancing market price.

GB ELECTRICITY MARKET AND PRICES

Overall electricity generation volumes in GB have been broadly stable over the past four years, with renewables continuing to play an ever-increasing role in the overall electricity system mix. Renewables output for Q3 reached 24TWh, just below the 25TWh of power generated from fossil fuel plant for the same period. The rapid increase in solar photovoltaic generation capacity observed from 2011 to 2017 has eased in the last 2 years, with a total capacity of more than 13 GW installed on the system for the summer 2019 generation season. A new solar generation peak of 9.55 GW was recorded on 14 May 2019. In addition, a new wind generation record was set in GB at 05:00 on 9 August 2019 when for the first time, over half (51.48%) of GB's electricity supply came from wind power. This record was supported by the Hornsea One offshore wind farm (1,200 MW), which began supplying power to the UK national electricity grid in February 2019.

Year on year, coal generation volumes in GB continue to drop, with lower coal fleet generation volumes in 2019 compared to 2018 as a whole. The UK Government decision to close all coal generation plants by 2025 coupled with the UK's Carbon Price Support plays an important role in driving this trend, which results in a substantially higher effective carbon price relative to other European countries. The 2 GW Cottam coal plant closed in September 2019, the 1.66 GW Aberthaw coal plant closed in December 2019, while Fiddlers Ferry coal plant (1.4 GW) is due to close in Quarter 1 2020.

FIGURE 5: BALANCE MARKET

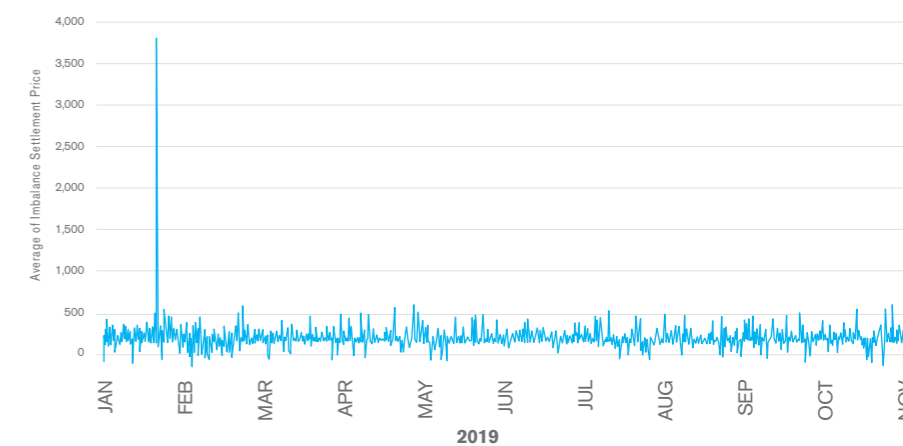
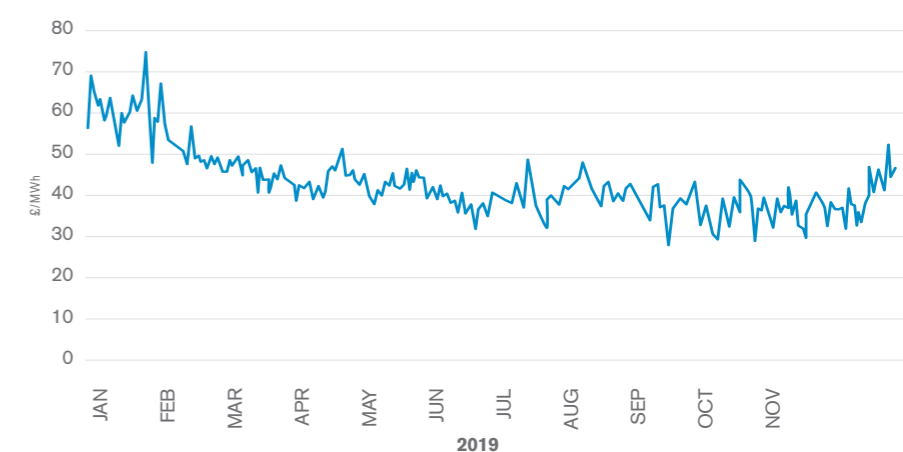


FIGURE 6: GB BASELOAD PRICES



Competitive auctions to secure capacity through the Capacity Market went ahead in the UK despite the suspension of the Capacity Market system for the majority of 2019. These auctions were generally significantly oversubscribed forcing prices down. The latest T-1 capacity auction for delivery in 2019-2020 concluded on 12 June 2019, resulting in the award of 3,626 MW of capacity at a record low price of £0.77/kWh. No coal-fired generation was successful in this auction, with gas-fired capacity securing 2,030 MW, interconnectors 1,025 MW, demand-side response 195 MW, waste-to-energy 264 MW, biofuels 76 MW and battery storage 8 MW.

On 9 August 2019, the UK experienced a large power outage, which resulted in over 1 million customers losing power and major disruption to Friday evening rail services. The outage was caused by a combination of events in quick succession, starting with a lightning strike followed by two large generators dropping off the system and back-up capacity not being sufficient to stabilise the grid.

National Grid Electricity System Operator (ESO) announced in April 2019 that it will be able to fully operate GB's electricity system with zero carbon by 2025. This announcement, and the associated increased penetration of intermittent generation, will lead to increased opportunities to provide system services. ESB began to explore how to maximise the value of its GB generation portfolio through ancillary services contracts by the commissioning the 7 MW Millfarm battery project in 2018, and it has continued to participate in the Firm Frequency Response market and the Balancing Mechanism in 2019.

FINANCIAL REVIEW



Pat Fenlon
Executive Director, Group Finance
and Commercial

Q How would you describe financial performance in 2019?

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. In 2019 we 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 Nearth na Gaoithe project in GB;
- Customer Solutions continuing to innovate and create value for customers, including the application of enduring long-term 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).

HIGHLIGHTS

EBITDA

€1,372 MILLION

PROFIT AFTER TAX BEFORE EXCEPTIONAL ITEMS

€419 MILLION

OPERATING PROFIT BEFORE EXCEPTIONAL ITEMS

€682 MILLION

2019 DIVIDENDS

€88 MILLION

CAPITAL EXPENDITURE

€1,242 MILLION

RETURN ON CAPITAL EMPLOYED

5.9%

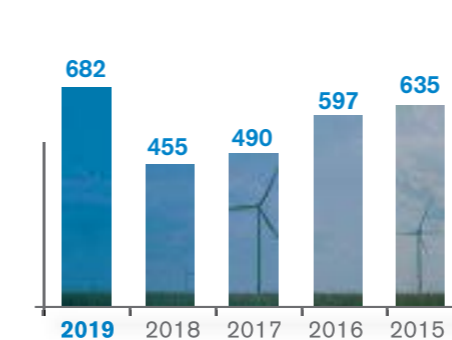
GEARING

Net debt divided by the sum of net assets and gross debt (excluding joint ventures)

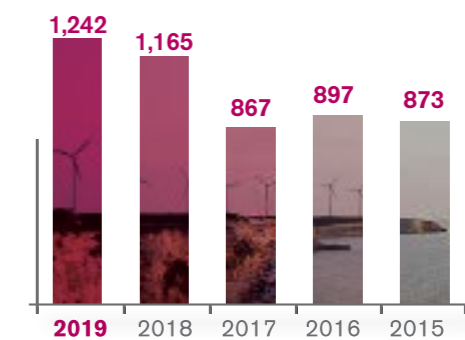
57%

FIGURE 1: FIVE-YEAR SUMMARY

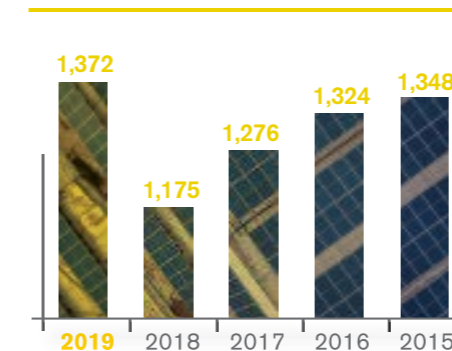
OPERATING PROFIT BEFORE EXCEPTIONAL ITEMS¹ € MILLION



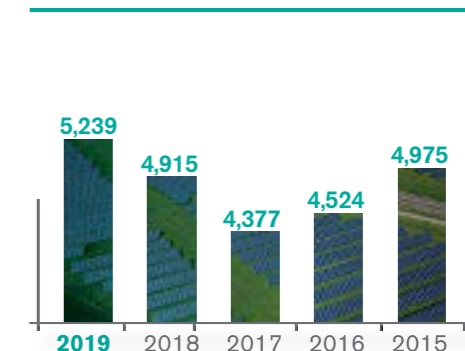
CAPITAL EXPENDITURE² € MILLION



EBITDA € MILLION



NET DEBT³ € MILLION



1. Before the following exceptional items: 2019: Severance and associated costs (€60 million) and Impairment charge (€34 million) 2018: impairment charge (€140 million) 2017: impairment charge (€276 million) 2015: impairment charge (€104 million)
2. 2019 and 2018 Capex is gross of customer contributions for network connections
3. 2019 includes Lease liabilities (€132 million)

FIGURE 2: SUMMARISED INCOME STATEMENT

	2019	2018
	€m	€m
Revenue and other operating income	3,718	3,433
Operating costs*	(3,036)	(2,978)
Operating profit	682	455
Exceptional items	(94)	(140)
Operating profit after exceptional items	588	315
Net finance costs	(167)	(193)
Fair value movements on financial instruments	(16)	(30)
Share of equity accounted investees loss	(8)	(14)
Profit before tax	397	78
Tax charge	(59)	(18)
Profit after tax	338	60

*Includes non-exceptional impairments (see note 17)

REVENUE

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.

FIGURE 3: OPERATING COSTS (EXCLUDING EXCEPTIONAL ITEMS)

	2019	2018
	€'m	€'m
Fuel and other energy related costs	1,287	1,141
Depreciation and amortisation	806	779
Employee costs	490	493
Operating and Maintenance costs*	441	560
Impairment (excluding exceptional items)	12	5
	3,036	2,978

*Includes non-exceptional impairment of financial assets (note 17)

OPERATING COSTS

Overall operating costs before exceptional items at €3,036 million have increased by €58 million.

- Fuel and other energy costs have increased by €146 million due to higher volumes in Customer Solutions.
- Depreciation is up by €27 million on 2018 reflecting a higher asset base in the Network businesses and the impact of IFRS 16 'Leases' offset by lower depreciation in GT business following 2018 exceptional impairments
- Employee costs are down €3 million as 2018 non-exceptional severance costs have been offset by the impact of higher headcount
- Operating and maintenance costs have decreased by €119 million primarily due to lower plant overhaul costs, the impact of IFRS 16 Leases (offset by depreciation), and non-cash foreign exchange translation gain on sterling denominated intercompany positions.

A breakdown of the operating costs by business segment is provided in note 2 to the financial statements.

EXCEPTIONAL ITEMS

In recent years the introduction of the I-SEM market and the growing volume of renewables on the system has led to a deterioration of margins in the thermal fleet. In 2018 there was an exceptional impairment charge of €122 million relating to generation assets at Aghada Unit 2 (€87 million), Synergen (€33 million) and (€2 million) across certain wind farms. In 2019 ESB closed North Wall, confirmed that there would be a cessation of electricity generation from peat at Lough Ree Power and West Offaly Power in the Midlands at the end of 2020 and significantly rationalised operations at Moneypoint given reduced running levels.

Arising from these re-structuring decisions ESB has recognised an exceptional severance provision of €55 million in respect of the expected costs associated with the staff exits at these locations. Arising from the planned closure of the midland peat stations a charge of €5 million has been included in operations and maintenance costs representing ESB's committed contribution to a "Just Transition Fund" for the Midlands.

An impairment of €34 million (2018: €17.5 million) was also recognised in respect of loans advanced to Tilbury Green Power Holdings Limited (a joint venture waste wood to energy plant in GB) primarily due to the impact of technical issues on availability at the plant and lower GB spreads. The shareholder loans advanced have now been fully provided for.

OPERATING PROFIT

Operating profit before exceptional items has increased by €227 million. The movement in operating profit between 2018 and 2019 is set out in the reconciliation of operating profit in Figure 4.

EBITDA

Earnings before interest, taxation, depreciation, impairments (including non-trading net impairment losses on financial assets), amortisation and revenue from supply contributions.

EBITDA	2019	2018
Operating Profit	588	315
Exceptional items: impairments	34	140
Depreciation	806	779
Impairment (other)	12	5
Revenue from Supply Contributions	(68)	(64)
EBITDA	1,372	1,175

ADJUSTED PROFIT BEFORE TAXATION

Adjusted profit before taxation for 2019 is €514 million (2018: €224 million). The variance relates to the higher operating profit and lower total finance costs as described above and lower net finance costs (see figure 5).

TOTAL FINANCE COSTS

Total finance costs for 2019 are €41 million lower than 2018. The decrease in net interest reflects lower average cost of debt following debt re-financing, in particular the re-financing of the Carrington CCGT project finance debt in 2018. The primary decrease on the fair value loss on financial instruments relates to the settlement of the Carrington "out of the money" interest rate swaps which crystallised in 2018 when the project financing was replaced with lower cost Group debt from the bond market. The movement on the inflation linked interest rate swaps is outlined on page 176. Further detail is included in note 22 to the financial statements.

TAXATION

The higher tax charge of €59 million primarily reflects the higher profit before tax outlined above. ESB's effective tax rate on profits before exceptional items has reduced due to a higher proportion of profits in Ireland and a lower proportion of profits overseas. Further detail is included in note 20 to the financial statements.

SEGMENTAL PERFORMANCE

The Group is organised into five main reportable segments or strategic divisions, which are managed separately. Details on the financial performance of the business segments are included in the business unit review sections pages 54 to 63 and in note 2 to the financial statements.

NET DEBT AND GEARING

The increase in net debt to €5.2 billion in 2019 from €4.9 billion in 2018 reflects continued capital investment, strengthening of GBP on sterling denominated debt, inclusion of lease liabilities arising from the introduction of IFRS 16 'Leases' in 2019, finance costs, tax and dividend payments in 2019 offset by positive EBITDA.

The gearing level has increased from 56% to 57% reflecting the higher net debt.

CAPITAL EXPENDITURE

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 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 114 MW 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.

FIGURE 5: RECONCILIATION OF ADJUSTED PROFIT BEFORE TAXATION

	2019	2018
	€'m	€'m
Profit before taxation	397	78
Exceptional items	94	140
Fair value movement on RPI linked interest rate swaps	23	6
Adjusted profit before taxation	514	224

FIGURE 6: TOTAL FINANCE COSTS

	2019	2018
	€'m	€'m
Net interest on borrowings	152	177
Financing charges	17	19
Finance income	(2)	(3)
Net finance costs	167	193
Inflation linked interest rate swaps	23	6
Fair value (gains) / losses on financial instruments	(8)	24
Total finance costs	182	223

FIGURE 7: SUMMARISED CASH FLOW STATEMENT

	2019	2018
	€'m	€'m
EBITDA (excluding exceptional items)	1,372	1,175
Provision utilisation and other movements	(91)	(70)
Interest and tax	(209)	(264)
Net cash inflow from operating activities	1,072	841
Sale proceeds	9	18
Capital expenditure and loans to equity accounted investees	(1,157)	(1,120)
Other	2	4
Net cash outflow from investing activities	(1,146)	(1,098)
Net cash outflow from financing activities	(34)	(106)
Net increase/(decrease) in cash	(108)	(151)

FIGURE 8: CAPITAL EXPENDITURE

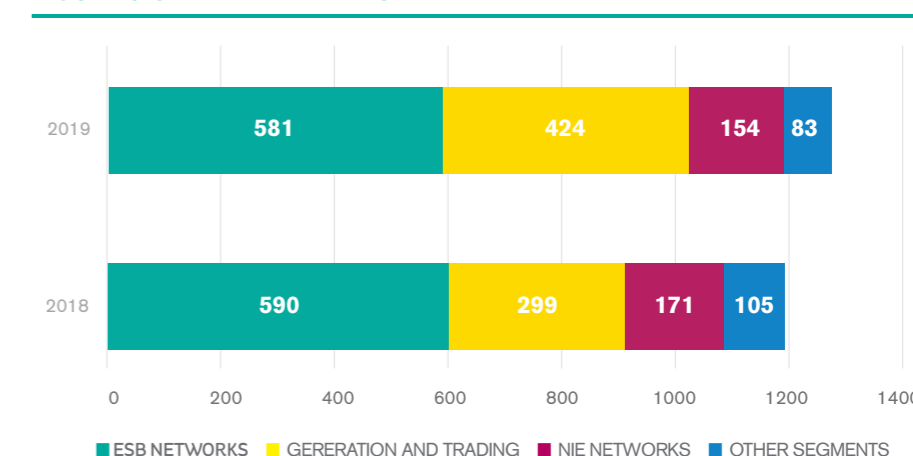
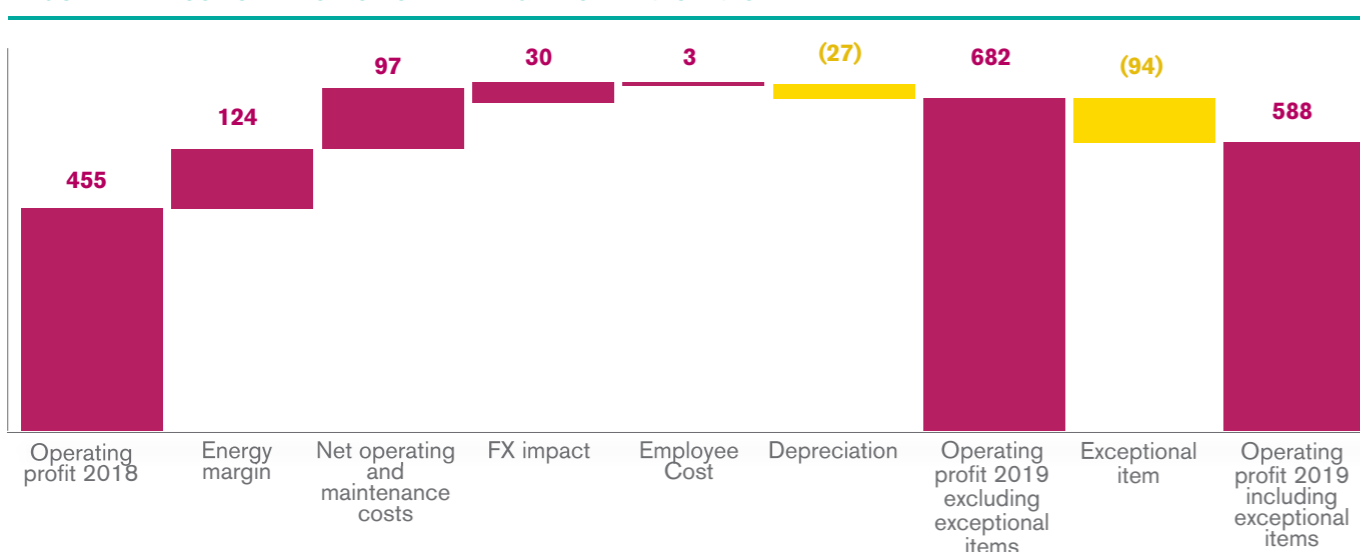


FIGURE 4: RECONCILIATION OF OPERATING PROFIT 2018-2019



TREASURY MANAGEMENT FRAMEWORK FOR TREASURY AND TRADING OPERATIONS

The main financial risks faced by the Group are:

- Liquidity availability and maintenance of access to the debt capital markets
- Foreign exchange volatility
- Interest cost exposures on the Group's projected future debt requirements
- Inflation movements, which have the potential to erode financial performance over time
- Commodity price movements
- Counterparty credit exposure, and counterparty risk generally
- Operational risk, including risk of misappropriation of funds, through fraud or error
- Compliance with financial regulations

Group Treasury is responsible for the day-to-day treasury activities of the Group, and therefore for the management, in whole or in part, of each of these financial risks. Some of these risks can be mitigated using derivatives. Where this is the case, such instruments are executed in compliance with the Specifications of the Minister for Finance issued under the Financial Transactions of Certain Companies and Other Bodies Act 1992. This Act enables ESB to enter into derivative contracts to eliminate or reduce the risk of loss arising from changes in interest rates, currency, inflation, commodity prices or other risk factors similar in nature. Cash flow hedge accounting treatment under IFRS 9 was applied to the Group's derivative positions where feasible up to 31 December 2019. Even where hedge accounting treatment was not applied, these derivatives were still considered valid economic hedges.

The Finance and Investment Committee of the Board is updated on an ongoing basis on key treasury matters. Group Treasury's approach to the management of the key financial risks of ESB is set out in more detail within the Financial Risk Management and Fair Value note 28 in the Financial Statements.

LIQUIDITY AND FUNDING ACTIVITIES

Group Treasury's funding activities are of strategic importance to the Group, supporting ESB's capital expenditure programme, the refinancing of maturing debt, and the maintenance of an appropriate liquidity buffer to guard against future economic shocks.

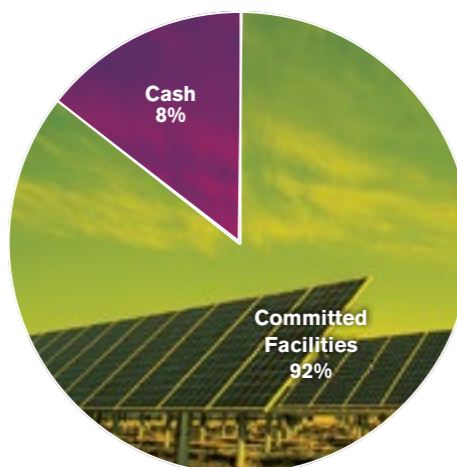
ESB had a strong liquidity position at 31 December 2019 with almost €1.5 billion in cash and available committed facilities. At 31 December 2019 ESB's €1.44 billion Revolving Credit Facility, provided by 14 relationship banks and extending out to January

2022, was the Group's main source of standby liquidity. At year end, negotiations to put in place a new facility with a maturity of 2025 were at an advanced stage.

During 2019, despite sometimes volatile market conditions, ESB raised over €600 million in new borrowings. In January 2019 ESB issued a EUR €100 million 25-year bond with a coupon of 2%, which extended the maturity profile of ESB's debt portfolio. 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.

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. In November 2019 ESB acquired a 50% equity stake in the 448 MW offshore wind project, Neart na Gaoithe (NNG). At project financial close, NNG executed interest and inflation linked swaps, de-risking the project from movements in underlying rates.

FIGURE 9: LIQUIDITY



Available liquidity at 31 December 2019 (€1.5 billion)

By year end, the weighted average interest rate on Group borrowings had fallen to 3.0% (December 2018: 3.4%). In recent years the Group has been able to issue longer dated (10 to 20 year) bonds, reducing medium term refinancing risk. Around a quarter of Group borrowings at 31 December 2019 were repayable within 5 years, compared to 42% at the end of 2016. This increase in the average duration of the Group's debt portfolio (8.4 years at 31 December 2019) is consistent with the long-term nature of Group assets. On 21 January 2020, ESB successfully raised a STG£325 million, 1.875% fixed rate note maturing on 21 July 2035. This transaction refinanced the STG£275 million 6.5% bond maturing in March 2020, which represented the majority of current borrowings at 31 December 2019.

FOREIGN EXCHANGE AND INTEREST RATE RISK MANAGEMENT

The Group's business is primarily located in the Republic of Ireland and the United Kingdom (UK). Accordingly, the majority of operating and investing cash flows are denominated in euro or sterling. The main exceptions to this are coal purchases, which are generally denominated in US dollars, and which are a declining element within ESB fuel mix. ESB's policy is to hedge any material foreign currency exposures as they arise using currency derivatives such as FX forwards, at competitive rates in the market. The maintenance by Group Treasury of credit lines with a broad range of well-rated counterparties is essential to the execution of this policy.

The Group's policy is to finance its euro denominated business by borrowing directly in euro or to convert any foreign currency borrowing to euro using derivative instruments, such as cross currency swaps. Investments in the UK (including NIE Networks) are generally funded by debt either issued in, or swapped to, pounds sterling. At 31 December 2019 approximately 72% of ESB's underlying debt is denominated in euro, with the remaining 28% in sterling.

The Group's interest rate policy was last reviewed and updated by the Board in March 2019. Under this policy, ESB has a preference for fixed interest rate debt, and will target to have a significant majority of its debt at fixed (or inflation linked) interest rate to maturity, with a minimum of 60% fixed maintained at all times. At 31 December 2019, approximately 95% of Group borrowings were fixed to maturity, or inflation linked. The Group is however exposed to future interest rate movements which may have an impact on the cost of future borrowing requirements, particularly as existing fixed rate debt

matures, and is refinanced. Group Treasury monitors market conditions closely in this regard and may seek to pre-fund or pre-hedge future funding requirements if appropriate, subject to the necessary Board and Shareholder approvals.

COMMODITY PRICE RISK

Fuel and carbon prices paid by ESB in connection with its electricity generation activities can exhibit some volatility, depending on market conditions. In 2019, coal use across Europe fell to historic lows. European year-ahead coal prices are deflated, as the penalty (i.e carbon price) for using the fuel has increased, with the cost of carbon emission permits in Ireland five times what it was in 2017. Stricter clean-energy policies and an abundance of natural gas also contributed to the reduction in coal usage. ESB's own coal-fired Moneypoint power station has had a reduced output over the past year, with a lower-running regime likely to persist into the future prior to eventual cessation of coal fired generation by the middle of this decade.

The resulting exposures to fuel price movements on future earnings are managed by ESB on a selective-hedging basis. ESB has entered into forward commodity price contracts in relation to gas, coal and carbon emissions allowances for up to three years ahead in order to reduce the Group's exposure to movements in wholesale electricity prices arising from such commodity price fluctuations. The Group's supply businesses in Ireland and, increasingly, in Northern Ireland and Great Britain, provide a natural hedge in this respect.

COUNTERPARTY RISK

The Group is exposed to credit risk in respect of the counterparties with which it holds its bank accounts and trades with in financial and commodity markets. ESB policy is to limit exposure to counterparties based on credit risk assessments. Exposures and credit limits are subject to ongoing review and monitoring in each business unit, and, at Group level, by the Group Trading Committee (GTC). Dealing activities are controlled by establishing dealing mandates with counterparties.

Counterparty credit limits set by the GTC are closely linked to their credit ratings as determined by the leading credit rating agencies, although other factors, including security provided and the legal structure of the transaction, may also be considered. The limit set for a counterparty is the amount by which the sum of the settlement amount, the mark to market value and the potential future exposure may not be exceeded. These positions are reviewed on a regular (up to daily) basis. During 2019, the majority of the Group's fuel commodity trades by value were transacted through energy market exchanges, rather than bilaterally. Exchange trading in general reduces, although it does not eliminate, counterparty risk, as well as providing trading liquidity and pricing transparency. Group Treasury hedging (regarding foreign exchange, interest rate, and inflation risk), continues to be carried out bilaterally with rated relationship banks, through bilateral OTC contracts.

FINANCIAL REGULATION

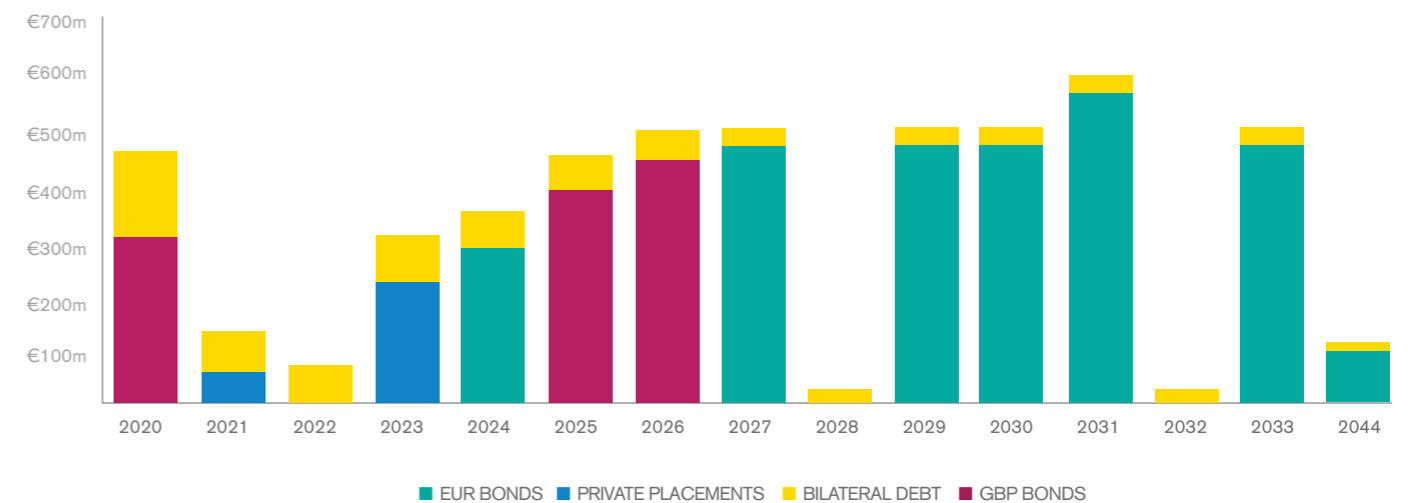
The regulatory environment for trading in financial and energy markets has become more complex in recent years, and the Group's capability in this regard has increased accordingly. The frequency

and scope of regulatory queries increased during 2019. Responding to queries from regulatory authorities and ensuring ongoing compliance with financial regulation will continue to be an area of focus in 2020.

OUTLOOK

ESB's position as Ireland's leading energy utility, its stable business profile and its solid financial position ensures it is well placed to meet the challenges that lie ahead and to deliver its Brighter Future strategy.

FIGURE 10: ESB DEBT MATURITY* PROFILE AS AT 31 DECEMBER 2019



* Cash flows associated with private placement repayments reflect hedging arrangements in place

GENERATION AND TRADING (GT)



Jim Dollard
Executive Director
Generation and Trading

What were the key achievements for Generation and Trading in 2019?

There are two key achievements for the year; **1. Major progress in the delivery of GT's renewable's strategy.** ESB intends to have 3.5GW of renewables assets by 2030 and 2019 has been a very positive year in meeting this objective.

- Delivery of 2 new major wind projects - Construction of Grousemount, ESB's largest wind farm to date has progressed well, the 114 MW project based on the Cork / Kerry border has made great progress and is on schedule to be commissioned by the start of Q2 2020. The 89 MW Oweninny wind farm in Co. Mayo was brought into commercial operation late in 2019 and is a great example of collaboration with our joint venture partner Bord na Mona.
- Development of a significant future pipeline of onshore wind assets - ESB has announced its intention to partner with Coillte to create a joint venture to develop onshore wind assets on Coillte owned land in Ireland. In addition ESB continues to grow a pipeline of c. 1 GW of onshore wind assets in Scotland and Wales.
- Significant growth in ESB's footprint in offshore wind. Building on the acquisition of a stake in the Galloper windfarm in 2018, ESB acquired a 50% shareholding in the Neart na Gaoithe 448 MW offshore wind farm project, located off the east coast of Scotland. The construction phase of the project has commenced and ESB are looking forward to partnering with EDF on this project. Offshore wind in Ireland is a key focus for ESB. ESB is partnering with Parkwind in the development of the Oriel and Clogherhead Wind farms and more recently GT has also entered into key strategic partnering agreements with Equinor to co-develop offshore wind assets in Ireland.

2. Effectively managing the transition of the operating business as it decarbonises - 2019 presented a number of challenges to the business and while there have been some difficult outcomes

such as the decision to close the peat stations in 2020, overall the business was effective in managing this transition. Key items of note were;

- The enhancement of our approach to safety through the Safe & Sound programme
- The delivery of financial targets for the year
- Strong performance in plant reliability across the portfolio and a successful first full year of operation in the new I-SEM market
- Ongoing realignment of our portfolio in terms of the closure of North Wall, the rationalisation of our operations in Corby and in particular the delivery of an agreement with our staff in Moneypoint to rationalise the operation of the plant in light of the significantly reduced running now expected in the market
- The successful participation in I-SEM capacity auctions and in particular the award of capacity contracts for 600 MW of new capacity

How does the business help ESB fulfil its strategic and financial objectives?

ESB has a strategic objective to support the decarbonisation of the electricity sector. To meet this goal GT are investing in renewable energy assets across a range of technologies including onshore and offshore wind and solar energy. GT are also developing assets that will support the grid to transition to a low carbon future such as battery and storage assets and flexible gas fired units that respond quickly to system demand, which will be key to facilitating large scale renewables in the future.



*before exceptional items of €94 million (2018: 140 million)

OVERVIEW

The GT business develops, operates and trades the output of ESB's electricity generation assets. The portfolio consists of 5,520 MW of generation assets across I-SEM and Great Britain (GB), with a further 338 MW under construction. With a strong focus on safety, GT delivers value by:

- Providing wholesale and traded products to meet market and customer needs;
- Offering system services to support a robust electricity grid and facilitate the integration of renewables;

- Optimising the operation of the ESB generation portfolio;
- Delivering new energy assets to support the transition to low-carbon energy; and
- Engaging constructively in communities close to construction projects and operating assets.

FINANCIAL PERFORMANCE

GT's operating profit before exceptional items at €198 million is up €161 million on 2018. This primarily reflects higher margins in I-SEM gas plants and reduced operating expenditure (mainly overhauls) offsetting the lower plant running in Moneypoint. Overall plant availability for the year was 84.1% with a number of significant overhauls being completed at Aghada, Dublin Bay and Turlough Hill stations in the year. GT has incurred an exceptional charge of €94m in the year. The exceptional charge relates to the cost of severance schemes relating to the restructuring of the Moneypoint plant, closure of North Wall and also the planned closure of the two peat fired stations, West Offaly Power and Lough Ree Power in the midlands at the end of 2020. ESB also impaired loans (€34 million) advanced to Tilbury Green Power Holdings Limited (an equity accounted investee waste to energy plant located in the UK) due to delays in reaching commercial operation milestones and lower projected GB spreads. Capital expenditure at €424 million is €125 million up on 2018, primarily due to ESB's investment in the 448 MW Neart Na Gaoithe offshore wind project in the UK and the construction programme for the Grousemount windfarm (114 MW).

OPERATING ENVIRONMENT

The Generation business has evolved rapidly over the last 20 years. Competition, regulation, and decarbonisation have significantly changed the landscape creating a challenging operating environment, particularly for thermal plants in the market. Whilst commodity prices in general have fallen in 2019, carbon prices have increased markedly. This has directly impacted the economics of coal fired generation and resulted in very low running in 2019. The financial consequence of this reduction in coal generation has been mitigated largely through hedging and increased generation from other elements of the GT generation portfolio. In light of the continuing challenges in the market for the thermal portfolio, GT are working towards ensuring that the cost base is reflective of the business and at a sustainable level.

In addition to this, ESB's peat-fired power stations Lough Ree Power and West Offaly Power are coming towards the end of their planning permission in 2020. ESB had been working on extending the life of the stations beyond 2020 by developing a phased transition from peat to biomass. However,

in July 2019, the planning application for West Offaly Power was rejected by An Bord Pleanála. Following on from that decision, a review of the options for both West Offaly Power and Lough Ree Power stations post-2020 was carried out. Having considered the key planning, environmental and commercial issues associated with peat and biomass, it has been concluded that there is no viable business model beyond 2020. As a result, both stations will close at the end of December 2020.

GT CUSTOMERS

GT continues to offer a variety of traded contracts to all supply companies in I-SEM on a non-discriminatory basis via an over-the-counter trading platform in weekly trading windows. These trading windows provide suppliers with the opportunity to hedge their power exposures to mitigate against market volatility risk for their customers.

PEOPLE

Employee numbers in GT at 914 are down on 2018 as the business continues to adapt and evolve to the changing operating environment brought about by higher renewables penetration and reduced running in certain generation stations. GT continues to focus on maintaining the safe and effective performance of its asset base while delivering on its strategic goals. Health, safety and wellbeing is of fundamental importance and GT's safety improvement programme during 2019 was directed at embedding the process safety programme, increasing the focus on behavioural safety through the Safe and Sound Programme, and the promotion of health and wellbeing. The Safe and Sound Programme is now up and running in 14 locations across GT. All locations within GT are covered by externally-audited OHSAS-certified safety management systems for which accreditation was maintained in 2019, additionally five locations succeeded in moving accreditation from this standard to the replacement ISO45001 Standard. Employee engagement is key to successful performance for the GT business. During 2019, various business lines and stations have received or maintained the accredited quality standard for Excellence Through People (ROI) and Investors in People (UK). While working to increase diversity and inclusion, GT's disability trainee programme recruited a further three employees in 2019.

SUSTAINABILITY

GT operates its business with a focus on minimising environmental impact, aiming to significantly increase renewable generation and reduce the overall carbon intensity of electricity generation. ESB is committed to leading a secure and affordable transition away from the use of coal and peat for power generation. CO₂ output from GT's generation plants is lower than 2005 (reference date) by approximately 59%, and the carbon intensity of generation reduced by 39% to 406 g/kWh.

UPDATE ON 2019 PRIORITIES AND PRIORITIES FOR 2020

2019 Priority	2019 Progress	2020 Priority
OPERATIONAL		
Continue to maintain a healthy and injury-free workplace.	• Phase 1 of Safe system of work started.	• Continue to maintain a healthy and injury-free workplace.
Continuing to improve safety assurance.	• Embedding of Process Safety .	• Commence phase 2 of Safe System of Work.
Further embed process safety programme into the business.	• Continued implementation of the safety culture transformation project (Safe and Sound).	• Continue to improve safety assurance.
Continue with further implementation groups in the Safe and Sound Programme.		• Improve Process Safety performance in the business.
		• Continue with further implementation groups in Safe and Sound Programme.
Safely build out the Grousemount and Oweninny wind projects.	• The construction of the Oweninny wind farm (89 MW) was completed in 2019 with commercial operation achieved in November 2019 and Grousemount wind farm (114 MW) was substantially completed in 2019, with commercial operation expected by the start of Q2 2020.	• Safely complete final stages of build out of the Grousemount wind project.
		• Oversee the initial stages of build out of Neart na Gaoithe (NNG) offshore wind farm.
Maintain a high level of performance in both generation and trading	• Annual availability of the generation fleet was lower than 2018 due to a number of technical issues at Moneypoint.	• Maintain a high level of performance in both generation and trading.
Consolidate operations in I-SEM	• Improved trading performance in the first full year of operation of the new I-SEM market compared to 2018.	• Continue to evolve and adapt the thermal portfolio so that its commercial performance is maximised.
STRATEGIC		
Increase the number of opportunities for investment in low-carbon generation including solar and offshore wind.	• Significant progress made in 2019 with the investments in NNG and Oriel wind farms. The joint venture established with Coillte and partnership with Equinor will offer further opportunities to explore in the future. Entered into partnership with Parkwind on development of Oriel and Clogherhead offshore wind farms.	• Increase the number of opportunities for investment in low-carbon generation including solar and offshore wind.
	• 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 Mona	
	• Development of potential flexible gas plants and batteries in GB and ROI, with 10-year capacity contracts achieved for a number of developments in ROL.	
Finalise plans for biomass conversion of the Midland stations	• With the refusal of planning permission for these stations in 2019, both stations will be closed at the end of 2020.	• Manage the efficient and orderly closure of these stations.

POWERING THE TRANSITION TO A CLEAN ENERGY FUTURE

Neart na Gaoithe (NNG)

NNG offshore wind farm will be located off the East coast of Scotland and will comprise 54 turbines having a total capacity of c. 448 MW. It is a joint venture with EDF Renewables UK (EDF), with both EDF and ESB owning 50%. The project has secured a 15-year Contract for Difference and is expected to reach commercial operation by the end of 2022.

Why did ESB invest in NNG?

Offshore wind is a key part of the ESB Renewables strategy. Building on the recent investment in the Galloper offshore wind farm in 2018, this investment strengthens commitment at ESB to developing an offshore wind portfolio in ESB's core markets of Ireland and Great Britain and NNG represents a solid investment proposition in its own right. NNG positions ESB well in delivering on the scale of ambition in ESB's Brighter Future Strategy to significantly increase the volumes of zero-carbon technologies in GT's generation portfolio.

ESB NETWORKS



Paddy Hayes
Managing Director
ESB Networks DAC



Paul Mulvaney
Executive Director
Customer Delivery, ESB Networks

OPERATING PROFIT
2019 €344 million

2018 €355 million
(€11 million)

CAPITAL EXPENDITURE
2019 €581 million

2018 €590 million
(€9 million)

REGULATED ASSET BASE (RAB)
2019 €8.1 billion

2018 €7.9 billion
€0.2 billion

FINANCIAL PERFORMANCE

ESB Networks operating profit for 2019 at €344 million is down €11 million on 2018 mainly due to lower electricity volumes on the distribution network. Capital expenditure at €581 million is in line with 2018 with significant investment in delivering new connectors to homes, businesses and renewables, delivery of the Smart Metering programme as well as renewal of the existing network.

OPERATING ENVIRONMENT

The government's REFIT programme, incentivised the delivery of a significant number of renewable generation projects in 2019. In total, ESB Networks connected 550 MW of renewable generation, of which 542 MW was wind.

ESB NETWORKS' CUSTOMERS

Electricity customers are at the heart of all activities for ESB Networks: including customers that use electricity, customers that supply or generate electricity and customers that access our network for the provision of services.

Customer Interactions

Customers interact with ESB Networks across many touchpoints including:

- The Customer Care Centre: which deals with over 1.5 million calls per year, achieving customer satisfaction ratings above 90% and in 2019 was awarded the Customer Contact Association (CCA) silver membership award for successfully achieving the Global Standard for over 10 years.
- Social Media: where ESB Networks now has +48,000 Twitter and +30,000 Facebook followers, achieving +19 million combined impressions, and ESB Networks' LinkedIn channel launched at the end of 2019.

Engaging Widely in 2019

- In preparing for the regulatory price control period covering 2021–2025 (PR5), ESB Networks

engaged with a broad range of customers and stakeholders through surveys, focus groups and workshops around the country. Discussions of ESB Networks' investment plans and customers' views and priorities, provided an important input to planning PR5.

- During 2019 ESB Networks prepared, and published for a consultation a Strategic Stakeholder Engagement Framework, setting out its approach to engaging with customers and stakeholders, together with a Strategic Stakeholder Engagement Plan, setting out specific areas of engagement activity over the coming period.
- In the first series of innovation events, ESB Networks hosted the 2019 Innovation Forum to discuss strategies engaging with and receiving feedback from key stakeholders, including Industry experts, government agencies and academia.

SAFETY

ESB Networks is committed to protecting the safety, health and wellbeing of our employees, contracting partners, members of the public and others who may be affected by its activities. Implementation of the ESB Networks Safety Strategy 2013-2019 was successfully completed and the roll out of the Safe and Sound safety culture transformation programme in all ESB Networks' locations was initiated. Safety engagement and communications were important themes and the number of serious (P1) incidents and absenteeism due to injuries both reduced in comparison to 2018. A full programme of competence and assurance auditing was completed, and following an external audit, ESB Networks was recommended for recertification to the international safety standard OHSAS 18001.

Public Safety

- Public safety activities continued to be central to the safe management of the network and the safe delivery of work programmes. These activities include hazard patrolling, media campaigns (TV, radio, print and digital), to increase public awareness of electricity, together with stakeholder engagement initiatives.

PEOPLE

ESB Networks' 3,490 staff are vital to delivering ESB Networks strategy and meeting customer needs. It was affirming to see people from ESB Networks being recognised by industry during 2019, including:

- Pat Horgan, ESB Networks Customer Contact Centre, was recognised in the Customer Service Excellence Awards.
- The ESB Networks Renewable North Team was recognised by the Sligo Business Awards for connecting of renewables.

Strong recruitment continued in 2019 with 121 new Network Technicians hired, 90 directly from ESB Networks' Apprenticeship Programme. ESB Networks' Apprenticeship recruitment campaign had another successful year with 83 apprentices selected from over 6,800 applicants and a strong increase in female participation rates. Caolán Carty

won the Shane Conlan Perpetual Trophy in ESB Networks' Apprentice Network Technician of the Year competition.

SUSTAINABILITY

ESB Networks is committed to supporting the Irish Government's target of 40% of energy consumption coming from renewable sources by 2020. Some 550 MW of renewable generation was connected in 2019, bringing total renewable generation connected to the network to over 4.6 GW. During 2019, ESB Networks developed revised notification protocols in relation to leakages from fluid filled cables with the relevant statutory authorities, made significant progress on assessing potential environmental impact of historic leakages, and established a web page on www.esbnetworks.ie to provide public information in relation to fluid filled cables. This web page will continue to be updated as further reviews are undertaken. ESB Networks uses

Sulphur Hexafluoride (SF6) as a safe insulator in switchgear. During 2019, ESB Networks deenergised older switchgear that was suffering leakages and continued to work to contain, reduce and minimise the use of SF6. During 2019, ESB Networks signed up to the European Distribution System Operators' Sustainable Grid Charter.

POWERING THE TRANSITION TO A CLEAN ENERGY FUTURE

As part of the National Climate Action Plan, the National Smart Metering programme installed the first 15,000 meters in the Midlands (centred around Portlaoise) and in West Cork (centred around Bandon). Smart meters will allow customers to play their part in the low carbon energy future, supporting the electrification of heat and transport, distributed generation and microgeneration, and bringing benefits to both customers and the environment.

Q What are the key achievements in 2019 for ESB Networks?

Connecting more renewable generation

ESB Networks connected 550 MW of renewable generation to the network, of which 542 MW was wind generation. In total, ESB Networks connected 31 separate generation projects to the network in 2019, bringing the total volume of renewables connected to 4.6 GW of which over 4 GW is wind.

Connecting more homes and businesses

ESB Networks connected over 30,206 homes and businesses this year, an increase of almost 12% compared to 2018, and an increase of 24% compared to 2017.

Supporting the widespread electrification of transport and heat:

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.

Responding to customers:

In 2019, ESB Networks successfully achieved the Customer Contact Association (CCA) Global Standard for Contact Centre performance.

Consulting with customers and stakeholders:

In 2019, ESB Networks increased the level of engagement and consultation with customers and stakeholders, particularly in relation to our Price Review 5 (PR5) proposals.

Innovating for the future:

ESB Networks' challenge is to innovate further and faster. Throughout 2019, ESB Networks have been innovating with communities working on the smart electricity trial in Dingle, the smart city project in Limerick City and the sustainable island community in the Aran Islands. Innovation within ESB Networks' Smart Metering Project won the award for "Intelligent Automation – Best Use of RPA & Cognitive" at the 2019 Artificial Intelligence Awards.

Reinforcing the network:

Important projects to improve resilience, increase capacity and strengthen the network were completed in 2019 including new 110kV Stations as part of the Donegal Loop Reinforcement Project, energisation of the new Castlebaggot 220kV Station in Dublin, completing the major rebuild of Drybridge 110kV Station in Louth, and uprating of 27km of the Bellacorrick/Moy 110kV line in Mayo.

Reacting to extreme weather:

Several major storms occurred in 2019 which required restoration responses from all teams in ESB Networks. ESB Networks would like to thank our customers for their patience during the restoration effort for these events.

Commencing the roll-out of smart meters:

Smart meters will be key to putting customers at the centre of a sustainable energy future. ESB Networks successfully installed the first Smart Meter in September 2019 and has continued to safely ramp up delivery with over 15,000 meters installed by the end of the year.

Q How does ESB Networks fulfil its strategic and financial objectives?

In leading the transition to a low carbon future powered by secure and affordable clean electricity, ESB Networks continues to;

- Connect greater volumes of renewable generation to decarbonise electricity;
- Develop the network to support widespread electrification, so that clean electricity can drive the decarbonisation of transport, heat and the economy;
- Connect and respond to the changing needs of customers;
- Reinforce and improve the resilience, performance and safety of the network; and
- Maximise networks utilisation and value for money for customers

OVERVIEW

ESB Networks is the licensed operator of the electricity distribution system in the Republic of Ireland (ROI). With responsibility for building, operating, maintaining and developing the network and serving all electricity customers across the country. ESB Networks also owns the Transmission System Network in ROI, working closely with the Transmission System Operator, Eirgrid. ESB Networks invested €248 million in reinforcement, asset replacement and constructing new networks in 2019 whilst €118 million was spent on maintaining the existing network. 2019 was the fourth year of the regulatory price review period PR4 and ESB Networks has continued to make good progress on the approved investment and maintenance programmes.

UPDATE ON 2019 PRIORITIES AND PRIORITIES FOR 2020

2019 Priority	2019 Progress	2020 Priority
OPERATIONAL		
ESB Networks' Safety Strategy 2019–2023 includes an organisation wide safety culture programme: Safe & Sound.	• The Safe & Sound safety culture Transformation Project has been established and is vested in 31 empowered leadership teams throughout ESB Networks.	• Build on the successful initial implementation of the Safe and Sound safety culture Transformation Project to improve leading indicators for the safety of our employees, contract partners and the public.
Facilitate the connection of more low-carbon electricity generation.	• 31 separate projects connected adding 550 MW of low carbon generation.	• Grow the capability for connecting and accommodating even more renewables, consistent with the National Climate Action Plan targets.
In line with the PR4 contract, efficiently deliver transmission and distribution capital and maintenance projects to reinforce the resilience, performance and safety of the network; and maximise networks utilisation and value for money.	• During 2019 ESB Networks efficiently delivered €581 million of transmission and distribution capital projects.	• In line with PR4 contract, efficiently deliver transmission and distribution capital and maintenance projects to reinforce the resilience, performance and safety of the network.
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.
STRATEGIC		
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.	• Finalise, in agreement with CRU, a suite of financeable investment plans for the period of 2021–2025 (PR5) consistent with the National Climate Action Plan, securing a low-carbon future, protecting customers, and transforming the role of the Distribution System Operator.
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.	• Deliver 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.
		• Continue the transformation of ESB Networks' environmental performance, reducing the carbon footprint of operations and delivering on the Sustainable grid charter.

NORTHERN IRELAND ELECTRICITY NETWORKS (NIE NETWORKS)



Jerry O'Sullivan
Deputy Chief Executive

What were the key achievements in 2019 for NIE Networks?

The Northern Ireland Strategic Energy Framework 2010–2020 set an ambitious target for Renewable Energy Sources for Electricity (RES-E) of 40% and this was achieved in 2019. Latest figures show that 45% of the total annual electricity consumption in Northern Ireland for the 12 months ending September 2019 was generated from local renewable sources. NIE Networks has played a critical role in meeting the RES-E target by providing the network connections for renewable generators with a cumulative investment of over £365 million in the network to deliver these connections.

NIE Networks has continued to improve its network performance and service to customers with another significant reduction in Customer Minutes Lost (CML) when compared to 2018, total CML in 2019 represents the lowest on record. This has been achieved alongside the delivery of NIE Networks' RP6 commitments with an investment of over €100m in the network in 2019.

NIE Networks continues to invest in its people and was awarded the title of Best Apprenticeship Scheme for 2019 at the national Chartered Institute of Personnel and Development People Management Awards UK.

How does the business help ESB fulfil its strategic and financial objectives?

NIE Networks is the owner of the electricity transmission and distribution networks in Northern Ireland (NI) and NIE Networks' revenues are derived primarily from its regulated businesses, significantly increasing the proportion of ESB's revenue from regulated businesses.

NIE Networks is embarking on a journey to evolve into a Distribution System Operator (DSO) meaning the company will be better placed to manage and optimise the network for the future energy market in NI.

NIE Networks launched its consultation on the

'Greater Access to the distribution Network' in 2019, seeking input from stakeholders and customers on exactly how its future model and operating structures might evolve. This consultation was well received and NIE Networks has now published its recommendations paper on the pathway to DSO. NIE Networks is actively engaging with the Department for the Economy and other NI stakeholders on the development of a future energy framework for NI as well as implementing an Innovation Strategy which seeks to meet the low carbon future challenge head on by working with customers to provide faster, cheaper and smarter connection solutions.

NIE Networks will be trialling six network innovation projects which are designed to create additional capacity on the distribution network at a lower cost than traditional reinforcement solutions and can be deployed much faster in response to the forecast changes in demand. This will help facilitate the predicted high growth rate in the connection of low-carbon technologies such as electric vehicles, photovoltaic cells, energy storage and heat pumps.

OPERATING PROFIT

2019 €61 million
2018 €62 million
(€1 million)

CAPITAL EXPENDITURE

2019 €154 million
2018 €171 million
(€17 million)

REGULATED ASSET BASE (RAB)

2019 £1.6 billion
2018 £1.5 billion
£0.1 billion

OVERVIEW

NIE Networks is the owner of the electricity transmission and distribution networks in NI, transporting electricity to over 880,000 customers including homes, businesses and farms. NIE Networks' employees maintain and extend the electricity infrastructure across NI, connect customers to the network and ensure that its equipment is safe and reliable. NIE Networks also provide electricity meters and metering data to suppliers and market operators. NIE Networks develops and reconfigures the electricity network to facilitate the connection of further renewable generation.

As required under its regulatory licences, NIE Networks is an independent business within ESB with its own Board of Directors, management and employees.

FINANCIAL PERFORMANCE

NIE Networks' operating profit for 2019 at €61 million is broadly in line with 2018. Capital Expenditure at €154 million is down €17 million primarily due to a lower level of demand in the connections market. Investment in the network was in line with the level of expenditure required to successfully deliver the physical outputs specified in the current price control. 2019 capex was primarily related to the refurbishment and replacement of worn transmission and distribution assets to maintain reliability of supply and ensure the safety of the network.

OPERATING ENVIRONMENT

In 2019, NIE Networks has been focused on implementing its RP6 plan, with 40% of the outputs from the Network Investment Plan delivered to date. In line with targets set in the current price control, NIE Networks reduced the number of customer complaints and overall customer minutes lost year on year.

NIE NETWORKS' CUSTOMERS

NIE Networks has continued to manage outages in order to minimise the length of time that customers are off supply. The average number of customer minutes lost due to planned interruptions to supply was 45 (2018: 41). The average number of minutes lost due to faults in the distribution network was 38 (2018: 53). There were 2 complaints taken up by the Consumer Council for NI (CCNI) on behalf of customers during the year (2018:1). In the event of a power cut or planned interruption to supply, NIE Networks offer a telephone information support service to customers who are dependent on life supporting medical equipment. Over 10,000 people are currently registered on the company's Medical Customer Care Register.

Every customer is important to NIE Networks and in 2019 the company became an accredited 'Just A Minute' (JAM) Card friendly organisation. Over 90% of employees are trained to provide the highest standard of service to those customers with a learning difficulty, autism or communication barrier.

SAFETY

Ensuring the safety of employees, contractors and the general public continues to be the number one value at the core of all NIE Networks' operations. NIE Networks had 3 lost time incidents during the year (2018: 2). The aim is to provide a zero-harm working environment where risks to health and safety are assessed and controlled.

PEOPLE

NIE Networks employs a highly skilled work force of 1,208 people ranging from linespersons to meter

readers, jointers to electrical engineers, and finance professionals to human resource experts. NIE Networks is an accredited 'Investors in People Gold Company'. NIE Networks engages annually with 18,000 young people in NI through the company's outreach and education initiatives, including as headline sponsor of Skills NI.

NIE Networks is striving to increase awareness of the careers on offer within the energy industry and attract more female employees, through increasing awareness of STEM subjects, as well as strong partnerships with Women In Business and the Institute of Directors. Since 2015, over one third of the company's apprenticeship and graduate intake has been female.

NIE Networks has recently been awarded the Bronze Diversity Charter Mark for its work in promoting gender diversity. NIE Networks continues to invest in its people and was awarded Best Apprenticeship Scheme for 2019 at the UK national Chartered Institute of Personnel and Development People Management Awards.

SUSTAINABILITY

NIE Networks is currently planning and working on over 50 new generation projects which will take the total amount of renewable energy connected to approximately 1,900 MW by the end of 2020, further increasing the penetration of renewable energy.

NIE Networks has successfully connected cumulatively over 20,000 customers who provide renewable generation capacity to the network, significantly adding to the available market capacity. NIE Networks was awarded Platinum level for the NI Environmental Benchmarking Survey for the third consecutive year in 2019. The Survey recognises and rewards those organisations that are going above and beyond their legal requirements to improve their environmental impacts and better manage their resources. NIE Networks continues to lead the way in the industry, having been the only utility to receive the Platinum accolade.

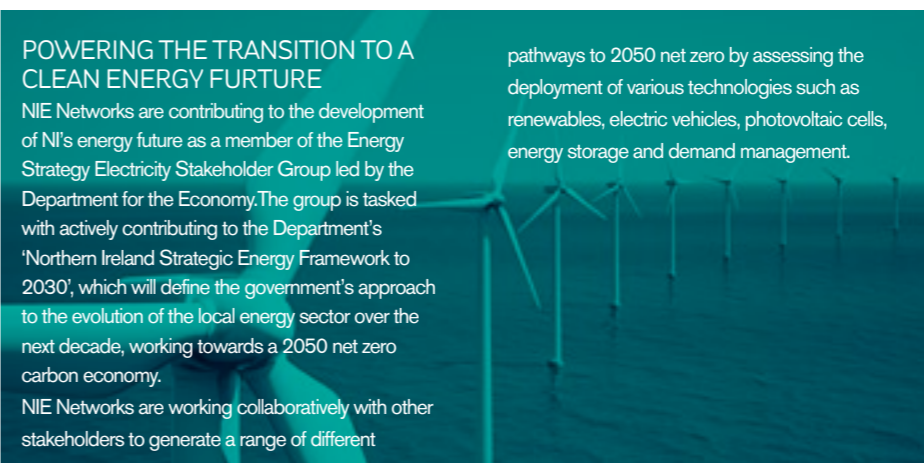
POWERING THE TRANSITION TO A CLEAN ENERGY FUTURE

NIE Networks are contributing to the development of NI's energy future as a member of the Energy Strategy Electricity Stakeholder Group led by the Department for the Economy. The group is tasked with actively contributing to the Department's 'Northern Ireland Strategic Energy Framework to 2030', which will define the government's approach to the evolution of the local energy sector over the next decade, working towards a 2050 net zero carbon economy.

NIE Networks are working collaboratively with other stakeholders to generate a range of different

UPDATE ON 2019 PRIORITIES AND PRIORITIES FOR 2020

2019 Priority	2019 Progress	2020 Priority
OPERATIONAL		
Ensure the health and safety of employees, contractors and the general public and achieve a zero-harm work environment through implementation of injury and accident-free initiatives.	<ul style="list-style-type: none"> 3 lost time incidents. Retained both ISO accreditations Implemented Health & Safety management plan and Environmental management plan for 2019. 	<ul style="list-style-type: none"> Ensure the health and safety of employees, contractors and the general public and achieve a zero-harm work environment through implementation of injury and accident-free initiatives. Implement a reduction in NIE Networks' internal carbon footprint.
Continue to consistently provide high standards in network performance and customer service while delivering the RP6 investment programme and the high level of generation connections.	<ul style="list-style-type: none"> High customer satisfaction survey score following roll-out of Think Customer initiative. Continued management of outages to reduce customer minutes lost. 	<ul style="list-style-type: none"> Deliver a Customer Service Action Plan for 2020 that will drive further improvement in customer service and development of a customer centric culture.
Operate successfully in a contestable connections market.	<ul style="list-style-type: none"> Retained significant market share while facilitating active competition and customer choice. 	<ul style="list-style-type: none"> Continue to operate successfully in a contestable connections market.
Deliver RP6 programme while maintaining a safe and secure network Deliver total expenditure in line with RP6 allowances.	<ul style="list-style-type: none"> Substantial capital investment (€154million) during 2019 with spend incurred in line with allowances. 	<ul style="list-style-type: none"> Review business plans to 2024 and the necessary slips to ensure NIE Networks remain on track for successful delivery of RP6.
STRATEGIC		
Continue investment in employees through effective employee development and increased employee engagement with focus on encouraging continuous improvement.	<ul style="list-style-type: none"> Engagement with employees via a number of forums throughout the year. Leadership capability across all levels enhanced through a variety of training and development initiatives. Awarded title of Best Apprenticeship Scheme for 2019 at CIPD People Management Awards UK. 	<ul style="list-style-type: none"> Provide effective employee engagement across the business through appropriate leadership and communications. Continue investment in employees through effective training and employee development.
Continue effective engagement with key stakeholders.	<ul style="list-style-type: none"> Significant engagement undertaken with customers and other stakeholders in 2019. Implementation of stakeholder engagement strategy. 	<ul style="list-style-type: none"> Continue effective engagement with key stakeholders including consumer engagement advisory panel and other customer representatives.
Continue to monitor funding market conditions to assess optimal timing for next fund raising.	<ul style="list-style-type: none"> Funding requirements reviewed on a regular basis. 	<ul style="list-style-type: none"> Continue to monitor funding market conditions to assess optimal timing for next fund raising.
Prepare the network for transition to a low-carbon future.	<ul style="list-style-type: none"> Actively involved in shaping NI energy policy. Trialling of six innovation projects designed to create distribution network capacity at a fraction of traditional costs commenced. 	<ul style="list-style-type: none"> Contribute to the development of a new energy policy for NI appropriate to achieve net zero carbon by 2050.
		<ul style="list-style-type: none"> Understand the impacts and changes required going forward in a decarbonised, decentralised and digitised world evolving from a DNO to a DSO.



pathways to 2050 net zero by assessing the deployment of various technologies such as renewables, electric vehicles, photovoltaic cells, energy storage and demand management.

CUSTOMER SOLUTIONS



Marguerite Sayers
Executive Director
Customer Solutions

What were the key achievements in 2019 for Customer Solutions?

During 2019, Customer Solutions through its brands Electric Ireland, ESB Energy, ESB Smart Energy Services, eCars and ESB Telecoms continued to offer exceptional service and excellent value to all its customers. Specifically, Electric Ireland continued to deliver on its value commitment to residential customers by rewarding loyalty through competitive pricing and has now almost one million customers on automatically applied discounts which continue well beyond the one year limit typical in the industry year after year.

Business customers have also been offered a very competitive range of products and services to manage their energy needs and improve energy efficiency.

In GB, the ESB Energy business has grown to over 110,000 customers by employing enhanced digital offerings, and increased use of robotics as well as the deployment of gas and electricity smart meters for the first time in 2019.

ESB Smart Energy Services have been successful in delivering over 145 Gigawatt hours of energy savings across over 250 industrial and commercial customers in Great Britain and Ireland.

ESB eCars was awarded €10 million under the Climate Action Plan by the Department of Communications Climate Action and the Environment and has commenced an upgrade of its public network to facilitate reliable rapid charging of electric cars as a significant step to support electrification of transport in the Republic of Ireland (ROI).

How does the business help ESB to fulfil its strategic and financial objectives?

Providing customers with the excellent services and products has always been integral to the financial and strategic success of ESB. Customer Solutions is also pivotal to driving national decarbonisation

by creating innovative customer propositions, providing technological solutions and investing in the infrastructure that will enable society to transition to more efficient and more environmentally friendly choices.

REVENUE

2019 **€2.1 billion**

2018 **€1.8 billion**

€0.3 billion

OPERATING PROFIT

2019 **€59 million**

2018 **€43 million**

€16 million

OVERVIEW

Customer Solutions brings together all of ESB's retail and business offerings in Ireland and GB, including Electric Ireland, ESB Energy, ESB Smart Energy Services, ESB eCars and ESB Telecoms.

Electric Ireland is the energy retail arm of ESB in ROI and Northern Ireland (NI), supplying electricity and energy services across the island as well as gas in ROI. With over 1.4 million customers and an electricity all-island residential market share of 34%, Electric Ireland serves all market segments, from domestic households to large industrial and commercial businesses, in both ROI and NI, it also has 21% of the gas market in ROI.

ESB Energy is ESB's electricity and gas retail business in GB and launched in GB's residential market in 2017 and serves over 110,000 electricity and gas residential customers.

ESB eCars builds, owns and operates electric vehicles (EV) charging networks for public use across ROI, NI and GB. This network contains over 1,100 chargers on the island of Ireland, as well as 110 chargers in GB.

ESB Telecoms operates within the wholesale ROI Telecoms market, maintaining and operating circa 370 telecoms transmission towers and over 1,800km of fibre optic network.

ESB Smart Energy Services (SES) develops and delivers integrated management solutions for large energy users in the UK and Ireland. Working in partnership with customers, SES designs, develops and delivers tailored solutions delivering energy efficiency, on site generation and demand management technologies.

FINANCIAL PERFORMANCE

Revenue in Customer Solutions in 2019 was €2.1 billion, an increase of 11% compared to 2018. This increase was driven predominantly by increasing volumes across all supply segments as well as increased unit rates for residential electricity and gas customers arising from increased wholesale energy prices. Electric Ireland's overall market share increased by 1% during 2019 to 34% primarily as a result of customer gains in the industrial and commercial market sectors.

Customer Solutions reported an operating profit of €59 million, this is a €16 million increase on 2018's financial performance. This increase was driven by higher energy margin due to higher volumes compared to 2018 as well as the fact that profits were lower in 2018 due to the business absorbing the cost of high energy prices for the 2018 winter months.

OPERATING ENVIRONMENT

The energy retail market in ROI is a dynamic and competitive market with a high level of customer switching. Electric Ireland's residential market share increased in 2019. This was achieved through competitive pricing, excellent customer service, innovative products and commitment to reward loyal customers with enduring discounts year after year.

In NI, Electric Ireland competes with 4 suppliers in the residential electricity market. The market in NI is also competitive with all suppliers being proactive with campaigns targeting acquisition and customer retention.

The GB market is intensely competitive which has led to the "Big 6" incumbents losing share to several mid-sized and small providers over the last number of years. ESB Energy is constantly enhancing its digital capability with the aim of being the most innovative, responsible and easy to deal with energy supplier in GB.

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.
- Within e-transport, the Climate Action Plan in Ireland is targeting to increase the number of EVs in ROI to 950,000 by 2030. In GB, the public electricity charging market is very active, with circa 35 companies offering EV charging.

- Large energy users (LEU) across all jurisdictions are also seeking to improve their low carbon credentials and deliver operational efficiencies, leading to an increase in the number of energy advisory companies operating in the LEU market.

CUSTOMER SOLUTIONS' CUSTOMERS

In the 2019 Customer Experience Index Report, a report which ranks all the main consumer brands in Ireland based on customers' experience, Electric Ireland again received the highest rating and was voted the customer champion in the Utilities sector. Electric Ireland came top of Northern Ireland energy companies in 'Which magazines' annual energy customer satisfaction survey in September 2019. Customer Solutions further developed its service capability during 2019:

- Smart Meters for residential customers in ROI are being rolled-out as part of a national programme at the end of 2020, and Electric Ireland has progressed the design of new products which will be enabled by the smart meters.
- Smart Energy Services throughout 2019 have delivered bespoke solutions including low carbon heating projects, process re-engineering to reduce energy consumption and lighting upgrades in many customers' premises
- A contract to design and deliver heat pump and CHP installations for what will be the GB's largest and most sustainable commercial greenhouses in Norfolk and Suffolk has been won by Smart Energy Services. This project is expected to deliver an estimated 1.2 million tonnes of carbon savings over the 20-year lifetime of the project.

PEOPLE

Customer Solutions' could not meet its strategic and operational targets without the capability, knowledge and performance of its employees, who are enthusiastic about delivering for customers in line with ESB's Brighter Future objectives.

A continued strong focus on employee development and targeted recruitment across a range of disciplines linked to the growth strategy will ensure that Customer Solutions continues to be a very attractive place to work, while providing customers with competitive offerings, excellent customer service and new and innovative products to meet changing needs.

SUSTAINABILITY

Electric Ireland is conscious of operating its business in a sustainable and environmentally responsible way and is certified to ISO 14001 standard. Electric Ireland actively works with customers to assist them in improving the sustainability of their homes and businesses through the efficient use of the energy provided to them.

UPDATE ON 2019 PRIORITIES AND PRIORITIES FOR 2020

2019 Priority	2019 Progress	2020 Priority
OPERATIONAL		
<ul style="list-style-type: none"> Deliver best in class digital customer journey by improving personalisation, online functionality, capability and insights through continued investment in online portals. Strong and robust management of the cost base to allow Electric Ireland to deliver on the price commitments across the product and service range. Continue to deliver a customer focused but effective credit management strategy and ensure vulnerable customers are protected. 	<ul style="list-style-type: none"> Delivery of Electric Ireland's flexible product manager provides customised analytics, market information and empowerment to large energy customers. Cost management allowing for delivery on commitment to reward loyal customers with discounts every year. Range of products and payment plans in place coupled with proactive early interaction with customers. Disconnections of less than 20 per 10,000 customers, the lowest rate in recent years. Bundled electricity and gas offers including smart-home speakers and smart thermostats Heat Pump Solution products, and EV charger installation propositions all available to customers. 	<ul style="list-style-type: none"> Deliver additional improvements to the online portals and prepare for smart metering activation, improving customer service and further empowering customers. Deliver performance improvements across the cost base to ensure Customer Solutions' can continue to offer competitive pricing propositions for all customers. Continue to deliver a customer focused but effective credit management strategy and ensure vulnerable customers are protected. Ensure continued engagement with state agencies and charities to support customers. Deliver customers a range of innovative products and services building on the Smarter Home offering. Deliver customers a range of integration innovation products and services. Deliver the roll-out of high-power charging hubs for EVs including replacement of standard chargers in line with the Climate Action Plan. This will transform the driver experience for EV owners across ROI.
STRATEGIC		
<ul style="list-style-type: none"> Improving customer experience, across all market segments, is of critical importance for Electric Ireland. Ongoing investment and development of digital capability is central to this. Electric Ireland will lead the way to a brighter future by focussing on delivering on all energy efficiency targets as well as offering customers new products and services to encourage more energy-efficient behaviours. Continue to operate successfully within the new I-SEM to competitively source electricity for customers. Electric Ireland will continue to grow brand and market share within the ROI and NI market and also in GB through ESB Energy. 	<ul style="list-style-type: none"> New eCars Connect App delivered to allow customers to make a journey using the upgraded public charging network. Electric Ireland is on track to achieve its energy efficiency targets. Discounted All Electric Tariff available to customers with heat pump heating systems. ESB Energy Electricity Tariffs 100% green as standard. Successful first year of trading and operating within the I-SEM market ensuring market volatility was managed and ensured price stability for customers Significant growth within the NI & GB market by Electric Ireland and ESB Energy Provided the public charging network across London, Coventry and Birmingham 	<ul style="list-style-type: none"> Customer Solutions business ongoing focus on development of the digital service capability across the entire customer experience journey. Customer Solutions will lead the way, encourage and reward more energy-efficient behaviours. SES will provide energy services to customers by delivering low-carbon heat projects and growing offering of EV charging solutions. Ensure value and stability for customers by continuing to successfully manage market liquidity and ensure effective hedging of wholesale market risk. Continue to grow our brands, offerings and market shares across the NI and GB markets

POWERING THE TRANSITION TO A CLEAN ENERGY FUTURE

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 commercial-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.

ENGINEERING AND MAJOR PROJECTS



Nicholas Tarrant
Executive Director Engineering and Major Projects (EMP)

Q What are the key achievements in 2019 for EMP?

Engineering and Major Projects (EMP) was established in 2018 following an internal re-organisation to effectively support the delivery of ESB's Brighter Future Strategy. Its purpose is to deliver the major projects and engineering solutions required by ESB and its customers to lead the transition to reliable, affordable and low-carbon energy. EMP aims to ensure consistent best practice major project delivery across ESB and to provide a centre of engineering to drive ESB's Brighter Future strategic objective to enable the production, connection and delivery of low-carbon electricity.

Working with Generation and Trading, the construction and commercial operation of Oweninny 89 MW wind farm was completed, a joint venture with Bord Na Mona, and the construction delivery of Grousemount 114 MW wind farm was significantly progressed. EMP also successfully managed the generation maintenance outage programme during 2019 in collaboration with Generation and Trading.

Working with ESB Networks, a number of large projects, including construction delivery of the North South interconnector project, are now under the responsibility of EMP. The delivery of major projects by EMP and other work programmes by ESB Networks Customer Delivery will maximise the delivery of the overall ESB Networks' work programme.

Under Group Property and Security, the redevelopment of ESB's head office, Project Fitzwilliam, progressed well during the year. ESB International continued the provision of a range of engineering, operations and maintenance solutions and consultancy services across a range of national and international clients. During 2019,

ESB International significantly completed the construction and commissioning of a 1.8 GW gas fired 'H' class power plant for Aluminium Bahrain (Alba) that powers the largest smelter in the Middle East region.

Q How does the business help ESB fulfil its strategic and financial objectives?

Engineering and Major Project delivery bring the Brighter Future Strategy to life by delivery of major projects and engineering solutions which enable the production, connection and delivery of low-carbon electricity.

Whether it is new wind farms, electricity transmission or distribution projects, or technologies such as biomass, battery storage or flexible power generation, a commercial engineering capability is a core requirement for ESB. This capability also supports the ongoing maintenance of existing infrastructure, ensuring that these generation and network assets perform efficiently throughout their lives to meet customer and market needs.

The aim of a centralised approach to major project delivery is to deliver projects efficiently, which supports ESB's financial objectives. This approach is based on having best practice project and contract management capability that can be applied across the Group, while observing regulatory requirements.

OVERVIEW

The EMP business provides a centre of engineering for ESB, delivers large projects across the ESB Group, is responsible for ESB'S Group Property and Security portfolio, and provides engineering and other services to external clients through ESB International. The business has over 800 people who work in partnership with other business areas in ESB and deliver engineering services to external clients both at home and internationally.

CENTRE OF ENGINEERING

The Centre of Engineering includes civil and environmental, networks and generation engineering, and asset management services. These engineering functions are involved in new development projects from concept through to construction and commissioning. They also support the operation and

maintenance of existing assets across the ESB Group, and work with Group Property and Security and ESB International.

MAJOR PROJECT DELIVERY

There are separate functional areas within EMP with responsibility for generation projects and networks projects. These work with the respective businesses and are building an enhanced capability to ensure these projects are delivered and that ESB reaches the goals set out in the Brighter Future strategy.

GROUP PROPERTY AND SECURITY

Group Property and Security (GP&S) manages ESB's property portfolio. The flagship project for GP&S is the development of ESB's head office in Fitzwilliam St., Dublin 2.

ESB commenced redevelopment of its Fitzwilliam Street site in Dublin 2 in June 2017 and work progressed well during 2019. This new 45,000 m² development will deliver a near-zero energy building, one of the most efficient and sustainable commercial office developments in Dublin city, while sensitively respecting and enhancing the Georgian streetscape. The project involves the demolition of the existing buildings, the retention and refurbishment of a number of protected Georgian structures and the construction of a new seven-storey office block.

ESB INTERNATIONAL

ESB International, a global provider of engineering consultancy services, is currently working in the Middle East, Africa and the Far East. It also continues to work across Europe including Ireland and the UK. During 2019, ESB International significantly completed the Alba CCGT project in Bahrain. ESB International's services are strongly linked to ESB's engineering, management and project delivery capabilities and allows it to bring these capabilities to international clients.

ENTERPRISE SERVICES



Geraldine Heavey
Executive Director Enterprise Services

Q What are the key achievements in 2019 of Enterprise Services?

As the provider of a wide range of key business processes and services across ESB Group, Enterprise Services' achievements in 2019 included:

- Leading the IT direction of ESB Group, ensuring excellent IT system availability including management of cyber security risks and delivery of the digital strategy
- Successfully managing IT programmes and projects; across the ESB Group
- Providing the professional services necessary to support strategic business decisions and
- Managing all financial and people operations for ESB Group.

Q How does Enterprise Services help ESB fulfil its strategic and financial objectives?

Enterprise Services' purpose is to enable ESB's Brighter Future Strategy by leading, advising and delivering in its core areas of expertise. Enterprise Services' strategic priorities are:

- Delivery of strategic advisory, business process and IT services effectively and efficiently so as to enable strategy delivery and support ESB's financial objectives across ESB Group.
- Accelerating delivery of digital and analytics across ESB Group as an enabler of business transformation and performance.
- Driving performance improvement and operational / performance excellence across all parts of Enterprise Services; and
- Continuing to build an engaged, safe and collaborative team.

A critical element in the successful delivery of Enterprise Services' strategic and operational priorities is the capability, knowledge and performance of its employees.

Working in collaboration and partnership with the rest of ESB Group, Enterprise Services has an essential role to play in the delivery of ESB's Brighter Future Strategy through a continued focus on operational/performance excellence including cost leadership, process improvement leveraging centralised capabilities and technology leadership.

OVERVIEW

As ESB's internal service provider, Enterprise Services enables ESB's Brighter Future Strategy by leading, advising and delivering in its core areas of expertise. Enterprise Services is:

- The strategic advisor to ESB Group in relation to core Enterprise Services
- Responsible for providing business critical processes and services to the rest of ESB Group through its two delivery arms, Business Operations and IT Delivery; and
- Responsible for leading the digital transformation of ESB Group, as well as leading process improvement across ESB.

An overview of Enterprise Services' functions is summarised below:

FUNCTIONS AND PURPOSES FOR 2020

Function	Purpose
Legal	The role of Legal is to provide legal advice and transactional services across a wide range of practice areas and to advise on legal risks across ESB Group.
Procurement	The role of Procurement is to manage all procurement activity across ESB Group while observing regulatory requirements. This includes development of procurement strategy, policies and procedures, strategic procurement planning and tendering services.
Pensions & Insurance	The role of Pensions & Insurance is to manage all pensions and insurance activities across ESB Group. This includes development of strategies, provision of expert advice and risk management. It also manages staff insurance services and the Medical Provident Fund.
Operational Excellence	The role of Operational Excellence is to deliver process improvement projects and drive a culture of continuous improvement across ESB Group.
CIO	The role of CIO is to shape world-class technology solutions that enable business growth and efficiencies and to oversee cyber security. This includes leading the transformation of ESB Group from an IT, Digital and Analytics perspective.
IT Delivery	The role of IT Delivery is to implement, scale and support IT and Digital projects, products and services and manage cyber security.
Business Operations	The role of Business Operations is to provide core business support functions such as people operations, finance operations, treasury operations, requisition to pay, facilities, as well as customer support.

RESPONSIBLE BUSINESS REPORT

- 66 Overview
- 66 People
- 68 Safety
- 70 Corporate Social Responsibility
- 73 Environment & Sustainability
- 76 Using our Profits in a Sustainable
Way

OVERVIEW



Pat Naughton
Executive Director, People and Organisation Development

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 to 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 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.

Pat Naughton,
Executive Director,
People and Organisation Development

PEOPLE

PEOPLE

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'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.
- Inclusion 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.
- 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

LEADERSHIP PROFILE

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.

WORKFORCE RENEWAL ACROSS ESB

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

- The Networks Apprentice Programme to develop Network Technicians for ESB Networks, brought 83 people at a variety of levels including school leavers and graduates into their first year of the 4-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
Average Number of Employees		7,974	7,874
Female		25%	24%
Senior Management Level Female		30%	25%
Employees with Disabilities*		3%	3%

Average number of employees by business unit is included in note 9 of the financial statements.

* ESB continues to exceed the 3% employment target for people with disabilities as set out in the Disability Act 2005.

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 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 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. The Health, Safety and Environment Committee supports the Board's monitoring and governance of health, safety and wellbeing. Further details of the Health, Safety and Environment Committee are outlined on page 101.

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.

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. 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.

A good catch is when someone intervenes when they observe an unsafe act or unsafe condition, and helps prevent a safety incident from occurring. Good catches are a key element in helping ESB achieve world class performance. The final number of good catches recorded by employees for 2019 was 11,901, an increase of 435 on the 2018 outcome.

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.

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.

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.

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 develop the leadership skills required to realize the Safe and Sound vision.

HEALTH AND WELLBEING

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.

KEY INITIATIVES AND PROGRAMMES IMPLEMENTED OR CONTINUED IN 2019

- 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.
- 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.
- 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.

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.
- 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.

FIGURE 1: LTI TREND 2017-2019

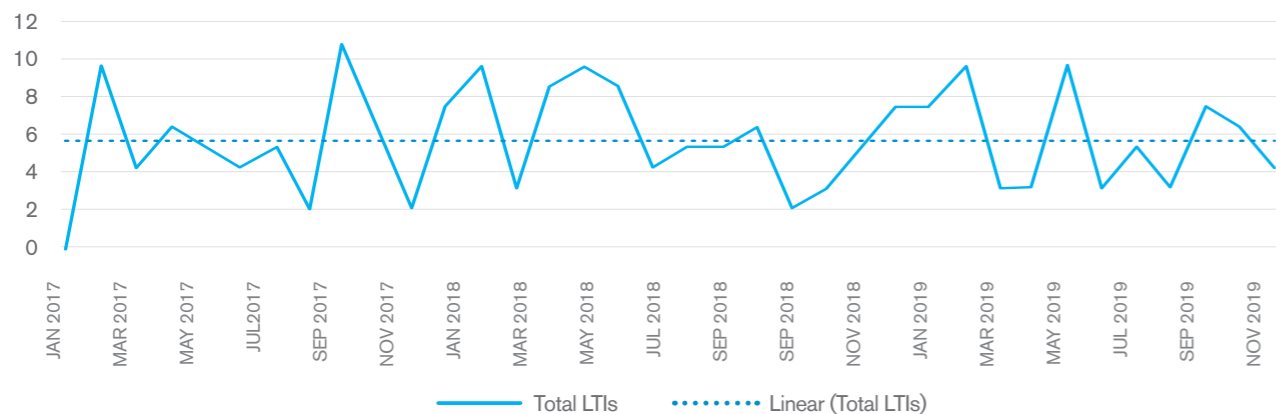
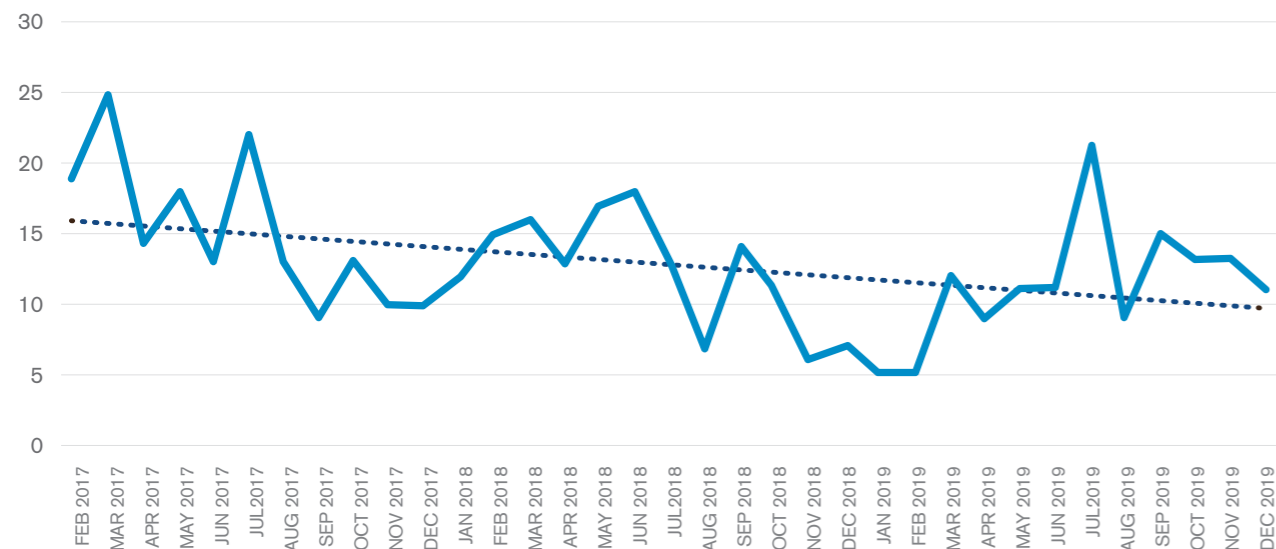


FIGURE 2: HIGH POTENTIAL INCIDENTS TREND (P1) 2017-2019



CORPORATE SOCIAL RESPONSIBILITY

SOCIAL PURPOSE

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 roll-out 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 8 primary schools throughout Ireland. ESB volunteers also introduce transition year pupils in 5 secondary schools to the world 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

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 (STEAM) 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.



SUSTAINABLE DEVELOPMENT GOALS

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

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 (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
- ESB Group Involvement (Over 60 staff across ESB, Electric Ireland, ESB Networks and NIE Networks supported as volunteers or judges)

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.



CLIMATE CHANGE

ESB recognises that climate change is the greatest priority facing Ireland and the world. In response, ESB's Brighter Future Strategy targets an accelerated transition to low-carbon electricity. ESB will exit peat generation by the end of 2020 and coal generation by the mid-decade. ESB's target is to halve the carbon intensity of its electricity generation by 2030 and to bring renewable electricity output to 50% of ESB's total electricity production by the same date.

ESB is a signatory of the Vision for the European Electricity Industry, which commits ESB to pursue the goal of carbon neutrality well before 2050.

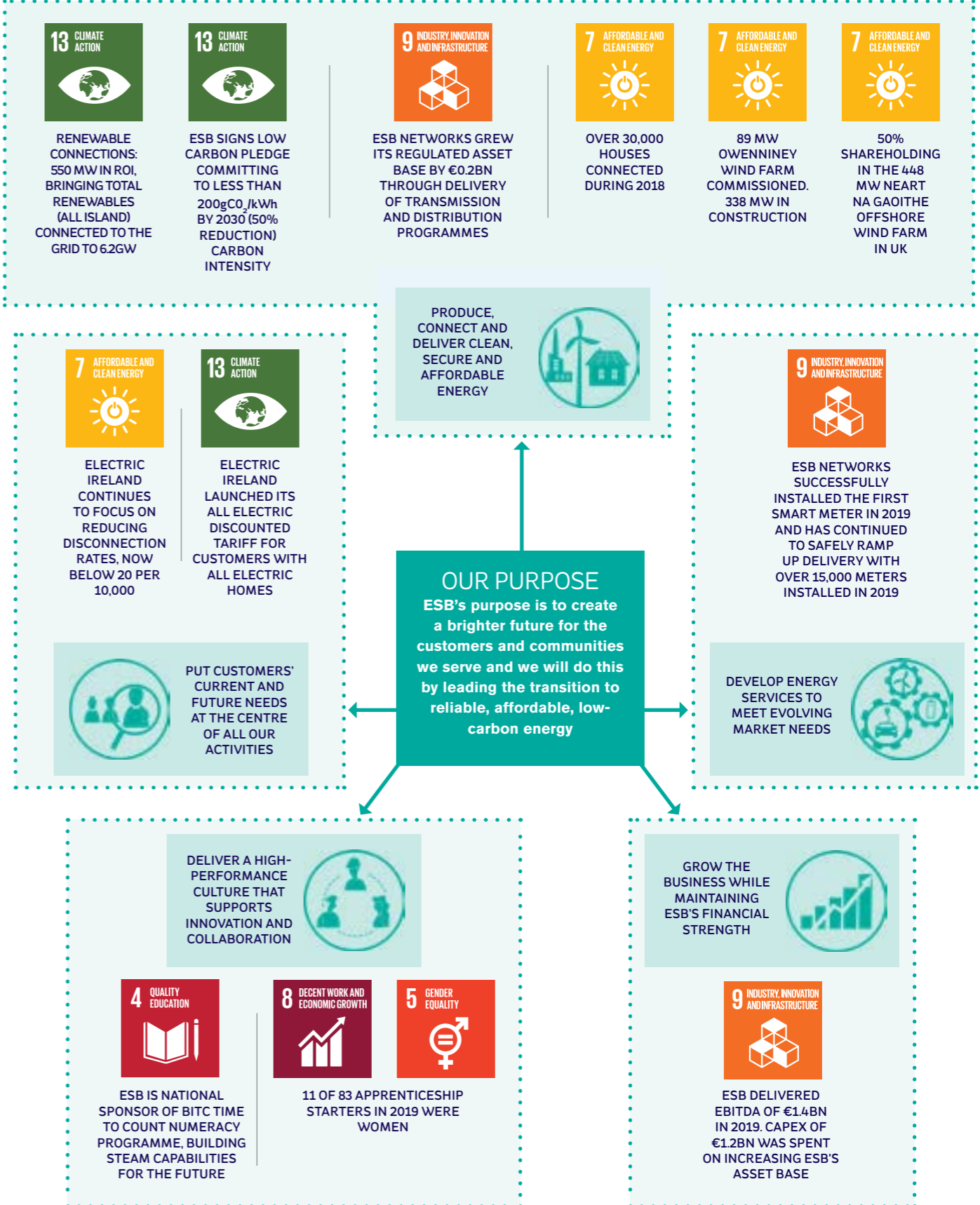
ESB is committed to leadership in caring for the environment in which ESB's businesses operate and operating sustainably by minimising ESB's impact on the earth's resources. This means that it is our responsibility to manage our impacts to provide a high level of protection for

the natural environment and to reduce its greenhouse gas emissions while supporting a sustainable economy.

The UN Sustainable Development Goals (SDGs) provide a balanced set of objectives for development. The illustration on the following page shows the alignment between ESB's strategy and the SDGs. Throughout this section, ESB highlights the SDGs impacted by particular activities.

ENVIRONMENT AND SUSTAINABILITY

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.



ENVIRONMENT

Each year ESB Group collates annualised waste data from each business unit to build a consolidated waste report in line with the requirements of the Global Reporting Initiative Standard. Waste is reported a year in arrears. The overall ESB waste tonnage for 2018 was 12,130, a 10% decrease from the 2017 total. The overall recycling rate has increased to 94.56%.

*excludes construction spoil and ash from peat and coal generation.

Waste and recycling 2018	
Waste	12,130* tonnes (-10%)
Recycling rate:	94.56%

ASSURANCE

ESB maintains environmental management systems across the Group. These are audited to the ISO 14001 standard. ESB discloses environment and sustainability information annually in the Sustainability Report in accordance with the GRI standards of disclosure. Alignment with the GRI standards is independently confirmed each year. This disclosure will be augmented in 2020 with the additional reporting requirements under the Green Bond issued in May.

The Safety Health and Environment group function oversee the development of Group Safety Health and Environment Standards and carry out regular site audits of these standards.

A cross-company group of senior managers - the Environment and Sustainability Leadership Team - was established in 2019 to provide guidance and direction to overall environmental assurance in the Group. Overall environmental performance is also monitored by the Health, Safety and Environment subcommittee of the Board.

Audits of the Group Environmental standards continued during the year and no issues were noted.

ENVIRONMENTAL ISSUES

A number of environmental issues were addressed during the year:

ESB Networks

Sulphur Hexafluoride (SF6) is used widely around the world as an insulator in switchgear, because its high electrical insulating properties

allows the switch gear to work efficiently and safely. During 2019, ESB Networks deenergised older switchgear that was suffering leakages and continued to work to contain, reduce and minimise the use of SF6. ESB Networks also addressed issues of fluid filled cables, developing response and reporting protocols with the relevant statutory authorities. A web page on www.esbnetworks.ie has been created to provide public information in relation to fluid filled cables; and this will continue to be updated as further reviews are undertaken.

Midlands Generation stations

During the drought conditions of 2017, the thermal plume of exiting cooling water led to a breach of conditions set out in the environmental licences of the two Midlands peat stations.

ESB has made improvements to address each of these issues. At the time of this report, prosecutions are pending by the EPA. In the meantime, a decision has been made to close the plants at the end of 2020.

SINGLE-USE PLASTICS

On 15 March 2019, the sale of single-use plastic items and all single-use coffee cups - including compostable cups - was discontinued in ESB catering services nationwide. This has removed all coffee cups, lids, cutlery, straws, drinking cups and smoothie bottles from use and replaced them with reusable alternatives. The impact of this measure has been to remove almost 1,000,000 single-use plastic items from annual usage and disposal, removing approximately 38 tonnes of CO₂ emissions annually. Further measures are planned for 2020.

2GOCUPS

Single-use cups were replaced with an internal cup borrow scheme, subsequently leading to a partnership with 2GoCup, an Irish company whose borrow and return cup scheme aims to build a national network of cafes who will remove all single-use cups from the growing café culture in Ireland. Collectively, the 2GoCup network saved 4.2 million single use cups in 2019.

FISHERIES

ESB carry out extensive fisheries development and conservation work as a primary fisheries owner. This arises from the fact that ESB operate several large-scale hydroelectric generations stations on the Shannon, Erne, Lee, Liffey and Clady Crollly river systems. ESB maintains partnerships with Inland Fisheries

Ireland, the Marine Institute and third levels colleges (including The National University of Ireland, Galway; University College Cork and Queens University, Belfast). In addition, ESB involves local interest groups, including angling clubs in these programmes of work.

Due to a 2009 EU Eel Regulation and a National Eel Management Plan, ESB carry out Trap + and Transport of juvenile and adult eel on the three largest catchments where hydroelectric generation occurs. This means that upward migrating juvenile eel and downward migrating mature silver eel can bypass the potential negative effects of hydro generation. Upward migrating juvenile eel (called 'elvers'), are captured each spring and summer and transported upstream by ESB employees.

The quantities vary according to the year and environmental effects. Also over the past decade, ESB have utilised the expertise of former commercial eel fishermen to catch down ward migrating silver eel. These autumn and winter migrating eel are then quantified (by weight) and released downstream of the stations. Each winter season sees approximately 60 tonnes of healthy eel released below the station where the eel continues their migration to the Sargasso Sea.

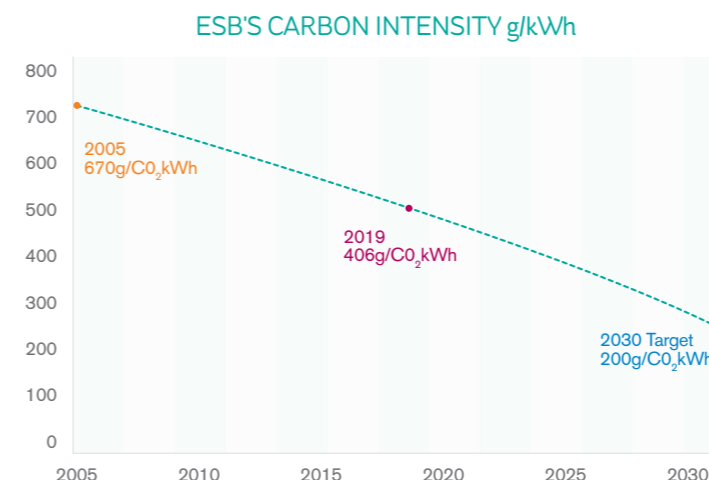
ESB operate three salmon conservation hatcheries to try and maintain and conserve salmon stocks. The hatcheries are located upon the Shannon, Erne and Lee catchments. Juvenile salmon are released within each hatchery and a portion are released as juveniles into the catchment above each hydro station. A smaller portion are released at 'smolt stage' from each hatchery and these return to the each hatchery as adult salmon the following year to begin the cycle again. An annual smolt generation protocol is implemented upon each catchment to minimise loss of smolts as they migrate downstream each spring.

Some habitat works to improve both the quality of the fisheries habitat and public access to fisheries (car parks, stiles, signage, etc.), are also carried out by ESB staff and contractors. The works include some selective bank clearance, fencing construction of weirs and pools, addition of spawning gravel, large boulders etc. These areas are then surveyed by ESB Fisheries staff to ensure that water quality and the progress of the fish population is maintained.

SUSTAINABILITY

Sustainability Targets	
Reduction in carbon intensity:	39%
Reduction in energy use (cumulative):	35%

CO2 EMISSIONS



CARBON DISCLOSURE

ESB is committed to progressively reducing the carbon intensity of electricity generation in 2019 and has set an ambitious carbon intensity target of 200g CO₂/kWh, which represents a 50% reduction on the current carbon intensity level. In 2019, CO₂ 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 CO₂/kWh.

CARBON MANAGEMENT

Since 2009, ESB has disclosed its carbon emissions through CDP, a global disclosure not-for-profit charity that runs the carbon disclosure system 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, the CDP assesses the performance of each company against sustainability and climate cation 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.

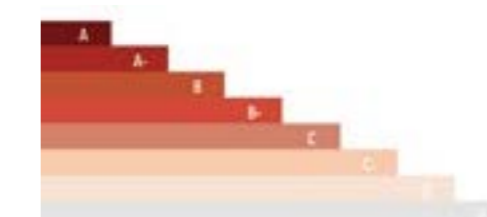
ESB was joined the Leaders Group on Sustainability, a Business in The Community Ireland (BITCI) led group of leading businesses who hold the Business Working Responsibly Mark. One of the first actions announced by the

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 and other founding members have committed to reduce their carbon intensity by 50% by 2030. The leaders group is working on the introduction of further best practises in 2019.

ESB GROUP ENERGY MANAGEMENT

ESB established a group-wide energy management system for its buildings and transport fleet in 2019. This was successfully certified to the ISO50001 standard in November, 2019. ESB and other public bodies are subject to energy reduction targets under the transposition of the EU Energy Efficiency Directive. ESB achieved a 35.0% cumulative

CDP SCORING FRAMEWORK



YOUR CDP SCORE
MANAGEMENT B
 Sector average: B
 Regional average: C

OPERATIONAL ENERGY CONSUMPTION		
ENERGY SOURCE	2019 (GWh)	2018 (GWh)
Coal	1,767	5,683
Natural Gas	18,999	22,925
Peat	3,971	4,045
Oil	413	205
OPERATIONAL ENERGY (PRIMARY ENERGY EQUIVALENT IN KWH)*		
Electricity	52,051,152	53,489,805
Thermal	3,790,805	4,986,783
Transport	53,653,578	56,146,927
ENERGY PERFORMANCE INDICATOR (ENPI)		
kWh/FTE Employee	19,749	20,852

*Operational Primary Energy Equivalent (non generation) as reported to Sustainable Energy Authority of Ireland, Annual Report 2019 on public sector energy efficiency performance.

energy reduction against the national target of 33% for 2020 by year end. 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.

USING OUR PROFITS IN A SUSTAINABLE WAY

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

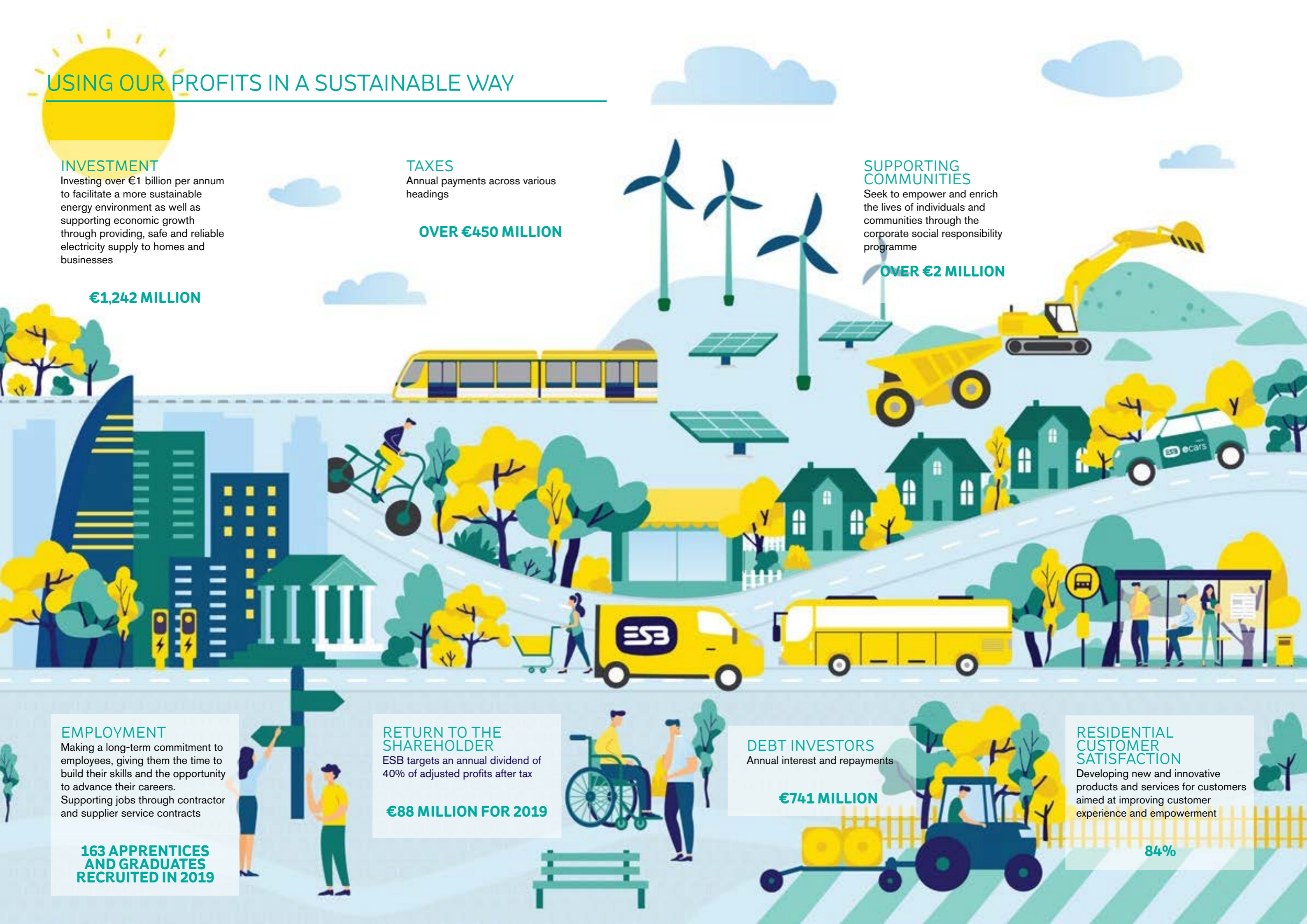
Annual interest and repayments

€741 MILLION

RESIDENTIAL CUSTOMER SATISFACTION

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

84%



CHAPTER 2

CORPORATE GOVERNANCE

- 80** The Board in 2019
- 84** Chairman's Corporate Governance Statement
- 86** The Board's Governance Report
- 95** Audit and Risk Committee Report
- 101** Board Committees in 2019
- 104** Board Members' Report



THE BOARD IN 2019



ELLVENA GRAHAM OBE

Chairman

Appointment to the Board: October 2010 and appointed as Chairman with effect from July 2015.

Tenure: Nine years and three months (four years and five months as Chairman).

Career experience: Ellvena brings wide-ranging experience of business and regulatory/policy issues to her role as Chairman of ESB. For over 30 years she worked in banking, most recently at senior executive level in Ulster Bank/RBS in both the Republic of Ireland (ROI) and Northern Ireland (NI) and managed large-scale operations in Europe, the Middle East and Africa. She is a Fellow of the Institute of Banking and a Fellow of the Institute of Directors.

External appointments: Chairman of the Belfast Waterfront and Ulster Hall, Member of Queen's University Senate, Immediate Past President of the Northern Ireland Chamber of Commerce & Industry, Chairman of the Economic Advisory Group (EAG) in Northern Ireland, Non-Executive Director of Camerata Ireland and a member of the Prince's Trust Council of Northern Ireland.

PAT O'DOHERTY

Chief Executive

Appointment to the Board: January 2013 as Board member and December 2011 as Chief Executive.

Tenure: Seven years as Board member.

Career experience: Holds primary and master's degrees in engineering from University College Dublin (UCD). Prior to his current role, Pat headed up ESB's largest businesses as Executive Director, ESB International, Managing Director, ESB Networks and Executive Director, ESB Power Generation. He completed the Advanced Management Programme at Harvard Business School.

External appointments: Vice President of Eurelectric, Director of Energy UK, Chair of the Apprenticeship Council of Ireland and former trustee of The Conference Board of the United States.



ANNE BUTLER

Independent Board Member

Appointment to the Board: November 2012.

Tenure: Seven years and two months.

Career experience: Chartered engineer. Worked in engineering consultancy, for Dublin local authorities and was a founding Director (Executive) of the Environmental Protection Agency (EPA). Former President of the Institution of Engineers and a member of the Irish Academy of Engineering.

External appointments: Served on a number of boards including the National Roads Authority (NRA), Ordnance Survey Ireland (OSI) and Dublin Institute of Technology (DIT) and currently serves on REPAK and the National Paediatric Hospital Development Board.



DAVE BYRNE

Worker Board Member

Appointment to the Board: January 2011 under the Worker Participation (State Enterprises) Act 1977. Re-appointed to the Board in September 2018 for a term of four years commencing 1 January 2019.

Tenure: Nine years.

Career experience: Member of a team that is now part of ESB's Enterprise Services organisation and previously worked in Customer Supply (now Customer Solutions).

External appointments: President of ESB Officers Association (ESBOA) until April 2010 and then appointed as the Group of Unions' representative in Central Partnership.

STEPHEN CARRIG

Worker Board Member

Appointment to the Board: January 2019 under the Worker Participation (State Enterprises) Act 1977

Tenure: One year.

Career Experience: Joined ESB as apprentice electrician in 1985. Holds primary and master's degree in engineering from Trinity College Dublin and UCD respectively. He is Controls and Instrument (C&I) Asset Management Specialist for the Generation Portfolio.

External Appointments: Member of the Institute of Engineers Ireland (IEI) and former Chair of Energy Sector Professional Association (ESPA) from 2014 to 2018.



ANDREW HASTINGS

Independent Board Member

Appointment to the Board: July 2015.

Tenure: Four years and six months.

Career experience: Graduated with a B.Admin in 1985 from Dundee University. Independent Non-Executive Director and Mentor following a 30-year career in banking & financial services. A Chartered Director, Chartered Banker and Certified Bank Director, and held CEO position of Barclays Bank Ireland plc until March 2015, which included responsibility for NI. Previously CEO of BNP Paribas Ireland from 2007 to 2011.

External appointments: Director of Elavon Financial Services DAC, the Dublin-based subsidiary of US Bancorp, Pepper Finance Corporation (Ireland) DAC Scottish Building Society and a Consultant to London-based Valuation Consulting LTD.



SEÁN KELLY

Worker Board Member ●

Appointment to the Board: January 2011 under the Worker Participation (State Enterprises) Act 1977. Re-appointed to the board in September 2018 for a term of four years commencing 1 January 2019.

Tenure: Nine years.

Career experience: A 20-year career in ESB Networks, currently in the delivery of large projects. Holds an honours degree in business from UCD and a higher diploma in mediation and conflict resolution from Maynooth University. Holds a diploma in human resources completed through Chartered Institute of Personnel and Development (CIPD) and certificates in health and safety from UCD and in-company directorship from the Institute of Directors in Ireland.

External appointments: Former chairperson and current member of the ESB Defined Benefit Superannuation Committee and Training Officer for the National Worker Directors Group. He is a member of the CIPD and the Institute of Directors (IOD).



PAUL LYNAM

Independent Board Member ●●

Appointment to the Board: October 2016

Tenure: Three years and three months.

Career experience: Holds a BSc in analytical science from Dublin City University (DCU), a postgraduate diploma in business studies from UCD and an MBA from City University Seattle. Paul is a Director of Operations of the International Industrial Business with Brand Energy & Infrastructure Services. He has a total of 25 years' experience in business. He previously served as CEO of the Whitfield Clinic in Waterford, CEO of Siemens Limited Ireland and CFO of Siemens Limited Ireland in the period from 2008 to 2010. Before his 10 years with Siemens, Paul spent 14 years in Germany in various management roles in both the Smurfit Group and Kappa Packaging.

External appointments: Served as a Director of Siemens Limited Ireland and Director of Whitfield Clinic associated companies.



TONY MERRIMAN

Worker Board Member ●

Appointment to the Board: January 2007 under the Worker Participation (State Enterprises) Act 1977. Re-appointed to the board in September 2018 for a term of four years commencing 1 January 2019.

Tenure: Thirteen years.

Career experience: Joined ESB as a network technician in 1979. Served as an officer with the ESB Group of Unions.

External appointments: Board member of ESB Employee Share Ownership Plan (ESOP) Trustee Limited and Chairman of the National Worker Directors Group.

NOREEN O'KELLY

Independent Board Member ●●

Appointment to the Board: April 2013.

Tenure: Six years and eight months.

Career experience: A chartered accountant who trained with KPMG. Held a number of senior positions in Independent News and Media Group including Head of Treasury and Group Secretary and was also Company Secretary of C&C Group. She currently works as a consultant on corporate governance.

External appointments: Director, Vice Chair and Chair of Audit Committee of Rehab and external member of the Audit Committee of University College Dublin.



ALF SMIDDY

Independent Board Member ●●

Appointment to the Board: October 2016.

Tenure: Three years and three months.

Career experience: A chartered accountant, who trained with PwC. He is an honours Commerce graduate from UCC, and has a Masters in Executive Leadership from Boston College and the University of Ulster. Chairman and Managing Director of Cork-headquartered Beamish & Crawford plc for over 12 years and on the Board of its parent company, Scottish & Newcastle (UK) Ltd. Member of the National Executive Council of IBEC, Director of Cork Chamber of Commerce, Chairman of the Cork Local Government Committee and served on the Board of Cork Airport Authority. He is a Fellow of the Irish Marketing Institute.

External appointments: Senior Independent Non-Executive Director of The Dalata Hotel Group Plc, Chairman of Quintas (Accountancy, Taxation and Corporate Finance), a Director of the Government-backed Social Innovation Fund Ireland, and Director of Oxfam Ireland.

NOREEN WRIGHT

Senior Independent Board Member ●●

Appointment to the Board: June 2011.

Tenure: Eight years and six months.

Career experience: Called to the Bar of Northern Ireland in 1976. Worked in the electricity industry for 25 years and held a number of senior management posts in both Northern Ireland Electricity plc and Viridian Group plc, including Company Secretary and Head of Legal Services.

External appointments: Lay Magistrate, member of both the Industrial and Fair Employment Tribunals of Northern Ireland and the Northern Ireland Valuation Tribunal. Non-Executive Director of Camerata Ireland.



KEY TO COMMITTEE MEMBERSHIP

- AUDIT AND RISK COMMITTEE
- HEALTH, SAFETY AND ENVIRONMENT COMMITTEE
- MARKETING AND CUSTOMER COMMITTEE
- REMUNERATION AND MANAGEMENT DEVELOPMENT COMMITTEE
- FINANCE AND INVESTMENT COMMITTEE

- PAGE 95
- PAGE 101
- PAGE 103
- PAGE 103
- PAGE 102

CHAIRMAN'S CORPORATE GOVERNANCE STATEMENT



Good governance provides the foundation for long-term value creation and is a core focus for the ESB Board and for me as Chairman. 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), we see our duties as including responsibility for the long-term success of the ESB 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.

Management has the knowledge and expertise for the operational requirements of the business. It is not the role of the Board to duplicate that. The Board establishes the company's purpose, values and strategy and we challenge and support management in the light of ESB's values and strategic direction. In our view, the best decisions are made through the dynamic interaction between Board and management.

GOVERNANCE

ESB, in pursuit of its governance objectives, complies with the State Code. ESB also complies on a voluntary basis (in so far as is reasonably applicable, given that ESB is a statutory corporation) with the UK Code and

with 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. In this way, ESB adheres in so far as is reasonably applicable to listed company government 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.

The Board is satisfied that ESB has complied with the requirements of the State Code. A report is also issued annually to the Minister for Communications, Climate Action and Environment (DCCAE) 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.

As a statutory body ESB is not subject to the disclosure requirements prescribed in the EU (Disclosure of non-financial and diversity information by certain large undertakings and Groups) Regulations 2017. However, on a voluntary basis ESB, in keeping with best practice, discloses non-financial information in relation to the Environment (page 73), Safety (page 68), Energy usage (page 75), Sustainability (page 75), Corporate social responsibility (page 70), People (page 66), Modern slavery policy (page 104) and Board diversity (page 89).

ESB has adopted a Code of Ethics, which sets out our approach to responsible and ethical business behaviour which is underpinned by our values. The underlying principle of the Code of Ethics is that employees can best serve ESB by adhering to the highest standards of integrity, loyalty, fairness and confidentiality and by meeting all legal and regulatory requirements. The Code of Ethics is published on the ESB website. Any reported breaches of the code are investigated and relevant updates are provided to the Audit and Risk Committee.

A detailed description of our governance compliance framework is set out on pages 86 to 94.

BOARD EFFECTIVENESS

The Board continually strives to improve its effectiveness. This is done informally by holding discussion amongst Board members with feedback to the Chairman and Company Secretary. A formal evaluation is carried out annually, and every third year this is done independently by an external evaluator. The most recent independent review was carried out in 2017. The results of the 2019 internal evaluation confirmed that the Board is operating effectively and a full description of the review is set out on page 89.

BOARD AND COMMITTEE CHANGES

Stephen Carrig joined the Board as a worker board member in January 2019 and sits on the Health, Safety and Environment Committee. There were no other changes to the Board this

year as the Group continues to benefit from the experience and diversity of current members.

The terms of reference of the Committees were revised and updated during the year including those of the Remuneration and Management Development Committee which were updated to reflect updated UK Code principles and provisions. There were no changes in Committee membership. Details of the Committees and their activities during the year are set out on pages 95 to 103.

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 in the Risk Report on pages 24 to 37.

BOARD 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". Board member details are set out on pages 80 to 83.

CULTURE

Good governance is good business and is built on competency, transparency and accountability. In pursuit of our goals, the Board and management remain committed to achieving competency, transparency and accountability in all we do. In my role as Chairman, as detailed in our Board terms of reference, which have recently been reviewed and revised, I am responsible for making sure that the Board operates effectively by facilitating the full participation of each Board member and ensuring effective communication with ESB's owners and stakeholders. Following on from last year's Organisational

Effectiveness Review and in line with the principles and provisions of the UK Code in respect of Culture, a Cultural dashboard was developed in 2019 as a means of assessing the alignment of culture with purpose, values and strategy.

The board subscribes to the view that Culture is the "combination of values attitudes and behaviours manifested by a company in its operations and relations with its stakeholders" (FRC Report "Corporate Culture and the Role of Board"). A more succinct definition is: "the way we do things around here". The Board gives careful consideration to how culture is assessed and reported through the employee engagement survey, through formal survey of our stakeholders and through Board site visits which involve direct engagement with employees.

Culture is reported to the Board under the following headings:

- Ethics and compliance
- Safety, health and wellbeing
- Diversity and inclusion
- People and performance
- Employee engagement

CONCLUSION

In the following pages, we outline in detail how the Board and its Committees have fulfilled their responsibilities during the year to ensure that robust governance practices are embedded across the Group.

Ellvena Graham OBE,
Chairman
27 February 2020

THE BOARD'S GOVERNANCE REPORT

PRINCIPLES OF GOVERNANCE

ESB, in pursuit of its governance objectives, complies with the Code of Practice for the Governance of State Bodies 2016 (the State Code) and in so far as is reasonably applicable with the UK Corporate Governance Code 2018 (the UK Code) and the Irish Corporate Governance Annex (the Irish Annex). A copy of the State Code can be obtained from the Department of Public Expenditure and Reform website www.per.gov.ie. A copy of the UK Code can be obtained from the FRC's website www.frc.org.uk and a copy of the Irish Annex is available at www.ise.ie.

The revised UK Code sets out an updated five key principles of governance: (1) Board Leadership and Composition, (2) Division of Responsibilities, (3) Composition, Succession and Evaluation, (4) Audit, risk and internal control, and (5) Remuneration. The Board's Governance Report is structured accordingly.

1 BOARD LEADERSHIP AND COMPOSITION

THE BOARD

The Board provides the leadership of the Group and, either directly or through the operation of Committees, applies independent judgement on matters of values, strategy, performance, resources and governance. During 2019, the Board comprised of the Board members detailed on pages 80 to 83, of whom the Chairman, the Chief Executive and the Independent Board members were appointed by Government and the four Worker Board members were appointed pursuant to the Worker Participation (State Enterprises) Act 1977. The Board size and structure is governed by the Electricity Supply Acts 1927-2004 and by the Worker Participation (State Enterprises) Act 1977. The roles of the Chairman and Chief Executive are not exercised by the same individual, with the responsibilities of each role formally defined in the Board terms of reference.

The Board has led the development of ESB's "Brighter Future" Strategy. The strategy was approved by the Board after detailed discussion and assessment. The strategy is a purpose driven strategy which aims to meet the customers' energy needs by bringing the best of ESB's capabilities together to deliver innovative and value-driven solutions for a low-carbon world. The strategic objectives reflect a significant contribution to the wider society in terms of decarbonisation and is underpinned by the requirement for strong financial performance.

DIALOGUE WITH SHAREHOLDERS

ESB is owned 95.7% by the Irish Government and 4.3% by the Trustee of the Employee Share Ownership Plan (ESOP). ESB engages in active and ongoing consultation with the Government on key policies and strategic issues as required by legislation and the State Code. It also provides detail on the annual budget and five-year plan and quarterly updates on its financial performance. ESB also regularly engages and consults with the Trustee of the ESB ESOP.

ESB ANNUAL GENERAL MEETING (AGM)

ESB holds an AGM each year, no later than 15 months after the last AGM. The requisite notice is given to ESB's ministerial stockholders and to the Trustee of the ESB ESOP. Board members including the Chairman of the Audit and Risk Committee are invited to attend. The Chairman gives an overview of the year and invites representatives of the ministerial stockholders and of the Trustee of the ESB ESOP to make any comments they may have. The external auditors attend the AGM.

CONFLICTS OF INTEREST

Board members make annual disclosures of any potential or any actual conflicts of interest under the ethics in Public Office Act 1995. In addition, Board members are responsible for notifying the Company Secretary on an ongoing basis should they become aware of any change in their circumstances regarding conflicts of interest, as detailed in the 'ESB Board Members' Code of Conduct.

Biographical details for all the Board members, including details of their external appointments are set out on pages 80 to 83.

2 DIVISION OF RESPONSIBILITIES

BOARD MEETINGS

The Board met on eleven occasions in 2019. The Board is responsible for reviewing the operational and financial performance of the Group and for ensuring effective internal control and risk management. The Board has a formal schedule of matters specifically reserved to it for decision, which are described on page 87.

The Board has delegated authority to management for decisions in the normal course of business subject to specified limits and thresholds. Oversight of decisions which are delegated by the Board is retained through a robust reporting framework,

central to which are effective relationships with the Board Committees, the Chief Executive, the Executive Director Group Finance and Commercial and the Executive Team.

There is ongoing financial and operational reporting to the Board and papers are made available to each Board member electronically in advance of each meeting to allow sufficient time to review and consider matters for discussion/decision. The Board papers include the minutes of Board Committee meetings.

The aim of the Board meetings is to achieve the right balance of oversight of people, culture, strategy, operations, finance and governance and risk management matters. This is monitored through the Board evaluation and informal feedback to ensure adequate time is devoted to each matter to maintain the required balance. The Board is satisfied that the Chairman and each of the Board members committed sufficient time during the year to enable them to fulfil their duties as Board members of ESB.

The Board's focus for 2020 will be the continued execution of the Strategy to 2030: leading the transition to reliable, affordable, low-carbon energy. This will be achieved by focusing on ESB's five associated strategic objectives as follows:

- 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.

The Board will also continue to monitor:

- The Price Review 5 (PR5) determination process.
- Group's preparedness for the impact of Brexit.
- Oversight of key Information Technology (IT) projects, such as the Smart Metering Programme and SAP 4 HANA upgrade. Maintain strategic focus on environmental and sustainability issues.
- Monitor Groups development of culture in line with ESB's values.

THE WAY WE ARE STRUCTURED

The organisation is structured to allow for effective and efficient decision-making with clear accountability.


ROLE OF THE BOARD













The Board provides leadership and direction to the business as a whole and is responsible for the long-term success of ESB. Decisions are made only after all appropriate information has been made available to Board members and following due consideration of the risks identified through the risk management process and in the context of the Group level risk appetite statement. The Board constructively challenges and helps develop proposals on strategy, which are then reviewed and approved by the Board. The Board has reserved the following key decisions for its own consideration:

- Approval of ESB Group Strategy, annual budgets and annual and interim financial statements
- Approval of dividends
- Review of operational and financial performance
- Approval of major capital expenditure, borrowings and treasury policies
- Overall review of Group health and safety performance
- Appointment of the Chief Executive
- Appointments to the Executive Team on the recommendation of the Chief Executive
- Appointment of the Company Secretary
- Major acquisitions, disposals or retirements of assets
- Assessment and approval of the Group governance framework, internal controls and risk management
- Mass Market Residential tariffs
- Key regulatory, legal, industrial relations, accounting and policy matters

Chairman - Elvena Graham OBE

- Leading the Board
- Determining the Board agenda
- Ensuring its effectiveness and facilitating full participation by each Board member
- Ensuring effective communication with the Group's owners and stakeholders

















BOARD

- Chairman, six independent Board members, four worker Board members and the Chief Executive
- Responsible for the long-term success of ESB and for its overall judgement on matters of strategy, performance, resources and governance


Chief Executive - Pat O'Doherty

- Executive leadership of the Group's business
- Implementation of the Group's strategies and policies
- Maintaining a close working relationship with the Chairman
- Leading the Executive Team




Senior Independent Board Member - Noreen Wright

- Act as a sounding board for the Chairman
- Serving as an intermediary for the other Board members and the shareholders when necessary



Company Secretary - Marie Sinnott

- Assists the Chairman in ensuring that all Board members have access to all relevant information and in facilitating Board induction / professional development
- Is responsible for ensuring that correct Board procedures are followed and advises the Board on corporate governance matters
- Liaison between Board and Executive Team



Audit & Risk Committee
Chairman - Noreen O'Kelly

- To assist the Board with its responsibilities in relation to:
 - Financial reporting
 - Internal control and risk management
 - Compliance, whistle-blowing and fraud
 - External and internal auditors



Health, Safety & Environment Committee
Chairman - Anne Butler

- To advise the Board on health & safety and environmental matters
- Monitor progress against agreed health, safety and key environmental performance indicators and risk management in these areas



Remuneration & Management Development Committee
Chairman - Elvena Graham OBE

- Set the remuneration of (i) the Chief Executive and (ii) the Executive Team following consultation with the Chief Executive
- To monitor the development of current and future leaders of ESB




Finance & Investment Committee
Chairman - Andrew Hastings

- Review capital raising and capital expenditure proposals
- Review treasury and energy trading policies and procedures
- Review investment and divestment proposals aimed at ensuring the positioning of ESB for future success, consistent with the strategy approved by the Board



Marketing & Customer Committee
Chairman - Alf Smiddy

- Alignment of marketing and customer initiatives and programmes with company strategic objectives
- New products and services and associated revenue projections
- Engagement with major customers
- Advertising and sponsorship programmes and assessment of their impact



EXECUTIVE TEAM

Leadership and Control of the Group

- Biographical details of the Chairman, Chief Executive and Senior Independent Director can be found on pages 80 and 83.
- Biographical details of the Board Members can be found on pages 80 to 83.
- Biographical details of the Company Secretary can be found on page 43.
- Biographical details of the Executive Team can be found on pages 42 to 43.

BOARD COMMITTEES

Five Committees of the Board assist in the discharge of its responsibilities and the Board delegates specific responsibilities to those Board Committees as set out in their terms of reference. The Committees assist the Board by giving more detailed consideration to business, operational, financial, governance and risk management issues and they report to the Board with any necessary recommendations. The Committees have access to adequate resources to carry out their duties and the terms of reference of the Committees are reviewed and updated on a regular basis. The most recent review was completed in 2019. The Committees and their membership are set out on pages 95 and 101 to 103 of this report.

ATTENDANCE AT MEETINGS IN 2019

There were 11 General Board meetings in 2019. The attendance by each Board member during the year is set out below. In addition to the Board members and Company Secretary, a number of executive directors/senior managers attend relevant sections of Board meetings, by invitation.

BOARD MEMBERS 2019	MEETINGS ATTENDED
Elvena Graham OBE	11
Anne Butler*	11
Dave Byrne^	11
Stephen Carrig^	11
Andrew Hastings*	11
Seán Kelly^	11
Paul Lynam*	11
Tony Merriman^	11
Noreen O'Kelly*	11
Alf Smiddy*	11
Noreen Wright*	11
Pat O'Doherty	11

* Independent Board member

^ Worker Board member

INDEPENDENCE

The Board has determined that those Board members (details on pages 80 to 83) were independent during 2019. The determination of Board members independence takes account of the relevant provisions of the UK Code regarding Board members' independence in character and judgement and the absence of relationships or circumstances which could compromise Board members' independence. In light of these factors, the Board is satisfied as to the independence of the Board members identified above.

SENIOR INDEPENDENT BOARD MEMBER

The Board appoints one of the Independent Board members to be the Senior Independent Board Member, to provide a sounding board for the Chairman and to serve as an intermediary for the other Board members and shareholders when necessary. Noreen Wright is the current Senior Independent Board member.

INDEPENDENT PROFESSIONAL ADVICE

The Board members, in the furtherance of their duties, may take independent professional advice at the expense of ESB. All Board members have access to the advice and services of the Company Secretary. Insurance cover is in place to protect Board members and officers against liability arising from legal actions taken against them in the course of their duties.

3 COMPOSITION, SUCCESSION AND EVALUATION

BOARD MEMBERSHIP

The ESB Board members in 2019 brought diverse experience, independence and challenges to support effective decision-making. The range of Board members' experience in engineering/technical, finance, legal, marketing and in ESB's operations is set out in their biographies on pages 80 to 83. The Board is confident that all of its members have the knowledge, ability and experience to perform the functions required of them.

The Board's primary role is to exercise objective and informed judgement in constructively challenging and helping to develop and approve the ESB Group Strategy, to ensure there is a strong management team in place to execute the strategy and drive business performance and to maintain a framework of prudent and effective controls to mitigate risk. The State Code provides that the Chairman may engage with the Government on Board succession and this provides an opportunity for ensuring an appropriate mix of skills, diversity and experience on the Board.

Two critical factors determine how the Board is equipped to fulfil those duties and obligations successfully:

- A diverse and deep range of skills and experiences among Board members;
- Processes to ensure that all of the Board members develop and maintain a good understanding of the Group's operations and external environment and are therefore well

placed to make informed decisions. See page 88 for further detail on the induction process.

BOARD APPOINTMENTS

As Board appointments are a matter for Government (including the appointment of worker board members), ESB does not undertake an evaluation of individual Board members. However, the Chairman does engage with Government in advance of the Board appointment process about the specific skills and benefits of diversity that are required on the Board. The Department of Public Expenditure and Reform in November 2014 published Guidelines on Appointments to State Boards and these guidelines apply to appointments to the Board of ESB.

Board members are normally appointed for terms of five years, or four years in the case of Worker Board members, and therefore are not subject to re-election to the Board at lesser intervals. The Chief Executive and Independent Board members may be re-appointed to the Board by Government and any reappointment of Worker Board Members is pursuant to the Worker Participation (State Enterprises) Act 1977.

INFORMATION AND BRIEFINGS

To maintain and enhance the effectiveness of the Board, it is essential that Board members are kept up to date with key business developments. A summary of the Board's activities in 2019 is set out on page 90. The Board receives regular updates on the regulatory environment, the market and operations including monthly Key Performance Indicator Reports.

Board meetings were also scheduled outside the head office location in 2019 including Cathleen's Fall Power Station, Co. Donegal and Aghada Power Station, Co. Cork. Site visits are arranged for individuals and groups of Board members to allow for a greater understanding of the ESB business.

INDUCTION

An induction programme is in place to familiarise new Board members with the operations of the Group. The programme is tailored to the experience, background and the requirements of the individual. Key elements are: meeting the executives, visiting sites and receiving a briefing on the ESB Group Strategy and on individual businesses and on the Enterprise Risk Management Framework.

ONGOING TRAINING AND DEVELOPMENT

A continuing development programme is in place for all Board members. The Chairman and Company

Secretary liaise with Board members for their specific needs, such as briefings by managers on specific topics or attendance at conferences/courses relevant to the business.

BOARD EFFECTIVENESS

The Board conducts an annual evaluation of their own performance and that of their committees. This evaluation is undertaken in order to comply with the State Code and, insofar as is reasonably applicable, with the UK Code. The evaluation relates to the Board's and Committees' collective performance and not to the individual performance of Board members. The purpose of the evaluation is to review the Board's operation and to identify ways to improve its effectiveness. It also helps to identify specific skills required in Board members and the Chairman can make suggestions to Government for consideration when appointments are being made.

The evaluation provides assurance that the Board is committed to the highest standards of governance. The evaluation is led by the Chairman and supported by the Company

Secretary. The annual evaluation consists of a questionnaire and based on Board members' replies, a report is made to the Board on the outcomes with proposed actions to address the issues raised.

An independent evaluation based on one-to-one interviews between Board members and the external facilitator is conducted every three years. An independently facilitated evaluation was completed in early 2017 by the Institute of Chartered Secretaries and Administrators (ICSA) Board Evaluation (who have no connection with the Group).

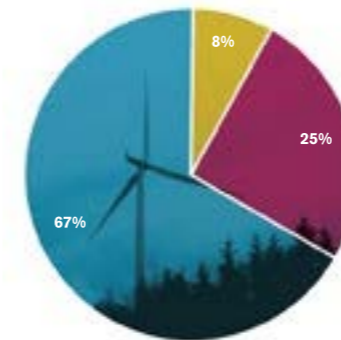
The next external independent evaluation will take place in 2020. During 2019 management carried out a comprehensive review of the Terms of Reference of four Board Committees which has provided much greater clarity and precision regarding their role. Management considered the volume, quality and timing of ongoing reporting information provided to the Board and Board Committees and made recommendations to streamline reporting which were adopted by the Board. Improvements

were also implemented regarding the tracking of actions arising at Board and Committees meetings to ensure prompt attention and closure by management.

The 2019 Board and Committee Evaluations have identified a number of areas which will be addressed during 2020 including an examination of board paper format, content of Chief Executive reporting and training requirements.

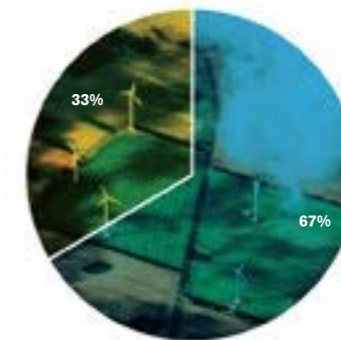
In addition, the Chairman meets with Board members including the Senior Independent Board member for an open exchange among Board members concerning the efficiency and effectiveness of the Board.

LENGTH OF TENURE



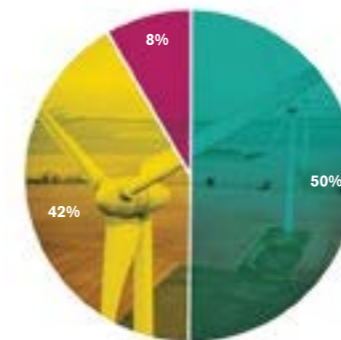
- 0 - 2 years
- 2 - 5 years
- 5 - 11 years

COMPOSITION OF BOARD (GENDER)



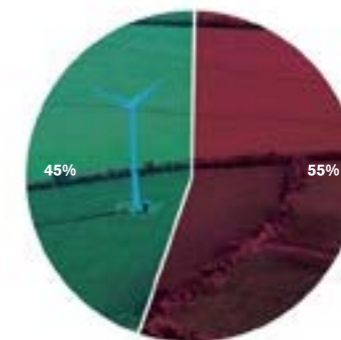
- Female
- Male

BOARD EXPERIENCE



- Engineering / Technical
- Business / Finance
- Legal

INDEPENDENCE OF BOARD*



- Non-Independent
- Independent

*Independence of Board excluding Chairman

EXAMPLES OF MATTERS CONSIDERED AND/OR APPROVED BY THE BOARD IN 2019

PEOPLE	OPERATIONS
<ul style="list-style-type: none"> Senior executive appointments Staff survey results High performance culture Severance scheme Group health, safety and wellbeing report Corporate culture update 	<ul style="list-style-type: none"> Chief Executive operations reports Health and safety reports Energy trading updates Plant investment and overhauls programme Property disposals Joint venture agreements Investment in Electric vehicle charge point network Investment in renewable projects Regulated price review submission update Onshore wind services agreement Head Office redevelopment project Enterprise services update Electricity price changes Engineering projects update
STRATEGY	GOVERNANCE AND RISK MANAGEMENT
<ul style="list-style-type: none"> Brexit implications Climate Action Plan review Energy policy and market updates Engineering projects strategy update Offshore wind review Enterprise services review Capacity auctions ESBI strategy review Smart metering Strategy implementation updates 	<ul style="list-style-type: none"> Group risk plan Dam safety Market abuse policy Effectiveness of risk management and internal control Internal audit plan for the year Committees terms of reference Effectiveness of internal control and risk management Group treasury policies Group authority levels and group trading authority levels ESB Group's risk policy and governance framework UK Modern Slavery Act Protected disclosures update Business continuity planning
FINANCE	
<ul style="list-style-type: none"> Annual and half-yearly published results ESB Regulatory accounts Quarterly financial performance and forecasts Monthly key performance indicators (KPIs) Annual budget and five-year business plan Interim and final dividend Updated market abuse policy 	<ul style="list-style-type: none"> Updated Group tax policy Hurdle rates for new investments Group valuation Funding requirements

4 AUDIT, RISK AND INTERNAL CONTROL

COMPLIANCE WITH CORPORATE GOVERNANCE CODES

ESB complies with the State Code, which sets out the principles of corporate governance which the Boards of State Bodies are required to observe. ESB also complies with the Corporate Governance Guidelines and other obligations imposed by the Ethics in Public Office Act, 1995, the Standards in Public Office Act, 2001 and the Regulation of Lobbying Act, 2015.

ESB complies on a voluntary basis in so far as is reasonably applicable with the UK Code and the Irish Annex. The UK Code consists of principles (main and supporting) and provisions. Companies listed on the Irish Stock Exchange are required, as part of the Listing Rules, to describe how they apply the principles and comply with the provisions of the UK Code and the related Irish Annex and to provide an explanation in the event of non-compliance.

ESB is a statutory corporation established under the Electricity (Supply) Act 1927 and is not obliged to comply with the UK Code or the Irish Annex. As stated above, ESB supports the principles and provisions of the UK Code and the Irish Annex and voluntarily complies with them subject to the following exceptions:

- Appointments to the Board are a matter for the Government and accordingly ESB does not have a Nominations Committee.
- Board members are appointed for terms of five years or four years in the case of Worker Board members and therefore are not subject to re-election to the Board at lesser intervals.
- ESB's Chairman has been a member of the Board of ESB for nine years from October 2010. The requirement for the Chairman not to remain in the post for more than nine years from the date of first appointment to the Board is not considered to be applicable to ESB, as appointments to the Board are a matter for the Government.
- ESB's policies and disclosures in relation to remuneration of the Chief Executive are in accordance with applicable Government guidelines. Notice periods in the Chief Executive contract are in accordance with Government guidelines. The details of Board members' remuneration on page 94 do not include amounts paid to the four Worker Board members as employees of ESB (as such pay is neither increased nor decreased because of their membership of the Board), but do include amounts paid to them by way of Board fees. Obligations regarding share awards are not relevant to ESB, nor are post-

employment shareholding requirements relevant as beneficial interests in the stock of ESB are held only through participation in ESB's Employee Share Ownership Plan (ESOP) and ESB is majority owned by the Government.

- The Board evaluation process has not to date evaluated the individual performance of Board members as the Board does not have a formal role in determining its own composition.
- The Board Chairman is also Chairman of the Remuneration and Management Development Committee, given the importance of compliance by ESB with Government policy in this area and the role of the Chairman as the primary interface with Government.
- The Independent Board members do not meet without the Chairman present to appraise the Chairman's performance as the appointment of the Chairman is a matter for the Government.
- The Government sets Chief Executive pay and establishes pay policy relevant to senior management. This limits the discretion of the Remuneration and Management Development Committee in relation to these matters.
- Committee chairs do not engage with Ministerial Stockholders as there is a process in place whereby the Chair engages with the Ministerial Stockholders and ensures that the Board and management is aware of the views of the stockholders.
- As ESB is 95.7% state owned, with governance arrangements in place with its Ministerial Stakeholders, requirements in relation to consultation with shareholders in the event of 20% or more of votes being cast against a Board recommendation are considered not to be applicable.
- Neither UK nor Irish company law is directly attributable to ESB including Section 172 of the UK Companies Act 2006.
- Members of the Board of ESB are applicable in accordance with Section 2 of the Electricity (Supply) Act, 1927 (as amended) and the Worker Participation (State Enterprises) Acts. Therefore the requirement to take account of demands on directors time and the undertaking of additional external appointments is a matter for the Government.

FINANCIAL AND BUSINESS REPORTING

The Board recognises its responsibility in preparing the Annual Report and Financial Statements and in presenting a fair, balanced and understandable assessment of the Group's position and prospects. The Board members' responsibilities regarding financial statements and going concern are set out on page 109.

PROCUREMENT

ESB carries out its procurement activities in compliance with applicable procurement laws and the State Code.

INTERNAL CONTROL

The Board has overall responsibility for the Group's system of internal control and for monitoring its effectiveness. The system of internal control is designed to provide reasonable but not absolute assurance regarding the achievement of the following objectives:

- Effectiveness and efficiency of operations and safeguarding of the organisation's assets against loss
- Reliability of reporting for internal and external use
- Compliance with applicable laws and regulations

In order to discharge their responsibilities in a manner which ensures compliance with legislation and regulations, the Board has established an organisational structure with clear operating and reporting procedures, lines of responsibility, authorisation limits, segregation of duties and delegated authority.

The Group uses the integrated internal control framework as developed by the Committee of Sponsoring Organisations of the Treadway Commission (COSO) as guidance for designing, implementing and conducting internal control and assessing its effectiveness. The COSO framework was first released in 1992 and updated in 2013.

ESB has in place a strong internal control framework, which includes the following:

- A code of ethics that requires all Board members and employees to maintain the highest ethical standards in conducting business
- A clearly defined organisational structure, with defined authority limits and reporting mechanisms to higher levels of management and to the Board, which support the maintenance of a strong control environment
- A corporate governance framework which includes risk analysis, financial control review and formal annual governance compliance statements by the management of business lines and joint ventures (JVs)
- A comprehensive set of policies and procedures relating to operational and financial controls
- Large capital projects require the approval of the Board and are closely monitored on an ongoing basis by the Finance and Investment Committee and they are also subject to post-completion audits
- Comprehensive budgeting systems with an annual budget approved by the Board
- A comprehensive system of financial reporting

COSO FRAMEWORK



- Cumulative actual results and key performance indicators are reported against budget and considered by the Board on a regular basis
- A telephone helpline and online webchat service provide employees with a confidential and if required, anonymous means of reporting any fraud or ethical concerns

These controls are reviewed systematically by Group Internal Audit. In these reviews, emphasis is placed on areas of greater risk as identified by risk analysis. Where weaknesses in the internal control system have been identified through the monitoring framework above, plans for strengthening them are put in place and action plans are regularly monitored until completed.

RISK MANAGEMENT

Effective risk management is critical to the achievement of ESB's strategic objectives and the long-term sustainable growth of its business. The rapid changes taking place in ESB (and the market and operating environment in which ESB operates) makes it all the more important to continuously reassess risks and have clear strategies to manage them, and as appropriate leverage any opportunities they present. The Board has overall responsibility for the Group's approach to risk. Specifically the Board is responsible for:

- Assessing the adequacy of the process designed to identify the principal risks and uncertainties is in place
- Overseeing that an appropriate risk culture is embedded throughout the Group
- Establishing a clearly articulated risk appetite position that clarifies the level of risk ESB is willing to accept, and which also ensures that management and the Board align their views on risk.
- Assessing adequacy of the risk management and

ESB INTERNAL CONTROL FRAMEWORK

- Control Environment**
 - Demonstrates commitment to control and ethical values
 - Exercises oversight responsibility
 - Establishes structure, authority and responsibility
 - Demonstrates commitment to competence
 - Enforces accountability
- Risk Assessment**
 - Specifies suitable objectives
 - Identifies and analyses risk
 - Assesses fraud risk
 - Identifies and analyses significant change
- Control Activities**
 - Selects and develops control activities
 - Selects and develops general controls over activities
 - Deploys through policies and procedures

- Information and Communication**
 - Uses relevant information
 - Communicates internally
 - Communicates externally
- Monitoring Activities**
 - Conducts ongoing and / or separate evaluations
 - Evaluates and communicates deficiencies

crisis management processes

- Assessing the likely effectiveness of management's mitigation measures and controls.

The Board has carried out a robust assessment of the principal risks facing the Group, including those that might threaten its business model, future performance, solvency and liquidity. A cyclical review process for identifying, assessing and managing significant risks has been in place for the year under review and up to the date of approval of this Annual Report. The principal risks and uncertainties facing the Group and the mitigating strategies are set out on pages 28 to 37.

The Board is aware that it must lead by example in shaping and supporting the updated Group values that underpin the approach to risk. It also seeks to ensure that sufficient risk management skills and capabilities are available in the business and that the knowledge and experience of all the employees in ESB who understand the risks associated with operations is utilised. Regular reporting has facilitated the Board to stay abreast of emerging risks and uncertainties.

The Board focuses primarily on those risks that could undermine ESB's strategy or which could adversely affect the long-term viability or reputation of the Group. The Board delegates responsibility for oversight of specific risks to Board Committees in accordance with Committees' terms of reference and its respective area of expertise. The Board agrees how committees will keep one another, and the Board itself, informed about risks and risk oversight practices. Efficiency and effectiveness call for clear boundaries, communication channels, and handoff points. The Board defines these elements clearly, making adjustments as needed.

The Committee Chair's report to the full Board on key developments and matters requiring further discussion and consideration. The Audit and Risk Committee retains overall responsibility for ensuring that enterprise risks are properly identified, assessed, reported and controlled on behalf of the board.

Risk appetite may also vary over time and the Board has explicitly considered the level of this appetite and how specific risks are managed within it. The propensity to take risk is always balanced by a focus on exercising control.

THE 2019 REVIEW OF THE EFFECTIVENESS OF INTERNAL CONTROL AND RISK MANAGEMENT

The Board retains overall responsibility for internal control and risk management. During 2019, the Board has directly and through the delegated authority to the Audit and Risk Committee, reviewed the effectiveness of the Group's system of internal control covering financial, operational and compliance controls and risk management systems for 2019 and will ensure a similar review is performed in 2020.

The process used by the Board and the Audit and Risk Committee to review the effectiveness of the system of internal control includes:

- A designated risk management function in ESB
- Review and consideration of the half-yearly risk review process and regular risk management updates
- Independent advice on the adequacy of the current risk management process operating in ESB (the last review was carried out in 2015, next review is planned for 2020)

ACTIVITIES UNDERTAKEN BY THE BOARD AND THE AUDIT AND RISK COMMITTEE DURING 2019 IN RESPECT OF ITS RISK RESPONSIBILITIES INCLUDED:

ACTIVITY	DETAIL
Group Risk Plan	The Audit and Risk Committee reviewed and challenged the 2019 group risk plan and recommended it to the board for approval.
Business continuity planning (BCP) and crisis management review	Review of the report submitted to the Audit and Risk Committee on the effectiveness of BCP plans and resilience testing arrangements across the group including a lessons learned review based on the experiences in 2019.
Review of ESB group's risk policy and governance framework	Annual review by the Audit and Risk Committee of ESB Group's risk policy and governance framework.
Mid-year risk review	The Audit and Risk Committee considered and reported to the board any changes to the group principal risks and emerging risks as approved at the start of the year, including a review of material changes to the risk profile.
Risk reports	The Audit and Risk Committee reviewed changes to the status of the principal risks, including the effectiveness of operation of controls and status of mitigating actions.
Cyber risk	A thorough review of cyber risk with the Audit and Risk Committee was completed. It included an external perspective of the cyber risk environment covering best practice in cyber risk management. Separately the Committee received an overview on a cyber crisis management exercise during the year.
General data protection regulation (GDPR)	The Audit and Risk Committee reviewed and challenged the quarterly GDPR risk reports and the 2018 data protection annual report.
Brexit	Details were provided to the Audit and Risk Committee several times over the year regarding of ESB's planning and preparedness arrangements to address the implications of a disorderly or hard brexit.
UK Corporate Governance Code	An update was presented to the Audit and Risk Committee regarding the processes to ensure compliance on a voluntary basis in so far as is reasonably applicable with the revised UK Corporate Governance Code.
Off-site risk day	A planned Audit and Risk Committee meeting was enlarged to extend an invitation to the full board to spend a day examining in detail some of the principal and emerging risks.

- Review and consideration of certification from management of satisfactory and effective operation of systems of internal control, both financial and operational
- A review of the programme of Group Internal Audit and consideration of its findings and reports. Group Internal Audit also report regularly on the status of implementation of recommendations raised previously from its own reports.
- Independent assessment of the effectiveness of the internal audit function (this is carried out every five years; the last assessment was carried out in 2016)
- A review of reports of the external auditors which contain details of work carried out on the key audit risks

On the basis of this review, the Board confirms the following for 2019:

- There is an ongoing process for identifying, evaluating and managing the principal risks of the Group
- Systems of internal control have been in place for the year under review and up to the date of approval of this Annual Report
- The systems comply with the Financial Reporting Council (FRC) Guidance on Risk Management, Internal Control and Related Financial and Business Reporting
- A number of environmental and safety compliance and reporting issues were

- identified in ESB Networks during the year. A programme of corrective actions was put in place with implementation well progressed.
- No other significant failings or weaknesses were identified in the review and where areas of improvement were identified, processes are in place to ensure necessary action is taken and progress is monitored until completed

Through its ongoing involvement and overview of internal control and risk management activities, the Board is satisfied that internal control and risk management processes are effective.

GOING CONCERN

The Group's performance, business model, strategy and principal risks and uncertainties and how these are managed are set out in the strategy and performance report on pages 7 to 77.

The financial position of the Group, its cash flows, liquidity position and borrowing facilities are described in the Financial Review on pages 48 to 53. Note 28 of the financial statements includes an overview of financial risk management, details of its financial instruments and hedging activities and its exposure to credit and liquidity risks.

The Group has considerable financial resources

and the Board believes that the Group is well placed to manage its risks successfully. After making appropriate enquiries, the Board is satisfied that ESB has adequate resources to continue in operational existence for the foreseeable future. Accordingly, the Board continues to adopt the going concern basis in preparing the Group's financial statements.

VIABILITY STATEMENT

In accordance with the UK Code, the Board members have assessed the prospects of the Group over a longer period than that required in adopting the going concern basis of accounting.

The Group's assessment has been made over a five-year period, which is consistent with the time frame of the Group's business planning process. The assessment is based on consideration of ESB's current position and prospects, maintenance of its financial strength (pages 48 to 53), progress against ESB 2030 Strategy (page 21), risk appetite (page 25), principal risks (pages 28 to 37) and how these are managed.

The Board believe that a five-year assessment is most appropriate as it aligns with the business planning process completed annually and is underpinned by regular Board briefings provided by business units along with strategic performance

indicators (SPIs) to measure progress. The projections in the business plan consider the Group's cash flows, committed funding and liquidity positions and examine future funding requirements and financial covenants, and other key financial ratios including those relevant to maintaining investment grade credit ratings. The metrics in the business plan are subject to sensitivity analysis, which involves flexing a number of the main assumptions underlying the plan to assess key financial metrics, such as Net Debt and EBITDA (Earnings Before Interest, Tax, Depreciation and Amortisation) where appropriate analysis is carried out to evaluate the potential financial impact of the Group's principal risks actually occurring. As part of the Enterprise Risk Management (ERM) processes, all potential consequences of a principal risk materialising are identified and, where possible and appropriate, the financial impact estimated. In addition, the ERM processes identify the interdependency of principal risks, particularly in terms of impact.

The Board recognises the significance of maintaining a strong balance sheet. The Group's funding operations are of strategic importance and support capital expenditure, the refinancing of maturing debt and the maintenance of adequate liquidity. The Group's debt management strategy targets a debt portfolio profile with a diverse mix of counterparties, funding sources and maturities. The Group's revolving credit facility of €1.44 billion provides ESB with a substantial level of standby liquidity. ESB's funding position reflects its underlying financial strength and at least BBB+ (or equivalent) credit ratings from two major credit rating agencies. Further details on debt maturity are set out on page 53.

The Board has carried out a robust risk assessment of the principal and emerging risks facing the Group. In addition, business continuity and disaster recovery testing is conducted annually to assess scenarios that could adversely impact the Group and to what degree these risks can be mitigated. These risks and the way they are being managed and mitigated are outlined on pages 28 to 37.

Based on the results of the above analysis, the Board members have a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over the five-year period of their assessment.

5 REMUNERATION

CHIEF EXECUTIVE'S REMUNERATION

The Chief Executive's remuneration is set within a range determined by the Minister for Public Expenditure and Reform and the Minister for Communications, Climate Action and Environment. Pat O'Doherty was appointed Chief Executive, effective 1 December 2011 and was appointed a Board member in January 2013. His remuneration consists of an annual salary of €318,083, a company car and employer pension contribution. He is a member of the ESB Pension Scheme. In line with Government policy that the Chief Executive of State companies should not receive performance related payments, he did not receive any performance related payments in 2019.

WORKER BOARD MEMBERS' REMUNERATION

Worker Board members appointed under the Worker Participation (State Enterprises) Act 1977 and are employees of ESB. They are members of the ESB Pension Scheme. Worker board members are entitled to receive a separate fee in respect of their position as board members.

INDEPENDENT BOARD MEMBERS' REMUNERATION

The remuneration of the Independent Board members (including the Chairman) is determined by the Minister for Public Expenditure and Reform and the Minister for Communications, Climate Action and Environment and they do not receive pensions or any other remuneration. The terms and conditions are set out in their letter of appointment and this is available on request from the Company Secretary.

BOARD MEMBERS' EXPENSES

In compliance with the State Code, disclosure is required of the expenses paid to Board members. During 2019, €68,304 was reimbursed to, or paid on behalf of, Board members for travel expenses, accommodation and other related expenses. The above expenses do not include those of the Chief Executive or the Worker Board members in respect of their Executive or employee duties.

BOARD MEMBERS' REMUNERATION

CHAIRMAN		
	2019	2018
	€	€
Elvena Graham OBE	31,500	31,500
CHIEF EXECUTIVE		
	2019	2018
	€	€
Salary	318,083	318,083
Taxable benefits	15,570	15,570
Pension contributions	52,166	52,166
	385,819	385,819
INDEPENDENT/WORKER BOARD MEMBERS		
	2019	2018
	€	€
Anne Butler	15,750	15,750
Dave Byrne	15,750	15,750
Stephen Carrig ¹	15,750	-
Andrew Hastings	15,750	15,750
Seán Kelly	15,750	15,750
Paul Lynam	15,750	15,750
Tony Merriman	15,750	15,750
Peter O'Sullivan ³	-	15,750
Noreen O'Kelly ²	15,750	10,816
Alf Smiddy	15,750	15,750
Noreen Wright	15,750	15,750
	157,500	152,556

¹Appointed 1 January 2019.

²Ms O'Kelly fully waived part of her Board fees in 2018

³Retired in 2019

AUDIT AND RISK COMMITTEE REPORT



CHAIRMAN'S INTRODUCTION

On behalf of the Audit and Risk Committee, I am pleased to introduce the Audit and Risk Committee Report for the year ended 31 December 2019. The purpose of the report is to provide an insight into the workings of the Audit and Risk Committee over the last 12 months. I confirm that the Audit and Risk Committee satisfied its responsibilities as set out in its terms of reference and under both the Code of Practice for the Governance of state bodies (the State Code), and the UK Corporate Governance Code 2018 (the UK Code), as applied on a voluntary basis insofar as us reasonably applicable.

Under the UK Code, the Board has a responsibility to confirm that the Annual Report and Financial Statements taken as a whole, are fair, balanced and understandable and provides all the necessary information for shareholders/stakeholders to assess the Group's performance, business model and strategy.

The Audit and Risk Committee has reviewed the Annual Report and Financial Statements and is satisfied that it meets these criteria and has recommended them to the Board for approval. The Audit and Risk Committee also considered the significant issues in relation to the financial statements and how these issues were addressed. This work is summarised on pages 97 to 98.

The 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.

The Audit and Risk Committee also reviewed and assessed reports on incidents of fraud and attempted fraud during the year.

The Audit and Risk Committee will keep its activities under review to ensure that future developments relating to the work of the Audit and Risk Committee are fully considered. The responsibilities of the Audit and Risk Committee are summarised on page 96 and are set out in full in its terms of reference. The Audit and Risk Committee currently consists of four Independent Board members whose biographical details are set out on pages 81 and 83. The members bring

a broad range of experience and expertise from a wide range of industries, which is vital to supporting effective governance. The Board has confirmed that each member of the Audit and Risk Committee is independent and that the membership meets the requirements of the State Code and UK Code in terms of recent and relevant financial experience and competence relevant to the sector in which the Group operates.

The key areas of focus in 2020 for the Audit and Risk Committee will include the following:

- Continued focus on cyber risks, impact of emerging technologies and further General Data Protected Regulation (GDPR) developments
- Continued focus on ethics and compliance framework
- Monitor and assess the Groups ESG (Environmental, Social and Governance) reporting in the context of the Annual Report

THE AUDIT AND RISK COMMITTEE HELD 7 MEETINGS DURING 2019. THE MEMBERS OF THE COMMITTEE, LENGTH OF SERVICE AND THE NUMBER OF MEETINGS ATTENDED ARE SET OUT BELOW:

MEMBERS	DESIGNATION	LENGTH OF SERVICE	MEETINGS ATTENDED
Noreen O'Kelly, Chairman ¹	Independent Board Member	6 years and 6 months	7
Andrew Hastings ²	Independent Board Member	4 years and 3 months	7
Alf Smiddy ¹	Independent Board Member	3 years	7
Noreen Wright ³	Independent Board Member	4 years and 3 months	7

¹ Fellow of Chartered Accountants Ireland

² Senior banking and financial services experience

³ Qualified Barrister and energy sector experience through previous roles in Northern Ireland Electricity Networks plc.

KEY OBJECTIVES

The role of the Audit and Risk Committee is set out in its terms of reference, a copy of which can be found on the ESB website, www.esb.ie. The terms of reference sets out the duties of the Audit and Risk Committee under the following headings:

- Financial Reporting
- Internal Control and Risk Management
- Compliance, Whistle-Blowing and Fraud
- Internal Audit
- External Audit

DUTY	ACTIVITIES CARRIED OUT IN 2019
<p>Financial reporting Review the Annual Report and Financial Statements to ensure that when taken as a whole, they are fair, balanced and understandable and that appropriate accounting standards, estimates and judgements have been applied</p>	<ul style="list-style-type: none"> ▪ Reviewed the clarity and completeness of the disclosures in the Annual Report and Financial Statements and the material information presented within them ▪ Reviewed ESB Annual report and financial statements to ensure that they were fair, balanced and understandable ▪ Considered and challenged the methods used to account for significant or unusual transactions and how these were presented and disclosed in the financial statements ▪ Reviewed whether the Group had applied appropriate accounting standards and made appropriate estimates and judgements, taking into account the views of the external auditors ▪ Reviewed going concern assumptions/viability statement ▪ Reviewed the interim results which consist of financial statements and explanatory notes ▪ Reviewed and considered the key messages for the financial results publications ▪ Reviewed and recommended to the Board for approval, the ESB regulatory financial statements ▪ Reviewed and recommended to the Board of ESB Finance DAC for approval, the ESB Finance DAC financial statements
<p>Internal control and risk management Review the effectiveness of internal control and risk management</p>	<ul style="list-style-type: none"> ▪ 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 Brexit assessments ▪ Reviewed the Data Protection Annual Report
<p>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</p>	<ul style="list-style-type: none"> ▪ 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
<p>Internal audit Monitor and assess the role and effectiveness of the internal audit function</p>	<ul style="list-style-type: none"> ▪ Reviewed the internal audit plan and monitored progress against this plan to assess the effectiveness of the function ▪ Reviewed reports detailing the results of key audits, management's response and the timeliness of resolution of actions ▪ Met with the Head of Internal Audit without management being present ▪ Reviewed internal audit key performance indicators
<p>External Audit Monitor and review the objectivity, independence and quality of the external auditors and review the findings of the audit with the external auditors</p>	<ul style="list-style-type: none"> ▪ Assessed the effectiveness of the external audit process including auditor independence and objectivity ▪ Reviewed and challenged the proposed external audit plan to ensure that PwC had identified all key risks and developed robust audit procedures ▪ Reviewed the report from PwC on its audit of the financial statements and their comments on accounting, financial control and other audit issues ▪ Considered and reviewed non-audit services provided by PwC and adherence to ESB policy ▪ Met with the external auditors without management being present, giving PwC the opportunity to raise any matters in confidence ▪ Reviewed PwC's internal control recommendations and management's response to these recommendations

FINANCIAL REPORTING

The Audit and Risk Committee receives and considers the interim and year-end financial statements from management as well as receiving reports from the internal audit team and discussing the audit strategy and focus of the external auditors. Taking into account information from these activities,

the Audit and Risk Committee determined the key areas of judgement in the Group's financial statements related to the following:

- Carrying value of long-lived assets and goodwill
- Pension obligations
- Legal contingent liabilities and disclosures

These issues were discussed with management during the year, with the auditors at the time the Audit and Risk Committee reviewed and agreed the auditors' Group audit plan, as part of the auditors' review of the half-year interim financial statements and at the conclusion of the audit of the year-end financial statements.

SIGNIFICANT ISSUES CONSIDERED

CARRYING VALUE OF LONG-LIVED ASSETS AND GOODWILL Republic of Ireland (ROI) and United Kingdom (UK) generation portfolio

Impairment reviews were performed on the ROI and UK generation assets where necessary to ensure the carrying values are supported by forecast future discounted cash flows.

Networks transmission and distribution of long-lived assets

As at 31 December 2019, there were no indicators of impairment of the carrying value of the asset base of ESB Networks (€8.1 billion), which determines the future regulated income to be earned.

Northern Ireland Electricity Networks (NIE Networks) long-lived assets and goodwill

As at 31 December 2019, there were no indicators of impairment of the carrying value of the asset base of NIE Networks (£1.6 billion), which determines the future regulated income to be earned.

Goodwill recognised in the NIE Networks business as at 31 December 2019 amounted to €178 million. Consequently an annual impairment test of the carrying value of NIE Networks was carried out in accordance with IAS 36 and no reduction in the value of goodwill was required. The significant judgements used to carry out this test are explained fully in note 14 of the financial statements.

PENSION OBLIGATIONS - ESB DEFINED BENEFIT PENSION SCHEME (THE SCHEME)

In accordance with IAS 19 Employee Benefits, ESB continues to reflect its existing committed obligations on the balance sheet as set out in note 23 of the financial statements. This treatment is based on the following key factors, none of which changed for the year ended 31 December 2019.

- 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 they also stipulate contributions to be paid by both ESB and the contributing members.
- 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). ESB does not intend that any further contributions, other than the normal ongoing contributions and the remaining balance of ESB's €591 million additional contribution (committed to under the 2010 Pensions Agreement will be made).
- Where a deficit arises in the future, ESB is obliged under the Scheme regulations 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 its rate of contribution cannot be altered without the agreement of ESB and the approval of the Minister for Communications, Climate Action and Environment.
- The Scheme Actuary confirmed during 2019 that on an actuarial basis, the Scheme's assets were broadly in balance with its liabilities at the end of 2018. There is however currently a shortfall in a wind-up scenario in a test known as the Minimum Funding Standard (MFS). The Trustees are in the process of finalising a new funding plan to resolve this MFS shortfall. It is expected that the plan will be submitted to the Pensions Authority after its approval by the Department of Communications, Climate Action and Environment. ESB 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 will be made.

HOW ISSUES WERE ADDRESSED BY THE AUDIT AND RISK COMMITTEE

The Audit and Risk Committee recognises that the impairment reviews for the carrying value of assets involve a range of judgemental decisions largely related to the assumptions used to assess the value-in-use of the assets being tested.

To assist with their decision on the level of impairment charge, the Audit and Risk Committee carried out the following:

- Considered detailed papers prepared and presented by the Executive Director, Group Finance and Commercial, including details of the methodologies and assumptions applied in determining the recoverable values including the discount rates and market and tariff assumptions used
- Constructively challenged the assumptions and projections presented in the papers
- Considered the sensitivity analysis provided including scenarios with different discount rates and market and tariff assumptions
- Considered the detailed reporting from, and findings of the external auditors

Following the review above, the Audit and Risk Committee is satisfied with the impairment review approach, key assumptions used and the charges reflected in note 7 of the Financial Statements.

The accounting for the obligations to be reflected in the financial statements requires the exercise of judgement. The Audit and Risk Committee is satisfied that the appropriate accounting treatment, determined in accordance with IAS 19 Employee Benefits, is to reflect its existing committed obligations, as set out in the notes of the financial statements.

SIGNIFICANT ISSUES CONSIDERED

LEGAL CONTINGENT LIABILITIES AND DISCLOSURES

Following flooding in Cork in November 2009, Aviva as University College Cork's (UCC) insurer pursued a legal action against ESB in the High Court seeking recovery of €19 million for property damage. On 5 October 2015, the High Court delivered its judgement in the case and found ESB 60% liable for the damage caused and UCC 40% contributory negligent.

Based on legal advice received, ESB appealed the decision to the Court of Appeal. On 20 March 2018 the Court of Appeal delivered its judgment which held that ESB is not liable for any damage caused to UCC's property by the flood. In October 2018 the Supreme Court granted UCC leave to appeal the judgment of the Court of Appeal. The appeal was heard by the Supreme Court in early July 2019 and the judgement of the Court was reserved. It is anticipated that the judgement of the Supreme Court may be delivered by the end of Q1 2020. The issue of the legal costs of the High Court and Court of Appeal cases is stayed pending the outcome of the Supreme Court appeal.

In addition to the UCC claim, ESB has, since the judgment of the High Court in the UCC case, been served with 388 sets of proceedings relating to the flooding in Cork in November 2009. Details of amounts claimed in relation to these proceedings have not yet been received and therefore it is not possible to make a reliable estimate of their cost (should the Supreme Court not uphold the decision of the Court of Appeal) at this time. However, ESB does not anticipate that the total amount of damages awarded, if any, and related costs for all of the actions, including the Aviva/UCC action, would exceed its applicable insurance cover.

On the basis of the internal and external legal advice received, and as the only ongoing appeal is by UCC (which ESB does not believe will be successful), no provision has been made for such claims in the financial statements. See notes of the Financial Statement for further details.

HOW ISSUES WERE ADDRESSED BY THE AUDIT AND RISK COMMITTEE

The Audit and Risk Committee recognise that in relation to legal claims, judgement is necessary on the appropriate level of disclosure and provisioning.

To assist with the decision on the classification of the claim as a contingent liability, the Audit and Risk Committee carried out the following work:

- Considered both the internal and external legal advice in relation to the case
- Challenged the views taken by management where necessary
- Based on this work, the Audit and Risk Committee is satisfied that the claim represents a contingent liability and it is appropriate not to make a provision in relation to the UCC case and other related outstanding cases.

The above description of significant issues considered should be read in conjunction with the Independent Auditors' Report on pages 110 to 116 and the statement of accounting policies disclosed in note 1 of the financial statements on page 125.

FAIR, BALANCED AND UNDERSTANDABLE

At the request of the Board, the Audit and Risk Committee has considered whether, in its opinion, the Annual Report and Financial Statements taken as a whole, are fair, balanced and understandable and provides all the necessary information for shareholders / stakeholders to assess the Group's performance, business model and strategy. Consideration is also given to whether the information is presented in a clear and concise format, avoids the use of jargon and is easily understood by the reader.

To assist in the process of supporting the fair, balanced and understandable assessment statement, management prepared a report to the Audit and Risk Committee setting out the key considerations in arriving at the statement and to assist in its challenge and testing of a fair, balanced and understandable assessment.

In reaching their conclusion, the Audit and Risk Committee considered the following:

- All Board members received copies of the Annual Report and Financial Statements to review early in the reporting cycle to ensure the key messages in the Annual Report were aligned with the Group's position, performance and strategy and the narrative sections of the Annual Report were consistent with the financial statements
- That a robust process was put in place by management for the preparation of the Annual Report and Financial Statements for the year ended 31 December 2019, including early planning, taking into consideration regulatory changes and best practice
- Clear linkages to the strategic objectives are provided throughout the report
- That the key performance indicators (KPIs) used and reported in the Annual Report are consistent with those provided by management to the Board throughout the year
- Review of data and information included in the Annual Report by internal audit
- Review of the external auditors' report
- That all key events and issues reported to the Board during the year, both positive and negative, have been adequately referenced or reflected in the Annual Report

Following its review, the Audit and Risk Committee is of the opinion that the Annual Report and Financial Statements taken as a

whole, are fair, balanced and understandable and provides all the necessary information for shareholders / stakeholders to assess the Group's performance, business model and strategy.

AUDIT AND RISK COMMITTEE EFFECTIVENESS

As part of the Board evaluation process, the operation of the Audit and Risk Committee is also evaluated. One of the findings of this evaluation was the challenge posed by the range and volume of material which had to be considered by the Committee given its extensive remit. The Committee accepted that this is a common issue for Audit and Risk Committees, and by its nature a dynamic process with Committee and management needing to work together in a supportive way. To achieve this the Committee chairman meets regularly with management to ensure that key topics are identified and reported on, as succinctly as possible. Measures taken to improve effectiveness include the development of post meeting action logs to assist with timely follow up of Committee queries and a full review of Committee reporting to assess the ongoing requirement for, the frequency of and the content of reporting to the Committee. An end of year report was prepared for the Committee which reviewed materials that were presented to the Committee by reference to their terms of reference and annual workplan to provide assurance that the Committee had adequate coverage of its oversight responsibilities.

EXTERNAL AUDIT

Audit quality

To maintain audit quality and provide assurance on the integrity of financial reporting, the Audit and Risk Committee reviews and challenges the proposed external audit plan, including its scope and materiality prior to approval, to ensure that the external auditors have identified the key audit risks and developed a robust approach. The Audit and Risk Committee considers the external auditors' response to accounting, financial control and audit issues as they arise and meets with them at least once annually without management present, providing the external auditors with the opportunity to raise any matters in confidence. The Audit and Risk Committee met with PwC privately in February 2020.

Discussions with external auditors

The Audit and Risk Committee has received and discussed a report from the external auditors on the findings from the audit, including those relating to the judgemental areas noted on pages 97 to 98.

After reviewing the presentations and reports from management and internal audit, and taking into account views expressed by the external auditors, the Audit and Risk Committee is satisfied that the financial statements appropriately address critical judgements and key estimates. The Audit and Risk Committee is also satisfied that the significant assumptions used for determining the value of assets and liabilities have been appropriately scrutinised, challenged and are sufficiently robust.

Throughout the year, ESB and PwC were engaged in ongoing, open communication on current matters as and when they arose.

Independence

The Audit and Risk Committee assesses the auditors' independence on an ongoing basis. The Committee considers the appointment of the external auditors every five years and this process is subject to public tender. The last tender process was completed in 2016.

Auditor independence and objectivity is safeguarded by a number of control measures, including:

- Limiting the nature and value of non-audit services performed by the external auditors as covered under the policy for non-audit services
- Monitoring the changes in legislation related to auditor objectivity and independence
- PwC confirming that they have appropriate internal safeguards in place that are consistent with applicable standards
- Rotating the audit partner every five years
- Providing opportunities to meet with the Audit and Risk Committee privately
- Reviewing annually the effectiveness of the external auditors
- Annual confirmation of independence by the external auditors

The Audit and Risk Committee is satisfied that the auditors, PwC, are both independent and objective.

Auditor effectiveness

The effectiveness of the external auditors is reviewed annually, taking into account feedback from a questionnaire on the evaluation of the external auditors by the Audit and Risk Committee. The evaluation focuses on such areas as the robustness of the audit process, audit team, communications and governance.

Overall, the Audit and Risk Committee is satisfied with the effectiveness of the external audit based on the quality of presentations received, management's assessment of the audit process, technical knowledge of PwC and their robust understanding of ESB's business.

A review of the effectiveness of the external process was formally conducted in 2019. Members of the Audit and Risk Committee also met with representatives from PwC's Public Interest Body (PIB) to discuss the quality and effectiveness of the external audit.

Non-audit services

The Audit and Risk Committee has approved a policy on the engagement of ESB's external auditors for non-audit services to take account of the implementation of the EU Audit Regulation and Directive on non-audit services in compliance with Statutory Instrument No 312/2016 - European Union (Statutory Audits) (Directive 2006/43/EC, as amended by Directive 2014/56/EU, and Regulation (EU) No. 537/2014) Regulations 2016 in Ireland and with the Ethical Standard for Auditors issued in April 2017 by the Irish Auditing and Accounting Supervisory Authority (IAASA).

The policy outlines the governance arrangements that apply to the provision of non-audit services. This policy includes a list of prohibited services, outline the governance arrangements that apply to the provision of such services and set out the transition arrangements for permitted non-audit services commenced prior to appointment of PwC. The revised policy includes a defined approval process and is in compliance with ESB procurement procedures and Group authority levels.

As 2020 represents the fourth year of the audit engagement with PwC, the policy will be updated in line with the EU Audit Regulation which established that when a statutory auditor or audit firm has been providing non-audit services (NAS), to the audited Public Interest Entity (PIE) for a period of three or more consecutive financial years, the total fees for such services in the fourth year will be limited to a maximum of 70% of the average of the total fees paid in the last three consecutive years for the statutory audit of the audited entity and, where applicable, of its parent undertaking of its controlled undertakings and of the consolidated financial statement of that group of undertakings.

Fees earned by ESB's external auditors in respect of non-audit services in any financial year, excluding permitted non-audit services under the transitional arrangements, shall not exceed the annual audit fee for that year. An update on the nature of PwC non-audit services provided and the value of such services is presented to the Audit and Risk Committee bi-annually to demonstrate that the services are in compliance with the policy and the value is within the cap.

A summary of the audit and non-audit fees paid to the external auditors is set out in note 10 of the financial statements. The primary non-audit related services provided by the external auditors during the year were in respect of permitted accounting, tax and treasury related advice. PwC also provided administrative assistance directly to the ESOP in relation to the ESOP auction process.

The Audit and Risk Committee are satisfied that the fees paid in 2019 did not compromise the independence or integrity of the external auditors. The Committee will continue to monitor the type and level of services provided to prevent any perceived or actual impact on auditors' independence.

MEETINGS

The internal and external auditors have full and unrestricted access to the Audit and Risk Committee. The Audit and Risk Committee Chairman reports the outcome of its meetings to the Board. Meetings, or part thereof, are routinely attended by the Board Chairman, Chief Executive and / or Deputy Chief Executive, Executive Director, Group Finance and Commercial, Head of Group Internal Audit, Group Compliance Manager and representatives of the external auditors. Committee-only sessions are arranged at the beginning/end of meetings, as determined by the Audit and Risk Committee Chairman.

On behalf of the Audit and Risk Committee



Noreen O'Kelly,
Chairman,
Audit and Risk Committee
27 February 2020

BOARD COMMITTEES IN 2019



Anne Butler,
Chairman

Role

The Health, Safety and Environment Committee's responsibilities are set out in its terms of reference. The Committee Chairman meets as required with the Chairman of the Audit and Risk Committee to agree and update as appropriate the specific risk responsibilities of the Health, Safety and Environment Committee.

➔ See pages 68 to 69 for further information on Health, Safety and Environment in 2019 as set out in the Responsible Business Report Section.

HEALTH, SAFETY AND ENVIRONMENT COMMITTEE

Committee Meetings

The Committee held 5 meetings during 2019. The members of the Committee, length of service and the number of meetings attended are set out below:

MEMBERS	DESIGNATION	LENGTH OF SERVICE	MEETINGS ATTENDED
Anne Butler, (Chairman)	Independent Board member	4 years and 3 months	5
Paul Lynam	Independent Board member	3 years	5
Pat O'Doherty	Chief Executive	8 years and 1 month	4
Stephen Carrig ¹	Worker Board member	1 year	5

¹ Stephen Carrig joined the Committee from January 2019.

KEY ACTIVITIES OF THE HEALTH, SAFETY AND ENVIRONMENT COMMITTEE 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: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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



Andrew Hastings, Chairman

Role
The Finance and Investment Committee's responsibilities are set out in its Terms of Reference.

FINANCE AND INVESTMENT COMMITTEE

Committee Meetings

The Committee held 11 meetings during 2019. The members of the Committee, length of service and the number of meetings attended are set out below:

MEMBERS	DESIGNATION	LENGTH OF SERVICE	MEETINGS ATTENDED
Andrew Hastings, (Chairman)	Independent Board member	4 years and 3 months	11
Dave Byrne	Worker Board member	6 years and 9 months	11
Seán Kelly	Worker Board member	4 years and 3 months	11
Paul Lynam	Independent Board member	3 years	11
Pat O'Doherty	Chief Executive	6 years and 9 months	11
Noreen O'Kelly	Independent Board member	4 years and 3 months	11

KEY ACTIVITIES OF THE FINANCE AND INVESTMENT COMMITTEE IN 2019

Duty	Examples of Activity
Review annual capital budgets and financial performance prior to submission to the Board	Reviewed and recommended to the Board (where applicable): <ul style="list-style-type: none"> 2020 Budget and the five-year business plan Quarterly financial and capital expenditure reports Quarterly loans, swaps and bonds report SIRO revised business plan
Examine major business proposals for investment and capital expenditure	Reviewed and recommended to the Board (where applicable): <ul style="list-style-type: none"> Renewables investments ESB Networks progress on Price Review 4 (PR4) and PR5 preparation Joint venture agreements Major IT system upgrade Head office redevelopment project Participation in the I-SEM & UK capacity auctions Electric Ireland Field sales contracts Smart Energy Services investments Generation assets investment and overhaul programme Great Britain Civil and Electrical Framework contract Electric Vehicle Chargepoint framework Onshore wind services agreement
Examine key policy issues concerning the financial requirements of ESB including credit ratings, borrowings, financial instruments and debt management	Reviewed and recommended to the Board (where applicable): <ul style="list-style-type: none"> Green Bond issue ESB funding requirements Treasury risk management update Group valuation and investment hurdle rates Credit rating updates
Review the energy trading policies and procedures of the Group	Reviewed and considered: <ul style="list-style-type: none"> ESB Trading Risk Position (market, credit and operational) Revised market abuse policy ESB Trading Strategy Update on I-SEM capacity auctions



Ellvena Graham OBE, Chairman

Role
The Remuneration and Management Development Committee's responsibilities are set out in its Terms of Reference.

REMUNERATION AND MANAGEMENT DEVELOPMENT COMMITTEE

Committee Meetings

The Committee held 3 meetings during 2019. The members of the Committee, length of service and the number of meetings attended are set out below:

MEMBERS	DESIGNATION	LENGTH OF SERVICE	MEETINGS ATTENDED
Ellvena Graham OBE, (Chairman)	Chairman	8 years	3
Andrew Hastings	Independent Board member	4 years and 3 months	3
Noreen Wright	Independent Board member	8 years	3

KEY ACTIVITIES OF THE REMUNERATION AND MANAGEMENT DEVELOPMENT COMMITTEE IN 2019

Duty	Examples of Activity
Keep under review senior management succession and development plans	<ul style="list-style-type: none"> Review of succession planning and leadership competencies Review of Senior management appointments Review of Chief Executive and Executive Director's career and personal development
Agree with the Chief Executive his specific annual performance targets	<ul style="list-style-type: none"> Reviewed performance against 2018 targets Set 2019 performance targets
Determine the remuneration packages for ESB's Executive Team	<ul style="list-style-type: none"> Reviewed and approved remuneration packages for the Executive Team



Alf Smiddy, Chairman

Role
The Marketing and Customer Committee's responsibilities are set out in its Terms of Reference.

MARKETING AND CUSTOMER COMMITTEE

Committee Meetings

The Committee held 4 meetings during 2019. The members of the Committee, length of service and the number of meetings attended are set out below:

MEMBERS	DESIGNATION	LENGTH OF SERVICE	MEETINGS ATTENDED
Alf Smiddy (Chairman)	Independent Board member	3 years	4
Anne Butler	Independent Board member	3 years	3
Tony Merriman	Worker Board member	3 years	4
Pat O'Doherty	Chief Executive	3 years	4

KEY ACTIVITIES OF THE MARKETING AND CUSTOMER COMMITTEE IN 2019

Duty	Examples of Activity
Review and consider marketing and customer initiatives and programmes and ensure they are aligned with ESB's strategic objectives	Reviewed and considered: <ul style="list-style-type: none"> ESB Networks customer update ROI residential customer update NI market update Electric Ireland Business performance update ESB Energy update (GB) Electric vehicles update Smart metering update Winter storm preparedness ESB reputation and brand update review
Review and consider new products and services and associated revenue projections	Received an update on: <ul style="list-style-type: none"> GB brand review Tariff changes External review of marketing strategies
Review and consider proposed advertising and sponsorship programmes and the assessment of their potential impact	Reviewed and considered: <ul style="list-style-type: none"> Marketing strategy updates Digital customer channel update Electric Ireland brand and advertising strategy update

Each Board Committee has its terms of reference reviewed and approved by the Board annually. Terms of reference of all committees are available upon request from the Company Secretary.

BOARD MEMBERS' REPORT

The Board members present their report together with the audited financial statements of ESB and of the Group for the year ended 31 December 2019.

PRINCIPAL ACTIVITIES

The principal activities of the Group are the generation, transmission, distribution and supply of electricity in the Republic of Ireland (ROI) and Northern Ireland (NI). The Group also operates internationally, in the generation and supply of electricity in Great Britain (GB) and is involved in a number of engineering consultancy projects in Asia and Africa.

BUSINESS REVIEW

Commentaries on performance in the year ended 31 December 2019, including information on recent events and potential future developments, are contained in the Chairman's Statement and the Chief Executive's Review. The performance of the business and its financial position and the principal risks faced by the Group are reflected in the reviews for each major business unit on pages 54 to 63, the Financial Review on pages 48 to 53 and the Risk Report on pages 24 to 37.

RESULTS AND DIVIDEND FOR THE YEAR

The financial results of the Group show a profit after tax before exceptional items of €419 million for the financial year 2019, compared with a profit of €181 million for 2018. Profit after tax and exceptional items is €338 million (2018: profit of €60 million). The dividend policy agreed with the Government in 2013 provides for targeted dividends of adjusted profit after tax of 40% in 2017 and thereafter. An interim dividend for 2019 of €38.2 million (1.94 cent per unit of stock) was declared and paid in November 2019. The Board is now recommending a final dividend for 2019 of 2.53 per cent per unit of stock, or €49.8 million, which brings the total dividend for 2019 to €88 million. This would bring the total dividends paid over the past decade to €1.2 billion.

SHARE CAPITAL

An Employee Share Ownership Plan (ESOP) market liquidity proposal was approved by ESB's Board in May 2015. ESB approved the expenditure of up to €25 million to acquire capital stock in internal ESOP markets, commencing in 2017, with the objective of improving liquidity in the market. This

expenditure commitment by ESB matched the expenditure committed by the ESOP trustee under the proposal. ESB purchased and cancelled capital stock worth €4.6 million in 2019 (2018: €4.8 million). Further details are outlined in notes 19 and 32. Details of the Group's share capital are outlined in note 19 of the financial statements.

FUTURE DEVELOPMENTS

ESB is a strong diversified, vertically integrated utility operating right across the electricity market: from generation, through transmission and distribution to supply of customers, with an expanding presence in the GB market. The Strategy to 2030 ensures that ESB continues to grow as a successful business while maintaining the financial strength to invest in a low-carbon future at the necessary scale and pace (see pages 17 to 21 for more information).

PRINCIPAL RISKS AND UNCERTAINTIES

A description of the principal risks and uncertainties facing the Group is set out in the Risk Report on pages 28 to 37.

FINANCIAL INSTRUMENTS

The financial risk management objectives and policies of the group along with a description of the use of financial instruments is set out in note 28 of the financial statements.

ACCOUNTING RECORDS

The Board members believe that they have employed accounting personnel with appropriate expertise and provided adequate resources to the financial function to ensure compliance with ESB's obligation to keep proper books of account. The books of account of ESB are held at Two Gateway, East Wall Road, Dublin 3.

REPORT UNDER SECTION 22 OF THE PROTECTED DISCLOSURES ACT 2014

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.

REGULATION OF LOBBYING ACT 2015

In accordance with the requirements of the Regulation of Lobbying Act, ESB is registered on the Lobbying Register at www.lobbying.ie and has made the required return for the period 1 January to 31 December 2019.

MODERN SLAVERY ACT

Modern slavery is a criminal offence under the UK Modern Slavery Act 2015. The Act imposes obligations on organisations of a certain size, which carry on a business in the United Kingdom. Modern slavery can occur in various forms, including servitude, forced and compulsory labour and human trafficking, all of which have in common the deprivation of a person's liberty by another in order to exploit them for personal or commercial gain. 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.

SUSTAINABILITY

Sustainability and corporate social responsibility (CSR) concepts are embedded in all ESB operations and activities. Information on the Group's approach to sustainability and CSR is set out on pages 70 to 77.

ELECTORAL ACT 1997

The Board made no political donations during the year.

PRINCIPAL SUBSIDIARY, JOINT VENTURE AND ASSOCIATED UNDERTAKINGS

Details of the principal subsidiary, joint venture and associated undertakings are outlined in note 35 of the financial statements.

PROMPT PAYMENTS REGULATION

The Board acknowledges its responsibility for ensuring compliance, in all material respects, with the provisions of the Prompt Payment of Accounts Act, 1997 and European

Communities (Late Payments in Commercial Transactions) Regulations, 2012 (S.I. No. 580 of 2012) as amended by European Communities (Late Payment in Commercial Transactions) (Amendment) Regulations 2016 (S.I. No. 281 of 2016) 2002. The Board is satisfied that ESB has complied with the requirements of the Regulations.

RELATED PARTY TRANSACTIONS

Related party transactions are set out in note 30 of the financial statements.

RESEARCH AND DEVELOPMENT

ESB's business is involved in innovative projects and programmes to develop the energy sector. A number of these projects and programmes are referred to in the Strategy and Performance Section on pages 7 to 63.

STATEMENT UNDER SECTION 330 OF THE COMPANIES ACT 2014

The ESB Regulations require ESB to observe the provisions of the Companies Act 2014 applying to a Companies Act entity in regard to audit and/or auditors. This requires the Board members to make a statement in the form required by Section 330 of the 2014 Act. In compliance with this requirement, the Board confirms that it applies the standards in Section 330 of the Companies Act 2014 and in this regard, each of the Board members confirms that:

- so far as the Board member is aware, there is no relevant audit information of which ESB's statutory auditors are unaware
- each Board member has taken all the steps that he or she ought to have taken as a Board member in order to make himself or herself aware of any relevant audit information and to establish that ESB's auditors are aware of that information (within the meaning of Section 330).

AUDIT AND RISK COMMITTEE

ESB has an Audit and Risk Committee, the members of which are set out on page 95.

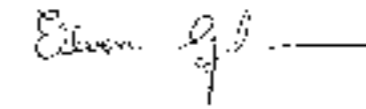
AUDITORS

PwC were appointed as ESB's auditors for the 2020 financial year at the AGM held in 2019 in accordance with Section 7(2) of the Electricity (Supply) Act 1927 (as amended), be confirmed at the AGM of the company. At the 2020 AGM, the shareholders will be asked (i) to authorise the directors to fix the remuneration of the auditors in respect of the year ended 31 December 2020 and (ii) to appoint PwC as auditors

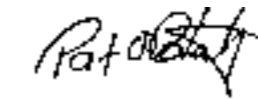
for the 2021 financial year (in accordance with the applicable provisions of Section 7(2) of the Act, which provides that the auditors are appointed annually).

APPROVAL OF THE 2019 ANNUAL REPORT AND FINANCIAL STATEMENTS

The Board is satisfied, after taking into account the recommendation of the Audit and Risk Committee, that the Annual Report and Financial Statements taken as a whole, are fair, balanced and understandable.



Ellvena Graham OBE,
Chairman



Pat O'Doherty,
Chief Executive

27 February 2020

A woman with blonde hair is shown in profile, looking towards the right. Her hair is styled with a blue and white gradient. On her head, there is a small, green house with orange windows and solar panels on the roof. In the background, a group of five people wearing hard hats and safety vests are walking through a field. The overall scene is a composite image representing renewable energy and infrastructure.

CHAPTER 3

FINANCIAL STATEMENTS

109 Statement of Board Member's
Responsibilities

110 Independent Auditor's Report to the
Stockholders of Electricity Supply Board

116 Financial Statements

210 Prompt Payments Act

211 Glossary

CONTENTS

Statement of Board Members' Responsibilities	109
Independent Auditor's Report to the Stockholders of Electricity Supply Board (ESB)	110

Financial Statements

Group Income Statement	116
Group Statement of Comprehensive Income	117
Group Balance Sheet	118
Parent Balance Sheet	119
Group Statement of Changes in Equity	120
Parent Statement of Changes in Equity	121
Group Cash Flow Statement	122
Parent Cash Flow Statement	123

Notes To The Financial Statements

1 Statement of Accounting Policies	124
2 Segment Reporting	138
3 Revenue from Contracts with Customers	140
4 Geographical Information	141
5 Exceptional Items	141
6 Other Operating Income / (Expenses)	142
7 Operating Costs (including Net Impairment Losses on Financial Assets)	143
8 Net Finance Cost and Other Financing Charges	143
9 Employees	144
10 Profit for the Financial Year	145
11 Property, Plant and Equipment	146
12 Intangible Assets	149
13 Right of use assets and lease liabilities	151
14 Goodwill	153
15 Financial Asset Investments at Fair Value through Profit or Loss and Equity Accounted Investees	154
16 Inventories	158
17 Trade and Other Receivables	158
18 Cash and Cash Equivalents	162
19 Changes in Equity	162
20 Taxation	164
21 Borrowings and Other Debt	168
22 Derivative Financial Instruments	174
23 Pension Liabilities	179
24 Liability – ESB Pension Scheme and Employee Related Liabilities	183
25 Trade and Other Payables	184
26 Deferred Income	185
27 Provisions	186
28 Financial Risk Management and Fair Value	188
29 Commitments and Contingencies	202
30 Related Party Transactions	202
31 Estimates and Judgements	204
32 ESB ESOP Trustee Limited	205
33 Post Balance Sheet Events	205
34 Approval of Financial Statements	205
35 Subsidiary, Equity Accounted Investees and Associate Undertakings	206

STATEMENT OF BOARD MEMBERS' RESPONSIBILITIES

The Board members are responsible for preparing the annual report, incorporating financial statements for ESB (the Parent) and for ESB Group comprising ESB and its subsidiaries "the Group".

Under ESB's governing regulations, adopted pursuant to Section 6 (1) of the Electricity (Supply) Act 1927 (as amended) "the ESB Regulations", the Board is required to prepare financial statements as are required by companies established under the Companies Act 2014.

ESB is also required to furnish its annual report, which incorporates the financial statements, to the Minister for Communications, Climate Action and Environment in accordance with corporate governance guidelines and to meet its obligations under Section 32 of the Electricity (Supply) Act 1927 (as amended), to make to the Minister a report of its proceedings during the preceding year.

The Board has elected to prepare ESB's financial statements in accordance with IFRS as adopted by the European Union and as applied in accordance with the applicable provisions of the Companies Act 2014 and ESB Regulations.

The Board members must not approve the financial statements unless they are satisfied that they give a true and fair view of the assets, liabilities and financial position of the Group and of ESB and of the Group's profit or loss for that year.

In preparing the financial statements the Board members are required to:

- Select suitable accounting policies and then apply them consistently;
- Make judgements and estimates that are reasonable and prudent;
- State that the financial statements comply with IFRS as adopted by the European Union, and as regards ESB, as applied in accordance with the Companies Act 2014; and
- Prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Group and ESB will continue in business.

The Board members are responsible for keeping adequate accounting records which disclose with reasonable accuracy at any time the assets, liabilities, financial position and profit or loss of ESB, and which enable them to ensure that the financial statements of ESB and the Group are prepared in accordance with applicable IFRS as adopted by the European Union and as applied in accordance with applicable provisions of the Companies Act 2014 and ESB Regulations.

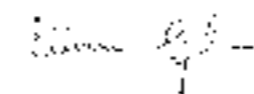
The Board Members are also responsible for safeguarding the assets of ESB and the Group, and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The Board members are responsible for the maintenance and integrity of the corporate and financial information included on the Group's and ESB's website www.esb.ie. Legislation in the Republic of Ireland governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

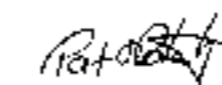
Each of the Board members, confirm that, to the best of each person's knowledge and belief:

- The Group financial statements, prepared in accordance with IFRS as adopted by the European Union and ESB's financial statements prepared in accordance with IFRS as adopted by the European Union as applied in accordance with the provisions of Companies Act 2014 and as applied by the ESB Regulations, give a true and fair view of the assets, liabilities, financial position of the Group and of ESB at 31 December 2019 and of the profit of the Group for the year then ended 31 December 2019;
- The Board members' report contained in the annual report includes a fair review of the development and performance of the business and the position of the Group and ESB, together with a description of the principal risks and uncertainties that they face; and
- The annual report and financial statements, taken as a whole, provides the information necessary to assess the Group's performance, business model and strategy and is fair, balanced and understandable and provides the information necessary for shareholders to assess ESB's position and performance, business model and strategy.

On behalf of the Board



Eilvena Graham OBE, Chairman



Pat O'Doherty, Chief Executive

INDEPENDENT AUDITORS' REPORT TO STOCKHOLDERS OF ELECTRICITY SUPPLY BOARD (ESB)

REPORT ON THE AUDIT OF THE FINANCIAL STATEMENTS

OPINION

In our opinion, ESB's Group consolidated financial statements and Parent financial statements (the "financial statements"):

- give a true and fair view of the Group's and the Parent's assets, liabilities and financial position as at 31 December 2019 and of the Group's profit and the Group's and the Parent's cash flows for the year then ended;
- have been properly prepared in accordance with International Financial Reporting Standards ("IFRSs") as adopted by the European Union and, as regards the Parent's financial statements, as applied in accordance with the provisions of the Companies Act 2014; and
- have been properly prepared in accordance with the requirements of the Companies Act 2014, as applied by the ESB Acts 1927 to 2014.

We have audited the financial statements, included within the Annual Report and Financial Statements (the "Annual Report"), which comprise:

- the Group and Parent Balance Sheets as at 31 December 2019;
- the Group Income Statement and Group Statement of Comprehensive Income for the year then ended;
- the Group and Parent Cash Flow Statements for the year then ended;
- the Group and Parent Statements of Changes in Equity for the year then ended; and
- the Notes to the financial statements, which include a description of the significant accounting policies.

BASIS FOR OPINION

We conducted our audit in accordance with International Standards on Auditing (Ireland) ("ISAs (Ireland)") and applicable law. Our responsibilities under ISAs (Ireland) are further described in the Auditors' responsibilities for the audit of the financial statements section of our report. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Independence

We remained independent of the Group in accordance with the ethical requirements that are relevant to our audit of the financial statements in Ireland, which includes IAASA's Ethical Standard and we have fulfilled our other ethical responsibilities in accordance with these requirements.

OUR AUDIT APPROACH

Overview

Materiality

- €25 million - Group financial statements

Based on c. 5% of profit before tax and exceptional items. We consider this to be an appropriate benchmark as the Group is profit orientated and the exceptional items are significant non-recurring items which are not reflective of the Group's ongoing trading activity.

- €25 million - Parent financial statements

We considered it appropriate to restrict materiality for the Parent financial statements to €25 million, being that applied to the Group financial statements.

Audit scope

We conducted our work across the four reportable segments and the head office function. Our audit work covered in excess of 90% of Group revenues, profit before taxation and exceptional items, total assets and total liabilities.

Key audit matters

- Carrying value of Long-Lived Assets
- Completeness of pension obligations
- Revenue Recognition – unbilled Electric Ireland revenue

INDEPENDENT AUDITORS' REPORT TO STOCKHOLDERS OF ELECTRICITY SUPPLY BOARD (ESB) (continued)

The scope of our audit

As part of designing our audit, we determined materiality and assessed the risks of material misstatement in the financial statements. In particular, we looked at where the Board members made subjective judgements, for example in respect of significant accounting estimates that involved making assumptions and considering future events that are inherently uncertain. As in all of our audits we also addressed the risk of management override of internal controls, including evaluating whether there was evidence of bias by the Board members that represented a risk of material misstatement due to fraud.

Key audit matters

Key audit matters are those matters that, in the auditors' professional judgement, were of most significance in the audit of the financial statements of the current period and include the most significant assessed risks of material misstatement (whether or not due to fraud) identified by the auditors, including those which had the greatest effect on: the overall audit strategy; the allocation of resources in the audit; and directing the efforts of the engagement team. These matters, and any comments we make on the results of our procedures thereon, were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. This is not a complete list of all risks identified by our audit.

Key audit matter

Carrying value of Long-Lived Assets

Refer to page 97 (Audit and Risk Committee Report), notes 1(vi), (vii) and (viii) (Statement of Accounting Policies) and notes 11 and 12 to the financial statements

The carrying value of ESB's property, plant and equipment and intangible assets is €11.5 billion, most of which are long-lived assets designed to deliver a return over 20+ years. The Group is required to assess at the end of each reporting period whether there is any indication that an asset may be impaired. If any such indication exists, the Group is required to perform impairment testing.

The ongoing pressure on energy margins in the UK and the lower forecast electricity prices by Poyry in the Republic of Ireland in addition to impairments recorded in the prior year increases the overall risk and level of audit focus required in respect of Irish and UK thermal assets.

The Group has concluded that there were no impairment charges to be recorded in respect of the Irish and UK thermal assets.

The Group's assessment of the carrying value of these assets involves significant judgement in estimating the inputs to discounted cash flow models used to assess the recoverable amount of these assets, including assumptions in respect of future electricity prices, capacity income, future fuel costs, expected plant running (load factors), discount rates, inflation and plant closure dates.

How our audit addressed the key audit matter

We focused our audit effort on those thermal generation assets where there was a risk of impairment.

We considered the Group's assessment of whether there were any indications that an asset may be impaired, thereby requiring an impairment test to be performed.

We evaluated management's assessment of those thermal generation assets which were potentially impaired by evaluating the critical assumptions in the future cash flow forecasts and considering the overall level of headroom and carrying value of the individual cash generating units.

For thermal generation assets, we obtained an understanding of management's approach in determining the key assumptions in the impairment models, including comparing them to the latest Board approved budgets. Where there was independent source data we compared this to the inputs to the models and understood management's basis for the judgements made in the models. For inputs with no observable data we considered these and challenged management's assumptions in the context of available internal data, including historical data and budget information. We considered the appropriateness of the discount rates used in the impairment models by assessing the assumptions used in the weighted average cost of capital against external benchmarks. We also performed sensitivity analysis to changes in key assumptions and we considered the likelihood of such changes arising.

We considered the disclosures in the financial statements in relation to these matters.

Based on our procedures we were satisfied that no impairment charge was required in the current year in respect of the thermal generation assets.

INDEPENDENT AUDITORS' REPORT TO STOCKHOLDERS OF ELECTRICITY SUPPLY BOARD (ESB) (continued)

Key audit matter	How our audit addressed the key audit matter
------------------	--

Completeness of pension obligations

Refer to page 97 (Audit and Risk Committee Report), note 1 (xvi) (Statement of Accounting Policies) and note 23 to the financial statements

As set out in Note 23 to the financial statements, the regulations governing the ESB Defined Benefit Scheme stipulate the benefits that are to be provided and the contributions to be paid by both ESB and the contributing members.

ESB has determined that its legal and/or constructive obligations in respect of contributions payable by it to the ESB Defined Benefit Scheme are limited to the amounts provided for in the Scheme Rules, namely, the normal ongoing contributions and the balance of the €591 million contribution which was committed by ESB under the 2010 Pensions agreement.

As set out in Note 23, the Defined Benefit Pension Scheme is not a typical "balance of costs" scheme where the employer is liable to pay the balance of contributions required to fund benefits.

We focused on this area as there has been a high level of complexity and judgement involved in the interpretation of the Scheme rules and the determination of the related accounting and adequacy of disclosures in the financial statements.

We updated our understanding of ESB's assessment of their obligations in respect of the ESB Defined Benefit Scheme and considered the continued appropriateness of the accounting treatment in the context of IAS 19 "Employee Benefits".

We made enquiries of senior management and internal legal counsel and read the board minutes, internal documentation and correspondence for the year to confirm that there had been no changes to the Group's position or commitments made to employees since 31 December 2018.

We received a representation from the Board that ESB do not intend to make any further payments to the Scheme other than the balance of the €591 million contribution which was committed by ESB under the 2010 Pensions agreement, and fixed continuing ongoing contributions of scheme members' salaries.

ESB has informed us that the Defined Benefit Pension Scheme is not a typical "balance of costs" scheme where the employer is liable to pay the balance of contributions required to fund benefits.

The accounting treatment in the financial statements reflects this position.

Revenue Recognition - unbilled Electric Ireland revenue

Refer to note 1 (xvii) (Statement of Accounting Policies) and note 17 to the financial statements

Unbilled revenue is the revenue from energy supplied to the customer between the date of their last bill and the year-end date and requires estimation.

In determining the unbilled revenue at the year end, volumes are estimated by reference to electricity volume purchases and other assumptions.

In Electric Ireland, given the size of the customer base, estimates used in determining the values attributable to these volumes in the Republic of Ireland are material to the financial statements.

There is also significant complexity in the models used to estimate unbilled revenue at year end.

We focused on this area given the level of complexity and estimates involved in determining the unbilled revenue at year end.

We assessed the IT general controls system application configuration and the business process controls in relation to revenue estimation and billing systems.

We evaluated the integrity of the model used by the Group in calculating unbilled revenue. We challenged the appropriateness of the estimates used in the model by reference to historical and current data and current pricing. Our work included reconciling certain relevant inputs to the model to the underlying source data. We also considered the output from retrospective reviews of previous estimates made in comparison to actual billing data and considered other information as part of our consideration of the Group's estimation techniques.

We concluded that the assumptions and methodologies adopted by management to calculate the unbilled revenue at the year-end were reasonable and consistent with those used in prior years.

INDEPENDENT AUDITORS' REPORT TO STOCKHOLDERS OF ELECTRICITY SUPPLY BOARD (ESB) (continued)

How we tailored the audit scope

The Group is structured across four key reportable segments and the head office function. We determined that there are five reporting components, four in the Republic of Ireland and one in Northern Ireland.

We tailored the scope of our audit to ensure that we performed enough work to be able to give an opinion on the financial statements as a whole, taking into account the structure of the Group, the accounting processes and controls, and the industry in which the Group operates.

Our audit work covered in excess of 90% of Group revenues, profit before taxation and exceptional items, total assets and total liabilities. All of the required audit work in respect of the four reporting components in the Republic of Ireland was performed by the Group team.

Under instruction from the Group team, our network firm in Northern Ireland performed an audit of the NIE Networks segment. We determined the level of involvement we needed to have in their audit work to be able to conclude whether sufficient appropriate audit evidence had been obtained as a basis for our opinion on the Group financial statements as a whole. We had regular communications and discussions with our Northern Ireland team throughout the audit process. We received a detailed memorandum of examination on work performed and relevant findings in addition to an audit report which supplemented our understanding of the segment.

Materiality

The scope of our audit was influenced by our application of materiality. We set certain quantitative thresholds for materiality. These, together with qualitative considerations, helped us to determine the scope of our audit and the nature, timing and extent of our audit procedures on the individual financial statement line items and disclosures and in evaluating the effect of misstatements, both individually and in aggregate on the financial statements as a whole.

Based on our professional judgement, we determined materiality for the financial statements as a whole as follows:

	Group financial statements	Parent financial statements
Overall materiality	€25 million	€25 million
How we determined it	c. 5% of profit before tax and exceptional items.	Based on Group materiality.
Rationale for benchmark applied	We consider that profit before tax and exceptional items is an appropriate benchmark as the Group is profit orientated and the exceptional items are significant non-recurring items which are not reflective of the Group's ongoing trading activity.	We considered it appropriate to restrict materiality for the Parent financial statements to €25 million, being that applied to the Group financial statements.

We agreed with the Audit Committee that we would report to them misstatements identified during our audit above €500,000 in respect of the Group and Parent audit as well as misstatements below that amount that, in our view, warranted reporting for qualitative reasons.

Going concern

In accordance with ISAs (Ireland) we report as follows:

Reporting obligation	Outcome
We are required to report if we have anything material to add or draw attention to in respect of the Board members' statement in the financial statements about whether the Board members considered it appropriate to adopt the going concern basis of accounting in preparing the financial statements and the Board members' identification of any material uncertainties to the Group's or the Parent's ability to continue as a going concern over a period of at least twelve months from the date of approval of the financial statements.	We have nothing material to add or to draw attention to. However, because not all future events or conditions can be predicted, this statement is not a guarantee as to the Group's or the Parent's ability to continue as a going concern.

INDEPENDENT AUDITORS' REPORT TO STOCKHOLDERS OF ELECTRICITY SUPPLY BOARD (ESB) (continued)

REPORTING ON OTHER INFORMATION

The other information comprises all of the information in the Annual Report other than the financial statements and our auditors' report thereon. The Board members are responsible for the other information. Our opinion on the financial statements does not cover the other information and, accordingly, we do not express an audit opinion or, except to the extent otherwise explicitly stated in this report any form of assurance thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If we identify an apparent material inconsistency or material misstatement, we are required to perform procedures to conclude whether there is a material misstatement of the financial statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report based on these responsibilities.

With respect to the Board Members' Report, we also considered whether the disclosures required by the Regulations of ESB have been included.

Based on the responsibilities described above and our work undertaken in the course of the audit, ISAs (Ireland) and the Companies Act 2014 (CA14), which is made applicable to the audit of the financial statements of ESB by the Regulations of ESB adopted pursuant to the ESB Acts 1927 to 2014, require us to also report certain opinions and matters as described below (required by ISAs (Ireland) unless otherwise stated).

Board Members' Report

- In our opinion, based on the work undertaken in the course of the audit, the information given in the Board Members' Report for the year ended 31 December 2019 is consistent with the financial statements and has been prepared in accordance with the applicable legal requirements. (CA14)
- Based on our knowledge and understanding of the Group and Parent and their environment obtained in the course of the audit, we did not identify any material misstatements in the Board Members' Report. (CA14)

Code of Practice for the Governance of State Bodies (the "Code")

Under the Code of Practice for the Governance of State Bodies (the "Code") we are required to report to you if the statement regarding the system of internal control included in the Board's Governance Report on pages 86 to 94 does not reflect the Group's compliance with paragraph 1.9(iv) of the Code or if it is not consistent with the information of which we are aware from our audit work on the financial statements. We have nothing to report in respect of this responsibility.

The Board members' assessment of the prospects of the Group and of the principal risks that would threaten the solvency or liquidity of the Group

As a result of the Board members' voluntary reporting on how they have applied the UK Corporate Governance Code (the "UK Code"), under ISAs (Ireland) we are required to report to you if we have anything material to add or to draw attention to regarding:

- The Board members' confirmation on page 92 of the Annual Report that they have carried out a robust assessment of the principal risks facing the Group, including those that would threaten its business model, future performance, solvency or liquidity.
- The disclosures in the Annual Report that describe those risks and explain how they are being managed or mitigated.
- The Board members' explanation on pages 93 to 94 of the Annual Report as to how they have assessed the prospects of the Group, over what period they have done so and why they consider that period to be appropriate, and their statement as to whether they have a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over the period of their assessment, including any related disclosures drawing attention to any necessary qualifications or assumptions.

We have nothing to report in respect of this responsibility.

Other UK Code provisions

As a result of the Board members' voluntary reporting on how they have applied the UK Code, we are required to report to you if, in our opinion:

- The statement given by the Board members' on page 109 that they consider the Annual Report taken as a whole to be fair, balanced and understandable and provides the information necessary for the members to assess the Group's and Parent's position and performance, business model and strategy is materially inconsistent with our knowledge of the Group and Parent obtained in the course of performing our audit.
- The section of the Annual Report on page 96 describing the work of the Audit and Risk Committee does not appropriately address matters communicated by us to the Audit and Risk Committee.

We have nothing to report in respect of this responsibility.

INDEPENDENT AUDITORS' REPORT TO STOCKHOLDERS OF ELECTRICITY SUPPLY BOARD (ESB) (continued)

RESPONSIBILITIES FOR THE FINANCIAL STATEMENTS AND THE AUDIT

Responsibilities of the Board members for the financial statements

As explained more fully in the Statement of Board Members' Responsibilities set out on page 109, the Board members are responsible for the preparation of the financial statements in accordance with the applicable framework and for being satisfied that they give a true and fair view.

The Board members are also responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Board members are responsible for assessing the Group's and the Parent's ability to continue as a going concern, disclosing as applicable, matters related to going concern and using the going concern basis of accounting unless the Board members either intend to liquidate the Group or the Parent or to cease operations, or have no realistic alternative but to do so.

Auditors' responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (Ireland) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

A further description of our responsibilities for the audit of the financial statements is located on the IAASA website at: https://www.iaasa.ie/getmedia/b2389013-1cf6-458b-9b8f-a98202dc9c3a/Description_of_auditors_responsibilities_for_audit.pdf. This description forms part of our auditors' report.

Use of this report

This report, including the opinions, has been prepared for and only for the Stockholders of ESB as a body in accordance with section 391 of the Companies Act 2014, made applicable to ESB by the Regulations adopted pursuant to the ESB Acts 1927 to 2014, and for no other purpose. We do not, in giving these opinions, accept or assume responsibility for any other purpose or to any other person to whom this report is shown or into whose hands it may come save where expressly agreed by our prior consent in writing.

OTHER REQUIRED REPORTING

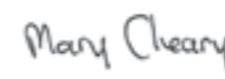
Companies Act 2014 opinions on other matters

- We have obtained all the information and explanations which we consider necessary for the purposes of our audit.
- In our opinion the accounting records of the Parent were sufficient to permit the Parent financial statements to be readily and properly audited.
- The Parent Balance Sheet is in agreement with the accounting records.

Companies Act 2014 exception reporting

Board Members' remuneration and transactions

Under the Companies Act 2014 we are required to report to you if, in our opinion, the disclosures of board members' remuneration and transactions specified by sections 305 to 312 of that Act have not been made. We have no exceptions to report arising from this responsibility.



Mary Cleary
For and on behalf of PricewaterhouseCoopers
Chartered Accountants and Statutory Audit Firm
Dublin

27 February 2020

GROUP INCOME STATEMENT

For the year ended 31 December 2019

	Notes	2019 Excluding exceptional items €m	2019 Exceptional items note 5 €m	Total €m	2018 Excluding exceptional items €m	2018 Exceptional items note 5 €m	Total €m
Revenue	3	3,709.5	-	3,709.5	3,431.8	-	3,431.8
Other operating income (net)	6	8.7	-	8.7	1.4	-	1.4
Net impairment losses on financial assets	5/7/17	(11.8)	(34.4)	(46.2)	(10.4)	(17.5)	(27.9)
Operating costs	5/7	(3,024.3)	(59.8)	(3,084.1)	(2,967.7)	(122.2)	(3,089.9)
Operating profit		682.1	(94.2)	587.9	455.1	(139.7)	315.4
Net interest on borrowings	8	(152.2)	-	(152.2)	(177.6)	-	(177.6)
Financing charges	8	(16.6)	-	(16.6)	(19.4)	-	(19.4)
Fair value movement on financial instruments	8	(15.8)	-	(15.8)	(29.8)	-	(29.8)
Finance income	8	2.2	-	2.2	3.7	-	3.7
Net finance cost		(182.4)	-	(182.4)	(223.1)	-	(223.1)
Share of equity accounted investees loss, net of tax	15	(8.3)	-	(8.3)	(14.0)	-	(14.0)
Profit before taxation		491.4	(94.2)	397.2	218.0	(139.7)	78.3
Income tax expense	20	(72.9)	13.5	(59.4)	(36.6)	18.5	(18.1)
Profit after taxation		418.5	(80.7)	337.8	181.4	(121.2)	60.2
Attributable to:							
Equity holders of the Parent		422.6	(80.7)	341.9	183.3	(121.2)	62.1
Non-controlling interest		(4.1)	-	(4.1)	(1.9)	-	(1.9)
Profit for the financial year		418.5	(80.7)	337.8	181.4	(121.2)	60.2

Notes 1 to 35 form an integral part of these financial statements.

GROUP STATEMENT OF COMPREHENSIVE INCOME

For the year ended 31 December 2019

	2019 €m	2018 €m
Profit for the financial year	337.8	60.2
Items that will not be reclassified subsequently to profit or loss:		
NIE Networks pension scheme actuarial (losses) / gains	(17.5)	19.2
Tax on items that will not be reclassified to profit or loss	3.0	(3.3)
	(14.5)	15.9
Items that are or may be reclassified subsequently to profit or loss:		
Effective hedge of a net investment in foreign subsidiary	(0.4)	0.1
Translation differences on consolidation of foreign subsidiaries	8.9	(1.5)
Fair value (losses) / gains on cash flow hedges	(18.9)	38.6
Fair value (losses) / gains on cash flow hedges in equity accounted investees	(3.8)	2.2
Transferred to income statement on cash flow hedges	(20.6)	(89.1)
Transferred to income statement on cash flow hedges in equity accounted investees	-	3.1
Tax on items that are or may be reclassified subsequently to profit or loss	2.4	(4.7)
Tax on items that are or may be reclassified subsequently to profit or loss for equity accounted investees	0.6	(0.4)
Tax on items transferred to income statement	2.6	5.7
	(29.2)	(46.0)
Other comprehensive expense for the financial year, net of tax	(43.7)	(30.1)
Total comprehensive income for the financial year	294.1	30.1
Attributable to:		
Equity holders of the Parent	298.2	32.0
Non-controlling interest	(4.1)	(1.9)
Total comprehensive income for the financial year	294.1	30.1

GROUP BALANCE SHEET

As at 31 December 2019

	Notes	2019 €m	2018 €m
ASSETS			
Non-current assets			
Property, plant and equipment	11	11,077.4	10,755.2
Intangible assets	12	458.1	401.8
Right of use assets	13	133.3	-
Goodwill	14	178.3	169.6
Investments in equity accounted investees	15	413.5	189.8
Financial asset investments at fair value through profit or loss	15	13.4	10.5
Trade and other receivables	17	12.4	47.2
Derivative financial instruments	22	65.5	68.6
Deferred tax assets	20	180.7	176.3
Total non-current assets		12,532.6	11,819.0
Current assets			
Inventories	16	151.0	134.0
Derivative financial instruments	22	244.8	156.5
Current tax asset		-	23.2
Trade and other receivables	17	1,105.1	942.3
Cash and cash equivalents	18	125.1	229.1
Total current assets		1,626.0	1,485.1
Total assets		14,158.6	13,304.1
EQUITY			
Capital stock	19	1,966.4	1,970.8
Capital redemption reserve		13.5	9.1
Translation reserve		3.7	(4.8)
Cash flow hedging reserve		(17.0)	20.7
Other reserves		(233.2)	(223.3)
Retained earnings		2,171.8	1,877.4
Equity attributable to equity holders of the Parent		3,905.2	3,649.9
Non-controlling interest		(10.0)	(5.9)
Total equity		3,895.2	3,644.0
LIABILITIES			
Non-current liabilities			
Borrowings and other debt	21	4,751.7	4,537.7
Lease Liabilities	13	112.4	-
Liability – ESB pension scheme	24	96.1	99.4
Liability – NIE Networks pension scheme	23	116.0	110.8
Employee related liabilities	24	70.4	40.2
Deferred income	26	1,259.3	1,192.7
Provisions	27	322.5	336.3
Deferred tax liabilities	20	645.8	648.1
Derivative financial instruments	22	662.5	625.2
Total non-current liabilities		8,036.7	7,590.4
Current liabilities			
Borrowings and other debt	21	480.7	606.3
Lease Liabilities	13	19.6	-
Liability – ESB pension scheme	24	296.5	295.8
Employee related liabilities	24	79.7	68.3
Trade and other payables	25	834.6	789.1
Deferred income	26	88.3	83.4
Provisions	27	150.0	118.5
Current tax liabilities		9.5	-
Derivative financial instruments	22	267.8	108.3
Total current liabilities		2,226.7	2,069.7
Total liabilities		10,263.4	9,660.1
Total equity and liabilities		14,158.6	13,304.1

Ellvena Graham OBE, Chairman

Pat O'Doherty, Chief Executive

Pat Fenlon, Executive Director, Group Finance and Commercial

PARENT BALANCE SHEET

As at 31 December 2019

	Notes	2019 €m	2018 €m
ASSETS			
Non-current assets			
Property, plant and equipment	11	7,300.1	7,201.0
Intangible assets	12	402.0	326.8
Right of use assets	13	73.2	-
Investments in equity accounted investees	15	106.5	106.5
Investments in subsidiary undertakings	15	61.8	61.8
Derivative financial instruments	22	27.8	16.3
Deferred tax assets	20	78.0	80.8
Total non-current assets		8,049.4	7,793.2
Current assets			
Inventories	16	54.0	71.6
Derivative financial instruments	22	201.4	107.7
Current tax asset		1.6	18.0
Trade and other receivables	17	3,691.2	3,398.6
Cash and cash equivalents	18	58.2	122.3
Total current assets		4,006.4	3,718.2
Total assets		12,055.8	11,511.4
EQUITY			
Capital stock	19	1,966.4	1,970.8
Capital redemption reserve		13.5	9.1
Cash flow hedging and other reserves		(19.5)	(25.2)
Retained earnings		1,774.6	1,451.5
Equity attributable to equity holders of the Parent		3,735.0	3,406.2
LIABILITIES			
Non-current liabilities			
Borrowings and other debt	21	887.3	959.3
Lease liabilities	13	58.9	-
Liability – ESB pension scheme	24	96.1	99.4
Employee related liabilities	24	70.3	39.4
Deferred income	26	843.4	804.9
Provisions	27	246.5	271.0
Deferred tax liabilities	20	429.0	434.5
Derivative financial instruments	22	43.0	30.0
Total non-current liabilities		2,674.5	2,638.5
Current liabilities			
Borrowings and other debt	21	155.7	390.3
Lease liabilities	13	12.8	-
Liability – ESB pension scheme	24	296.5	295.8
Employee related liabilities	24	73.6	58.2
Trade and other payables	25	4,751.2	4,502.1
Deferred income	26	57.9	53.1
Provisions	27	86.3	83.5
Derivative financial instruments	22	212.3	83.7
Total current liabilities		5,646.3	5,466.7
Total liabilities		8,320.8	8,105.2
Total equity and liabilities		12,055.8	11,511.4

Parent profit after tax for the financial year ended 31 December 2019 amounted to €366.0 million (2018: profit of €151.4 million).

Ellvena Graham OBE, Chairman

Pat O'Doherty, Chief Executive

Pat Fenlon, Executive Director, Group Finance and Commercial

GROUP STATEMENT OF CHANGES IN EQUITY

As at 31 December 2019

	Capital stock €m	Translation reserve €m	Capital redemption reserve €m	Cash flow hedging reserve ¹ €m	Other reserves ² €m	Retained earnings €m	Total €m	Non-controlling interest €m	Total equity €m
Reconciliation of changes in equity									
Balance at 1 January 2018	1,975.2	2.7	4.7	58.6	(242.6)	1,917.6	3,716.2	(3.7)	3,712.5
Change in accounting policy - IFRS 9	-	-	-	-	-	(62.8)	(62.8)	-	(62.8)
Restated total equity at 1 January 2018	1,975.2	2.7	4.7	58.6	(242.6)	1,854.8	3,653.4	(3.7)	3,649.7
Total comprehensive income / (expense) for the year									
Profit for the financial year	-	-	-	-	-	62.1	62.1	(1.9)	60.2
NIE Networks pension scheme actuarial gain	-	-	-	-	19.2	-	19.2	-	19.2
Foreign currency translation adjustments	-	(6.9)	-	5.5	-	-	(1.4)	-	(1.4)
Cash flow hedges:									
- Net fair value gains	-	-	-	38.6	-	-	38.6	-	38.6
- Transfers to income statement	-	-	-	-	-	-	-	-	-
- Finance cost (interest)	-	(0.6)	-	29.0	(0.6)	-	27.8	-	27.8
- Finance cost (foreign translation movements)	-	-	-	(23.3)	-	-	(23.3)	-	(23.3)
- Other operating expenses	-	-	-	(93.6)	-	-	(93.6)	-	(93.6)
- Fair value gains for hedges in equity accounted investees	-	-	-	2.2	-	-	2.2	-	2.2
Transfers to income statement for equity accounted investees	-	-	-	3.1	-	-	3.1	-	3.1
Tax on items taken directly to statement of comprehensive income (OCI)	-	-	-	(4.7)	(3.3)	-	(8.0)	-	(8.0)
Tax on items transferred to income statement	-	-	-	5.7	-	-	5.7	-	5.7
Tax on items taken directly to OCI for equity accounted investees	-	-	-	(0.4)	-	-	(0.4)	-	(0.4)
Total comprehensive income / (expense) for the year	-	(7.5)	-	(37.9)	15.3	62.1	32.0	(1.9)	30.1
Transactions with owners recognised directly in equity									
Dividends	-	-	-	-	-	(34.6)	(34.6)	(0.3)	(34.9)
Repurchase of own shares ²	(4.4)	-	4.4	-	-	(4.9)	(4.9)	-	(4.9)
ESOP repurchase provision ³	-	-	-	-	4.0	-	4.0	-	4.0
Balance at 31 December 2018	1,970.8	(4.8)	9.1	20.7	(223.3)	1,877.4	3,649.9	(5.9)	3,644.0
Balance at 1 January 2019	1,970.8	(4.8)	9.1	20.7	(223.3)	1,877.4	3,649.9	(5.9)	3,644.0
Total comprehensive income / (expense) for the year									
Profit for the financial year	-	-	-	-	-	341.9	341.9	(4.1)	337.8
NIE Networks pension scheme actuarial losses	-	-	-	-	(17.5)	-	(17.5)	-	(17.5)
Foreign currency translation adjustments	-	8.5	-	-	-	-	8.5	-	8.5
Cash flow hedges:									
- Net fair value losses	-	-	-	(18.9)	-	-	(18.9)	-	(18.9)
- Transfers to income statement	-	-	-	-	-	-	-	-	-
- Finance cost (interest)	-	-	-	(2.4)	-	-	(2.4)	-	(2.4)
- Finance cost (foreign translation movements)	-	-	-	(8.3)	-	-	(8.3)	-	(8.3)
- Other operating expenses	-	-	-	(9.9)	-	-	(9.9)	-	(9.9)
- Fair value loss for hedges in equity accounted investees	-	-	-	(3.8)	-	-	(3.8)	-	(3.8)
Tax on items taken directly to OCI	-	-	-	2.4	3.0	-	5.4	-	5.4
Tax on items transferred to income statement	-	-	-	2.6	-	-	2.6	-	2.6
Tax on items taken directly to OCI for equity accounted investees	-	-	-	0.6	-	-	0.6	-	0.6
Total comprehensive income / (expense) for the year	-	8.5	-	(37.7)	(14.5)	341.9	298.2	(4.1)	294.1
Transactions with owners recognised directly in equity									
Dividends	-	-	-	-	-	(42.9)	(42.9)	-	(42.9)
Repurchase of own shares ²	(4.4)	-	4.4	-	-	(4.6)	(4.6)	-	(4.6)
ESOP repurchase provision ³	-	-	-	-	4.6	-	4.6	-	4.6
Balance at 31 December 2019	1,966.4	3.7	13.5	(17.0)	(233.2)	2,171.8	3,905.2	(10.0)	3,895.2

¹ Included within the cash flow hedge reserve at 31 December 2019 are amounts of €1.3 million (2018: €0.5 million) relating to currency basis risk.

² Other reserves include (i) other reserves relating to the Northern Ireland Electricity Networks Limited (NIE Networks) pension scheme of (€219.5) million (2018: (€205.0) million), (ii) a non-distributable reserve of (€5.0) million which was created on the sale of the Group's share in Ocean Communications Limited in 2001; and (iii) an ESOP repurchase provision which relates to the amount that ESB has committed to date to purchase from the ESOP internal market (€7.5) million (2018: (€11.8) million). Refer to note 19 for further details on other reserves and note 32 for information on the ESOP repurchase.

³ Refer to note 32 for information on the ESOP repurchase.

PARENT STATEMENT OF CHANGES IN EQUITY

As at 31 December 2019

	Capital redemption reserve €m	Reserve for the repurchase of loan stock €m	Cash flow hedging and other reserves €m	Retained earnings €m	Total €m
Reconciliation of changes in equity					
Balance at 1 January 2018	1,975.2	4.7	(12.0)	1,397.5	3,365.4
Change in accounting policy - IFRS 9	-	-	-	(62.8)	(62.8)
Restated total equity at 1 January 2018	1,975.2	4.7	(12.0)	1,334.7	3,302.6
Total comprehensive income / (expense) for the year					
Profit for the financial year	-	-	-	151.4	151.4
Cash flow hedges:					
- Net fair value gains	-	-	42.8	-	42.8
- Transfers to income statement	-	-	-	-	-
- Finance cost (interest)	-	-	(3.5)	-	(3.5)
- Finance cost (foreign translation movements)	-	-	(23.3)	-	(23.3)
- Other operating expenses	-	-	(31.5)	-	(31.5)
Tax on items taken directly to OCI	-	-	(5.3)	-	(5.3)
Tax on items transferred to income statement	-	-	3.6	-	3.6
Total comprehensive income / (expense) for the year	-	-	(17.2)	151.4	134.2
Transactions with owners recognised directly in equity					
Dividends	-	-	-	(34.6)	(34.6)
Repurchase of own shares ¹	(4.4)	4.4	-	-	-
ESOP repurchase provision ¹	-	-	4.0	-	4.0
Balance at 31 December 2018	1,970.8	9.1	(25.2)	1,451.5	3,406.2
Balance at 1 January 2019	1,970.8	9.1	(25.2)	1,451.5	3,406.2
Total comprehensive income / (expense) for the year					
Profit for the financial year	-	-	-	366.0	366.0
Cash flow hedges:					
- Net fair value losses	-	-	(10.8)	-	(10.8)
Transfers to income statement	-	-	-	-	-
- Finance cost (interest)	-	-	(2.4)	-	(2.4)
- Finance cost (foreign translation movements)	-	-	(8.3)	-	(8.3)
- Other operating expenses	-	-	22.8	-	22.8
Tax on items taken directly to OCI	-	-	1.3	-	1.3
Tax on items transferred to income statement	-	-	(1.5)	-	(1.5)
Total comprehensive income / (expense) for the year	-	-	1.1	366.0	367.1
Transactions with owners recognised directly in equity					
Dividends	-	-	-	(42.9)	(42.9)
Repurchase of own shares ¹	(4.4)	4.4	-	-	-
ESOP repurchase provision ¹	-	-	4.6	-	4.6
Balance at 31 December 2019	1,966.4	13.5	(19.5)	1,774.6	3,735.0

¹ Refer to note 32 for information on the ESOP repurchase.

GROUP CASH FLOW STATEMENT

For the year ended 31 December 2019

	Notes	2019 €m	2018 €m
Cash flows from operating activities			
Profit after taxation		337.8	60.2
Adjustments for:			
Depreciation and amortisation	7	806.2	779.4
Revenue from supply contributions and amortisation of other deferred income	26	(122.7)	(111.2)
Net emissions movements		22.2	(48.5)
Profit on disposal of non-current assets	6	(7.1)	(8.6)
Inventory impairment		9.2	3.2
Net finance cost	8	182.4	223.1
Impact of fair value adjustments in operating costs		(8.7)	18.9
Losses from equity accounted investees (net)	15	8.3	14.0
Income tax expense	20	59.4	18.1
Gain on Castlepook Power DAC becoming a 100% subsidiary undertaking		-	(4.7)
Dividend received	6	(1.6)	-
Impairment charge	5 / 7	58.1	145.0
Operating cash flows before changes in working capital and provisions		1,343.5	1,088.9
(Credit)/ charge in relation to provisions		(2.8)	17.2
Charge in relation to employee related liabilities		131.2	81.3
Utilisation of provisions		(15.6)	(16.0)
Payments in respect of employee related liabilities		(122.4)	(113.6)
Deferred income received		151.5	106.4
Increase in trade and other receivables		(208.6)	(32.6)
Increase in inventories		(26.2)	(15.2)
Increase / (decrease) in trade and other payables		30.4	(11.5)
Cash generated from operations		1,281.0	1,104.9
Current tax paid (net)		(30.8)	(50.3)
Financing costs paid		(177.9)	(214.0)
Net cash inflow from operating activities		1,072.3	840.6
Cash flows from investing activities			
Purchase of property, plant and equipment		(846.6)	(804.7)
Purchase of intangible assets		(109.1)	(102.3)
Proceeds from sale of non-current assets		8.6	17.1
Proceeds from sale of investments		-	1.0
Amounts advanced to equity accounted investees as shareholder loans		-	(81.7)
Amounts repaid by equity accounted investees		30.5	9.7
Dividends received from joint venture	15	13.7	-
Dividends received from investments measured at fair value through profit and loss		1.6	-
Net cash outflow on acquisition of Castlepook Power DAC		-	(11.8)
Purchase of financial assets and equity accounted investments		(246.6)	(129.0)
Interest received		2.2	3.7
Net cash outflow from investing activities		(1,145.7)	(1,098.0)
Cash flows from financing activities			
Dividends paid	19	(42.9)	(34.9)
Principal element of lease payments		(16.6)	-
Repurchase of ESOP shares		(4.6)	(4.9)
Repayments of bonds and term debt facilities		(548.0)	(823.2)
Proceeds from the issue of bonds		592.9	894.5
Proceeds on the drawdown of revolving credit facility and other borrowings		-	170.4
Payments on inflation linked interest rate swaps		(15.2)	(95.6)
Net cash (outflow) / inflow from financing activities		(34.4)	106.3
Net decrease in cash and cash equivalents		(107.8)	(151.1)
Cash and cash equivalents at 1 January	18	229.1	380.4
Effect of exchange rate fluctuations on cash held		3.8	(0.2)
Cash and cash equivalents at 31 December	18	125.1	229.1

PARENT CASH FLOW STATEMENT

For the year ended 31 December 2019

	Notes	2019 €m	2018 €m
Cash flows from operating activities			
Profit after taxation		366.0	151.4
Adjustments for:			
Depreciation and amortisation		543.7	510.0
Revenue from supply contributions and amortisation of other deferred income	26	(55.0)	(49.3)
Net emissions movements		(13.8)	(40.9)
Profit on disposal of non-current assets		(5.4)	(0.6)
Net finance cost		42.4	62.8
Impact of fair value movement on financial instruments in operating costs		(8.7)	11.7
Dividend received from subsidiary undertakings		(9.1)	(9.1)
Income tax expense		56.5	29.6
Inventory impairment		8.3	1.0
Provision for amounts due from related undertakings		31.2	34.4
Impairment charge		8.3	87.3
Operating cash flows before changes in working capital and provisions		964.4	788.3
(Credit) / charge in relation to provisions		(4.4)	5.1
Charge in relation to employee related liabilities	24	118.6	49.8
Utilisation of provisions		(6.9)	(15.0)
Payments in respect of employee related liabilities	24	(89.4)	(66.1)
Deferred income received		88.9	12.5
Increase in trade and other receivables		(5.6)	(266.1)
Decrease in inventories		9.3	4.4
(Decrease) / increase in trade and other payables		(197.2)	176.1
Cash generated from operations		877.7	689.0
Current tax paid		(43.0)	(44.3)
Interest paid		(118.0)	(117.7)
Net cash inflow from operating activities		716.7	527.0
Cash flows from investing activities			
Purchase of property, plant and equipment		(549.4)	(524.5)
Purchase of intangible assets		(101.8)	(90.8)
Proceeds from the sale of non-current assets		6.5	4.7
Amounts advanced to equity accounted investees as shareholder loans		-	(45.0)
Amounts advanced to subsidiary undertakings		(249.8)	(469.3)
Interest received		60.0	44.4
Dividends received from subsidiary undertakings		9.1	9.1
Net cash outflow from investing activities		(825.4)	(1,071.4)
Cash flows from financing activities			
Dividends paid	19	(42.9)	(34.6)
Principal elements of lease payments		(11.0)	-
Repayments of term debt facilities		(286.3)	(177.2)
Proceeds from borrowings		-	100.0
Proceeds on the drawdown of revolving credit facility		-	70.0
Proceeds from loans from subsidiaries		384.8	500.0
Net cash inflow from financing activities		44.6	458.2
Net decrease in cash and cash equivalents		(64.1)	(86.2)
Cash and cash equivalents at 1 January	18	122.3	208.5
Cash and cash equivalents at 31 December	18	58.2	122.3

NOTES TO THE FINANCIAL STATEMENTS

1. STATEMENT OF ACCOUNTING POLICIES (continued)

(I) BASIS OF PREPARATION

Electricity Supply Board (ESB) is a statutory corporation established under the Electricity (Supply) Act, 1927 and is domiciled in Ireland. The consolidated financial statements of ESB as at and for the year ended 31 December 2019 comprise the Parent and its subsidiaries (together referred to as ESB or the Group) and the Group's interests in associates and jointly controlled entities.

The Parent and Consolidated financial statements are prepared under IFRS (International Financial Reporting Standards) as adopted by the EU (EU IFRS) as applied in accordance with the Companies Act 2014. The Companies Act 2014 provide a Parent entity that presents its individual financial statements together with its consolidated financial statements with an exemption from publishing the Parent income statement and statement of comprehensive income which forms part of the Parent financial statements prepared and approved in accordance with the Act. The financial statements of the Parent and Group have been prepared in accordance with the EU IFRS standards and IFRIC (International Financial Reporting Interpretations Committee) interpretations issued and effective for accounting periods ending on or before 31 December 2019. The Parent and Consolidated financial statements have been prepared on the historical cost basis except for derivative financial instruments and certain financial asset investments which are measured at fair value.

These financial statements are prepared in euro, and except where otherwise stated, all financial information presented has been rounded to the nearest million. The preparation of financial statements in conformity with EU IFRS requires management to make judgements, estimates and assumptions that affect the application of policies and reported amounts of assets and liabilities, income and expenses. These estimates and associated assumptions are based on historical experience and various other factors that are believed to be reasonable under the circumstances.

The estimates and underlying assumptions are reviewed on an ongoing basis. Judgements made by management in the application of EU IFRS that have a significant effect on the financial statements and estimates with a significant risk of causing material adjustment in the next year are discussed in note 31 to the financial statements.

The policies set out below have been consistently applied to all years presented in these consolidated financial statements and have been applied consistently by all Group entities – with the exception of adoption of new standards as set out at note 1(iii) below.

The Group has considerable financial resources and the Board believes that the Group is well placed to manage its risks successfully. After making appropriate enquiries the Board is satisfied that ESB has adequate resources to continue in operational existence for at least twelve months from the date of approval of the financial statements. The financial statements are prepared on the going concern basis of accounting. Further details of the Group's liquidity position are provided in note 21 of the financial statements.

Certain tables in the consolidated financial statements may not add precisely due to rounding.

(II) BASIS OF CONSOLIDATION

The Group's financial statements consolidate the financial statements of the Parent and of all subsidiary undertakings together with the Group's share of the results and net assets of associates and joint ventures made up to 31 December 2019. The results of subsidiary undertakings acquired or disposed of in the year are included in the Group income statement from the date of acquisition or up to the date of disposal. ESB Parent has availed of the exemption in section 304(2) of the Companies Act 2014 not to present its individual income statement, statement of comprehensive income and related notes that form part of the approved Parent financial statements.

Going concern

The Group has considerable financial resources and the Board believes that the Group is well placed to manage its risks successfully. After making appropriate enquiries the Board is satisfied that ESB has adequate resources to continue in operational existence for at least twelve months from the date of approval of the financial statements. Accordingly, the consolidated financial statements are prepared on the going concern basis of accounting.

The funding and liquidity management of the Group are described in note 21 and the amount of cash and cash equivalents that the Group had on hand at 31 December 2019 was €125.1 million.

Accounting for business combinations

Business combinations are accounted for using the acquisition method as at the acquisition date, which is the date on which control is transferred to the Group.

Acquisitions on or after 1 January 2010

The Group account for business combinations under IFRS 3 Business Combinations, the Group measures goodwill at the acquisition date as:

- the fair value of the consideration transferred; plus
- the recognised amount of any non-controlling interests in the acquiree; plus if the business combination is achieved in stages, the fair value of the existing equity interest in the acquiree; less
- the net recognised amount (fair value) of the identifiable assets acquired and liabilities assumed.

When the excess is negative, a bargain purchase gain is recognised immediately in profit or loss.

Costs relating to the acquisition (other than those associated with the issue of debt or equity securities) that the Group incur in connection with a business combination are expensed as incurred.

Acquisitions between 1 January 2004 and 1 January 2010

For acquisitions between 1 January 2004 and 1 January 2010, goodwill represents the excess of the cost of the acquisition over the Group's interest in the recognised amount (fair value) of the identifiable assets, liabilities and contingent liabilities of the acquiree. When the goodwill excess was negative, a bargain purchase gain was recognised immediately in profit or loss. Transaction costs, other than those associated with the issue of debt or equity securities that the Group incurred in connection with business combinations were capitalised as part of the cost of the acquisition.

NOTES TO THE FINANCIAL STATEMENTS

1. STATEMENT OF ACCOUNTING POLICIES (continued)

(II) BASIS OF CONSOLIDATION (continued)

Acquisitions prior to 1 January 2004 (date of transition to IFRS)

As part of its transition to IFRS, the Group elected to restate only those business combinations that occurred on or after 1 January 2003 in accordance with policy elections made by the Group at the time. In respect of acquisitions prior to 1 January 2003, goodwill represents the amount recognised under the Group's previous accounting framework, Irish / UK GAAP.

IFRS 10 — Consolidated financial statements

The IFRS 10 control model focuses on whether the Group has power over an investee, exposure or rights to variable returns from its involvement with the investee and ability to use its power to affect those returns. In particular, IFRS 10 requires the Group to consolidate investees that it controls on the basis of de facto control.

In accordance with IFRS 10, the Group's assessment of control is performed on a continuous basis and the Group reassesses whether it controls an investee if facts and circumstances indicate that there are changes to one or more of the elements of the control model.

Subsidiaries

Subsidiaries are entities controlled by ESB (control exists when ESB is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity). The financial statements of the subsidiaries are included in the consolidated financial statements from the date that control commences until the date that control ceases.

IFRS 11 - Joint arrangements

Under IFRS 11, the Group classifies its interests in joint arrangements as either joint operations or joint ventures depending on the Group's rights to the assets and obligations for the liabilities of the arrangements. When making this assessment, the Group considers the structure and legal form of the arrangements, the contractual terms of the arrangement agreed by the parties and when relevant, other facts and circumstances.

Joint operations

Joint operations are those undertakings in which ESB is deemed to have joint control of the arrangement and has rights to the assets and obligations for the liabilities of the arrangement. Accordingly, the Company's share of assets, liabilities, revenues, expenses and other comprehensive income are recognised in the respective categories within the consolidated financial statements.

Joint ventures

Joint venture undertakings (joint ventures) are those undertakings over which ESB exercises contractual control jointly with another party, whereby the Group has rights to net assets of the arrangement rather than rights to its assets and obligations for its liabilities.

Joint ventures are accounted for using the equity method of accounting. Under the equity method, the Group's share of the profits or losses after tax of joint ventures is included in the consolidated income statement after interest and financing charges. The Group's share of items of other comprehensive income is shown in the statement of comprehensive income.

The Group's interests in the net assets are included as investments in joint ventures on the face of the consolidated balance sheet at an amount representing the Group's share of the fair values of the net assets at acquisition plus goodwill, acquisition costs, the Group's share of post acquisition retained income and expenses less any impairment charge. Net liabilities are only recognised to the extent that ESB has incurred legal or constructive obligations or made payments on behalf of joint ventures.

The amounts included in the consolidated financial statements in respect of post-acquisition results of joint ventures are taken from their latest financial information made up to the Group's balance sheet date.

In the Parent financial statements, investments in joint ventures are carried at cost less any impairment charges.

The Group assesses if a change in the facts and circumstances requires reassessment of whether joint control still exists. The Group has evaluated its involvement in joint arrangements and has confirmed that these investments meet the criteria of joint ventures which continue to be accounted for using the equity method.

Associates

Entities other than joint arrangements and subsidiaries and over whose operating and financial policies the Group is in a position to exercise significant influence but not control or joint control, are accounted for as associates using the equity method and are included in the consolidated financial statements from the date on which significant influence is deemed to arise until the date on which such influence ceases to exist.

In the Parent financial statements, investments in associates are carried at cost less any impairment charges.

NOTES TO THE FINANCIAL STATEMENTS

1. STATEMENT OF ACCOUNTING POLICIES (continued)

(II) BASIS OF CONSOLIDATION (continued)

Transactions eliminated on consolidation

Intra-group balances and transactions, and any unrealised income and expenses arising from intra-group transactions, are eliminated in preparing the consolidated financial statements. Unrealised gains arising from transactions with equity accounted investees are eliminated against the investment to the extent of the Group's interest in the investee. Unrealised losses are eliminated in the same way as unrealised gains, but only to the extent that there is no evidence of impairment.

(III) NEW STANDARDS AND INTERPRETATIONS

New standards or amendments	Effective Date	Material effect on the results and financial position of the group
IFRS 16 Leases	01 January 2019	Material effect
IFRIC 23 Uncertainty over Income Tax Treatments	01 January 2019	No material effect
IAS 19 Employee Benefits (amendments) Plan Amendments, Curtailment or Settlement	01 January 2019	No material effect

IFRS 16 Leases

The Group has applied IFRS 16 Leases on 1 January 2019, comparatives for the 2018 financial year have not been restated.

Impact on the consolidated financial statements on the adoption of IFRS 16

ESB have selected the modified retrospective approach upon transition to IFRS 16. Under this transition option:

- The standard is applied from the beginning of the transition accounting period (1 January 2019)
- Lease liabilities are measured as at the transition date (1 January 2019) for the remaining lease payments and are measured using the discount rate, lease term, and other assumptions (reasonable certainty of extensions, terminations, etc.) as at 1 January 2019.

The following tables summarise the impact of transition to IFRS 16 on the opening balance of Group assets and liabilities.

	Original carrying amount 31 December 2018 €m	IFRS 16 transition impact €m	New carrying amount 1 January 2019 €m
Balance sheet extract			
Non-current asset			
Right of use (RoU) assets	-	132.9	132.9
Non-current liabilities			
Lease Liabilities	-	(118.0)	(118.0)
Current liabilities			
Lease Liabilities	-	(14.9)	(14.9)
			€m
Operating lease commitments disclosed as at 31 December 2018			168.4
Discounted using the Group's incremental borrowing rate			(23.1)
Add / (less) adjustments for:			
- Service charges included as part of IFRS 16 lease liability			6.6
- Timing of lease signings			(4.2)
- Different treatment of extension and termination options			(13.7)
- Short-term leases recognised on a straight-line basis as expense			(0.8)
- Low-value leases recognised on a straight-line basis as expense			(0.3)
Lease liability recognised as at 1 January 2019			132.9
Analysed as follows:			
Non-current liabilities			(118.0)
Current liabilities			(14.9)
Total			(132.9)

NOTES TO THE FINANCIAL STATEMENTS

1. STATEMENT OF ACCOUNTING POLICIES (continued)

(III) NEW STANDARDS AND INTERPRETATIONS (continued)

IFRS 16 Leases (continued)

Practical Expedients

A number of practical expedients were availed of by ESB in relation to IFRS 16, these are detailed below.

- Grandfather exemption

ESB have availed of the 'Grandfather Exemption' transition expedient in relation to IFRS 16. ESB is not required to reassess whether a contract is, or contains, a lease at the date of initial application. Instead, ESB is permitted:

- to apply this Standard to contracts that were previously identified as leases applying IAS 17 Leases and IFRIC 4 Determining whether an Arrangement contains a Lease.
- not to apply this Standard to contracts that were not previously identified as containing a lease applying IAS 17 and IFRIC 4. -ESB has availed of this exemption and has recognised all leases included in the operating lease obligation note in the 2018 consolidated financial statements in determining the opening IFRS 16 RoU asset / lease liability.

- Low value exemption

The low value lease exemption (where the value of the underlying asset is less than €5,000) has been applied where relevant. The associated lease payments are expensed to the income statement in the period in which they are incurred.

- Short-term lease exemption

Short-term lease exemption has been applied for leases with a term of 12 months or less and lease agreements that expire within 12 months of the transition date. The associated lease payment is expensed to the income statement as incurred.

- Non-lease components

ESB have elected not to separate non-lease components from lease components. The non-lease components comprise of service charges on property leases.

Judgements

(i) Discount rates

Discount rates were calculated at transition date by contract currency and lease term using the forward interest swap rates plus an appropriate credit margin. The weighted average discount rate applied by each lessee ranged from 0.1% to 2.6%.

(ii) Lease terms

Lease terms were determined with reference to each lease agreement and decisions on extensions and break clauses were assessed on a case by case basis in line with IFRS 16.

Lease contracts

The Group leases various land and buildings, wind farm land and motor vehicles. Rental contracts are typically made for fixed periods but may have extension options as described in note 13 leases. Lease terms are negotiated on an individual basis and contain a wide range of different terms and conditions. The lease agreements do not impose any covenants, but leased assets may not be used as security for borrowing purposes.

IFRS 16 Leases: Accounting policies applied to leases from 1 January 2019

From 1 January 2019, leases are recognised as a right-of-use asset and a corresponding liability at the date at which the leased asset is available for use by the Group. Assets and liabilities arising from a lease are initially measured on a present value basis. Lease liabilities include the net present value of the lease payments. Lease payments to be made under reasonably certain extension options are also included in the measurement of the liability. The lease payments are discounted using the interest rate implicit in the lease. If that rate cannot be readily determined, which is generally the case for leases in the Group, the lessee's incremental borrowing rate is used, being the rate that the individual lessee would have to pay to borrow the funds necessary to obtain an asset of similar value to the right-of-use asset in a similar economic environment with similar terms, security and conditions.

Lease payments are allocated between principal and finance cost. The finance cost is charged to profit or loss over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period.

Right-of-use assets are measured at cost comprising the following:

- the amount of the initial measurement of lease liability
- any lease payments made at or before the commencement date less any lease incentives received
- any initial direct costs, and
- restoration costs.

Right-of-use assets are generally depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis. If the Group is reasonably certain to exercise a purchase option, the right-of-use asset is depreciated over the underlying asset's useful life.

Payments associated with short-term leases of equipment and vehicles and all leases of low-value assets are recognised on a straight-line basis as an expense in profit or loss. Short-term leases are leases with a lease term of 12 months or less. Low-value assets comprise predominately of IT equipment.

NOTES TO THE FINANCIAL STATEMENTS

1. STATEMENT OF ACCOUNTING POLICIES (continued)

(III) NEW STANDARDS AND INTERPRETATIONS (continued)

IFRS 16 leases (continued)

Accounting policies applied to pre 1 January 2019 (IAS 17)

Finance leases are leases where the Group, as lessee, assumes substantially all the risks and rewards of ownership, while operating leases are those in which the lessor retains those risks and rewards of ownership.

Non-current assets acquired under finance leases are included in the balance sheet at their equivalent capital value and are depreciated over the shorter of the asset's useful life and the lease term if there is no reasonable certainty that the Group will obtain ownership at the end of the lease term. The corresponding liabilities are recorded as a finance lease payable and the interest element of the finance lease payments is charged to the income statement on a constant periodic rate of interest. Operating lease rentals are charged to the income statement on a straight-line basis over the lease term.

(IV) STANDARDS, INTERPRETATIONS AND AMENDMENTS TO PUBLISHED STANDARDS THAT ARE NOT YET EFFECTIVE

A number of new standards, amendments to standards and interpretations are not yet effective for the year ended 31 December 2019, and have not been applied in preparing these consolidated financial statements. The items that may have relevance to the Group are as follows:

New standards or amendments	Effective Date	Material effect on the results and financial position of the group
Revised Conceptual Framework for Financial Reporting	01 January 2020	No material effect
Definition of Material – Amendments to IAS 1 and IAS 8	01 January 2020	No material effect
Definition of a Business – Amendments to IFRS 3	01 January 2020	No material effect

(V) FOREIGN CURRENCIES

These financial statements are presented in euro, which is the Parent's functional currency.

(a) Functional and presentation currency

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which the entity operates (the functional currency). The consolidated financial statements are presented in euro.

(b) Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation of monetary assets and liabilities denominated in foreign currencies at year end exchange rates are generally recognised in profit or loss. They are deferred in equity if they relate to qualifying cash flow hedges and qualifying net investment hedges or are attributable to part of the net investment in a foreign operation.

Non-monetary items that are measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value was determined. Translation differences on assets and liabilities carried at fair value are reported as part of the fair value gain or loss. For example, translation differences on non-monetary assets and liabilities such as equities held at fair value through profit or loss are recognised in profit or loss as part of the fair value gain or loss.

The results and financial position of foreign operations (none of which has the currency of a hyperinflationary economy) that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

- assets and liabilities for each balance sheet presented are translated at the closing rate at the date of that balance sheet
- income and expenses for each statement of profit or loss and statement of comprehensive income are translated at average exchange rates (unless this is not a reasonable approximation of the cumulative effect of the rates prevailing on the transaction dates, in which case income and expenses are translated exchange rates at the dates of the transactions); and
- all resulting exchange differences are recognised in other comprehensive income.

On consolidation, exchange differences arising from the translation of any net investment in foreign entities, and of borrowings and other financial instruments designated as hedges of such investments, are recognised in other comprehensive income. When a foreign operation is sold or any borrowings forming part of the net investment are repaid, the associated exchange differences are reclassified to profit or loss, as part of the gain or loss on sale.

Goodwill arising on the acquisition of a foreign operation are treated as assets and liabilities of the foreign operation and translated at the closing rate

(VI) PROPERTY, PLANT AND EQUIPMENT AND DEPRECIATION

Recognition and measurement

Property, plant and equipment is stated at cost less accumulated depreciation and provisions for impairment in value, except for land which is shown at cost less impairment. Property, plant and equipment includes capitalised employee, interest and other costs that are directly attributable to the asset and an appropriate portion of relevant overheads.

NOTES TO THE FINANCIAL STATEMENTS

1. STATEMENT OF ACCOUNTING POLICIES (continued)

(VI) PROPERTY, PLANT AND EQUIPMENT AND DEPRECIATION (continued)

Depreciation

The charge for depreciation is calculated to write down the cost of property, plant and equipment to its estimated residual value over its expected useful life using methods appropriate to the nature of the Group's business and to the character and extent of its property, plant and equipment. No depreciation is provided on freehold land or on assets in the course of construction. Depreciation on other items of property, plant and equipment is calculated using the straight-line method to allocate their depreciable amounts over their estimated useful lives as follows:

Generation plant and thermal station structures	20 years
Wind farm generating assets	20/25 years
Distribution plant and structures	25/30 years
Transmission plant and structures	30 years
General buildings and hydro stations	50 years

Subsequent expenditure

Subsequent expenditure on property, plant and equipment is included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. All other repairs and maintenance costs are charged in the income statement during the financial period in which they are incurred.

Included in property, plant and equipment are strategic spares in relation to the Electricity Generation business. Capital stock in the Networks business is carried within assets under construction pending commissioning.

(VII) INTANGIBLE ASSETS AND GOODWILL

(a) Goodwill

Goodwill that arises on the acquisition of subsidiaries is presented separately on the balance sheet.

Subsequent measurement

Goodwill is measured at cost less accumulated impairment losses. Goodwill is tested annually for impairment. An impairment loss is recognised if the carrying amount of the asset or cash-generating unit (CGU) exceeds its recoverable amount.

The recoverable amount of an asset or CGU is the greater of its value in use and its fair value less costs to sell. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset or CGU.

Impairment losses in respect of goodwill are recognised in profit or loss, and are not reversed.

(b) Emission allowances and renewable obligation certificates (ROCs)

Emission allowances purchased by ESB are recorded as intangible assets at cost.

As emissions arise, a charge is recorded in the income statement to reflect the amount required to settle the liability to the relevant authority. This provision includes the carrying value of the emission allowances held, as well as the current market value of any additional allowances required to settle the obligation. These allowances are returned to the relevant Authority in charge of the scheme within four months of the end of that calendar year, in order to cover the liability for actual emissions of CO₂ during that year.

ROCs are certificates issued to operators of accredited renewable generating stations in the UK for the eligible renewable electricity they generate. The Group purchases ROCs from certain of its joint ventures. Purchased ROCs are recognised initially at cost (purchase price) within intangible assets. The liability for actual emissions of CO₂ is measured at the cost of purchased allowances up to the level of purchased allowances held, and then at the market price of allowances ruling at the balance sheet date, with movements in the liability recognised in operating profit.

Emission allowances and ROCs held at cost as intangible assets are therefore not amortised as they are held for settlement of the related liabilities in the following year.

(c) Software costs and other intangible assets

Acquired computer software licenses and other intangible assets including grid connections and other acquired rights, are capitalised on the basis of the costs incurred to acquire and bring the specific asset into use. These assets are measured at cost less accumulated amortisation, which is estimated over their useful lives on a straight line basis, and accumulated impairment losses. Major asset classifications and their allotted life spans are:

Software	3 / 5 years
Other intangibles	up to 20 years

NOTES TO THE FINANCIAL STATEMENTS

1. STATEMENT OF ACCOUNTING POLICIES (continued)

(VII) INTANGIBLE ASSETS AND GOODWILL (continued)

(c) Software costs and other intangible assets (continued)

Development costs that are directly associated with the production of identifiable and unique software products controlled by the Group and that will probably generate economic benefits exceeding costs beyond one year, are recognised as intangible assets when the following criteria are met:

- management intends to complete the software and use or sell it
- there is an ability to use or sell the software
- it can be demonstrated how the software will generate probable future economic benefits
- adequate technical, financial and other resources to complete the development and to use or sell
- there are adequate technical, financial and other resources to complete the development and to use the intangible asset
- the expenditure attributable to the software during its development can be reliably measured.

Direct costs include the costs of software development, employees and an appropriate portion of relevant overheads. These assets are measured at cost less accumulated amortisation, which is estimated over their estimated useful lives (three to five years) on a straight line basis, and accumulated impairment losses.

(d) Research and development

Research expenditure and development expenditure that does not meet the criteria above is recognised as an expense as incurred. Development costs previously recognised as an expense are not recognised as an asset in a subsequent period.

(VIII) IMPAIRMENT OF NON-CURRENT ASSETS OTHER THAN GOODWILL

Assets that have an indefinite useful life are not subject to amortisation and are tested annually for impairment. Assets that are subject to depreciation and amortisation are tested for impairment whenever events or changes in circumstance indicate that the carrying amount may not be recoverable. Assets not yet in use are tested annually for impairment. An impairment loss is recognised for the amount by which an asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and its value in use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash-generating units).

For power generation assets, value in use is based on the estimated cash flows expected to be generated by the asset and is based on estimates of forecast power generation and forecast power, gas, carbon and capacity prices (where applicable) and the timing and extent of operating costs and capital expenditure. These cash flows are discounted to their present value using a pre-tax discount rate that reflects the current markets assessment of the time value of money and the risks specific to the asset.

(IX) BORROWING COSTS

Borrowing costs attributable to the construction of major assets, which necessarily take substantial time to get ready for intended use, are added to the cost of those assets at the weighted average cost of borrowings, until such time as the assets are substantially ready for their intended use. The capitalisation rate applied equates to the average cost of ESB's outstanding debt and where applicable, a project specific rate is applied. All other borrowing costs are recognised in the income statement in the period in which they are incurred.

(X) INVENTORIES

Inventories are carried at the lower of average cost and net realisable value. Cost comprises all purchase price and direct costs that have been incurred in bringing the inventories to their present location and condition. Net realisable value is based on normal selling price less further costs expected to be incurred prior to disposal.

Specific provision is made for damaged, deteriorated, obsolete and unusable items where appropriate.

NOTES TO THE FINANCIAL STATEMENTS

1. STATEMENT OF ACCOUNTING POLICIES (continued)

(XI) FINANCIAL ASSETS AND LIABILITIES

Classification and measurement

The following accounting policies apply to the measurement of financial assets in the ESB Group's consolidated financial statements:

Financial assets at fair value through profit or loss (FVTPL)

These assets are subsequently measured at fair value. Net gains and losses, including any interest or dividend income, are recognised in profit or loss.

Financial assets at fair value through other comprehensive income (FVOCI)

These assets are subsequently measured at fair value. Net gains and losses are recognised in other comprehensive income.

Financial assets at amortised cost

These assets are subsequently measured at amortised cost using the effective interest method. The amortised cost is reduced by impairment losses. Interest income, foreign exchange gains and losses and impairment is recognised in profit or loss. Any gain or loss on derecognition is recognised in profit or loss.

Trade and other receivables

Trade and other receivables are initially recognised at fair value, which is usually the original invoiced amount and subsequently carried at amortised cost using the effective interest method less allowance made for impairment.

The Group applies the IFRS 9 simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all trade and other receivables except on the shareholder loans advanced to equity accounted investees which are measured using the general approach. The loss allowances for financial assets are based on assumptions about risk of default and expected loss rates. The Group uses judgement in making these assumptions and selecting the inputs to the expected credit loss calculations, based on the Group's past history, existing market conditions and forward looking estimates at the end of each reporting period.

Loans and balances with equity accounted investees

Loans and balances with equity accounted investees are non-derivative financial assets or liabilities which are not quoted in an active market. They are included in current assets or current liabilities on the balance sheet, except for those with maturities greater than twelve months after the balance sheet date, which are included in non-current assets or non-current liabilities and are initially recorded at fair value and thereafter at amortised cost using the effective interest method less loss allowance made for impairment.

Loans and balances with Group companies (Parent)

Loans and balances with Group Companies are non-derivative financial assets or liabilities which are not quoted in an active market. They are included in current assets or current liabilities on the balance sheet, except for those with maturities greater than twelve months after the balance sheet date, which are included in non-current assets or non-current liabilities. Loans and balances are included within trade and other receivables or trade and other payables in the Parent balance sheet and are initially recorded at fair value and thereafter at amortised cost.

Trade and other payables

Trade and other payables are initially recorded at fair value, which is usually the original invoiced amount, and subsequently carried at amortised cost using the effective interest rate method.

Impairment

The Group assesses on a forward looking basis the expected credit losses associated with its debt instruments carried at amortised cost. The impairment methodology applied depends on whether there has been a significant increase in credit risk.

For loans and balances with group companies, the Parent applies the general approach permitted by IFRS 9, which requires 12 month expected credit losses to be recognised on initial recognition of these receivables. If a significant increase in credit risk occurs, this requires expected lifetime credit losses to be recognised on these receivables.

Cash and cash equivalents

Cash and cash equivalents include cash in hand, deposits repayable on demand and other short-term highly liquid investments with original maturities of three months or less. Cash and cash equivalents for the purpose of cash flow include bank overdrafts payable on demand. Bank overdrafts are shown within borrowings in current liabilities in the balance sheet.

NOTES TO THE FINANCIAL STATEMENTS

1. STATEMENT OF ACCOUNTING POLICIES (continued)

(XI) FINANCIAL ASSETS AND LIABILITIES (continued)

Borrowings

(a) Interest bearing borrowings

Interest bearing borrowings are recognised initially at fair value less attributable transaction costs. Subsequent to initial recognition these borrowings are stated at amortised cost using the effective interest rate method. If a financial liability measured at amortised cost is modified without this resulting in derecognition, a gain or loss is recognised in profit or loss. The gain or loss is calculated as the difference between the original contractual cash flows and the modified cash flows discounted at the original effective interest rate.

(b) Derivative financial instruments and other hedging instruments

The Group uses derivative financial instruments to hedge its exposure to commodity price, foreign exchange and interest rate risk arising from operational, financing and investing activities. The principal derivatives used include interest rate swaps, inflation-linked interest rate swaps, currency swaps and forward foreign currency contracts. Commodity contracts are also used to hedge the Group's exposures to the purchase of fuel and sale of electricity. The Group applies the general hedge accounting model in IFRS 9. This requires the Group to ensure that hedge accounting relationships are aligned with its risk management objectives and strategy and to apply a more qualitative and forward looking approach to assessing hedge effectiveness.

ESB funds its operations using borrowings and uses deposit instruments to invest surplus funds. ESB also uses interest rate and foreign currency instruments to manage interest rate and currency risks that arise in the normal course of operations from US dollar and sterling denominated borrowings, from its foreign currency subsidiaries and from the use of foreign currency suppliers.

Within its regular course of business, the Group routinely enters into sale and purchase contracts for commodities, including gas and electricity. Where the contract was entered into and continues to be held for the purposes of receipt or delivery of the commodities in accordance with the Group's expected sale, purchase or usage requirements, the contracts are designated as own use contracts and are accounted for as executory contracts. These contracts are therefore not within the scope of IFRS 9 Financial Instruments.

Commodity contracts which are not designated as own use contracts are accounted for as trading derivatives and are recognised in the balance sheet at fair value. The changes in fair value when a hedge accounting relationship exists and the contract has been designated as held for hedging purposes will be recognised in accordance with IFRS 9 as cash flow hedges or fair value hedges.

Financial derivative instruments are used by the Group to hedge interest rate and currency exposures. All such derivatives are recognised at fair value and are re-measured to fair value at the balance sheet date. With the exception of the inflation linked interest rate swaps the majority of other derivative financial instruments are designated as being held for hedging purposes.

The designation of the hedge relationship is established at the inception of the contract. The treatment of gains and losses on subsequent re-measurement is dependent on the classification of the hedge and whether the hedge relationship is designated as either a fair value or cash flow hedge.

All fair value movements on derivatives that are not designated as hedging relationships are recorded through the income statement within finance income and expense or other operating costs, as appropriate.

Cash flow hedges

Where a derivative financial instrument is designated as a hedge of the variability in cash flows of a recognised liability, a firm commitment or a highly probable forecast transaction, the effective part of any gain or loss on the derivative financial instrument is recognised directly in other comprehensive income. When the firm commitment or forecasted transaction results in the recognition of a non-financial asset or liability, the cumulative gain or loss is removed from other comprehensive income and included in the initial measurement of that asset or liability. Otherwise the cumulative gain or loss is removed from other comprehensive income and recognised in the income statement at the same time as the hedged transaction. The gain or loss relating to the ineffective portion is recognised in the income statement immediately.

When a hedging instrument or hedge relationship is terminated but the hedged transaction is still expected to occur, the cumulative gain or loss at that point remains in other comprehensive income and is recognised in accordance with the above policy when the transaction occurs. If the hedged transaction is no longer probable, the cumulative unrealised gain or loss recognised in other comprehensive income is recognised in the income statement immediately.

Hedge of net investment in foreign entity

Where a foreign currency liability hedges a net investment in a foreign operation, foreign exchange differences arising on translation of the liability are recognised directly in other comprehensive income, and taken to the translation reserve, with any ineffective portion recognised in the income statement immediately.

NOTES TO THE FINANCIAL STATEMENTS

1. STATEMENT OF ACCOUNTING POLICIES (continued)

(XI) FINANCIAL ASSETS AND LIABILITIES (continued)

(c) Guarantees

During the normal course of business, the Group provides guarantees and bonds to third parties, subsidiary companies of the Parent and equity accounted investees. Where claims are probable, the expected credit loss model is applied.

(XII) CAPITAL STOCK

The units of capital stock are measured at the price at which they were initially issued to the Department of Finance, the Department of Communications, Climate Action and Environment and ESB ESOP Trustee Limited.

(XIII) INCOME TAX

Income tax on the profit or loss for the year comprises current and deferred tax. Income tax is recognised in the income statement, except to the extent that it relates to items recognised directly in other comprehensive income or equity.

(a) Current tax

Current tax is provided at current rates and is calculated on the basis of results for the year. The income tax expense in the income statement does not include taxation on the Group's share of profits of joint venture undertakings, as this is included within the separate line on the face of the income statement for share of equity accounted investee profit/(loss), net of tax.

(b) Deferred tax

Deferred tax is provided using the balance sheet liability method, providing for temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes.

Deferred tax assets are recognised only to the extent that the Board consider that it is more likely than not that there will be suitable taxable profits from which the future reversal of the underlying temporary differences can be deducted.

Deferred tax is measured at the tax rates that are expected to apply in the periods in which temporary differences reverse, based on tax rates and laws enacted or substantively enacted at the balance sheet date.

(XIV) PROVISIONS

A provision is recognised if, as a result of a past event, the Group has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. Provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. The unwinding of the discount is recognised as a finance cost.

Provision for asset retirement obligations

The provision for retirement and decommissioning of mainly generating stations, wind farms and ESB Networks creosote treated wood poles represents the present value of the current estimate of the costs of closure of the stations and the disposal of poles at the end of their useful lives

The estimated costs of closing stations and other asset retirement obligations are recognised in full at the outset of the asset life, but discounted to present values using an appropriate pre-tax discount rate. The costs are capitalised in property, plant and equipment and are depreciated over the useful economic lives of the stations or other assets to which they relate unless the related asset has reached the end of its useful life. Subsequent changes in the liability in respect of assets that have reached the end of their useful life are recognised in the income statement as they occur. The costs are reviewed each year and amended as appropriate. Amendments to the discounted estimated costs are capitalised into the relevant assets and depreciated over the remaining life of those assets to the extent that the assets are still in use.

As the costs are capitalised and initially provided on a discounted basis, the provision is increased by a financing charge in each period, which is calculated based on the provision balance and discount rate applied at the last measurement date (updated annually) and is included in the income statement as a financing charge. In this way, the provision will equal the estimated closure costs at the end of the useful economic lives of stations or other assets. The actual expenditure is set against the provision as stations are closed or other obligations are met.

The provision for generating station closure costs and other asset retirement obligations is included within current or non-current provisions as appropriate on the balance sheet.

NOTES TO THE FINANCIAL STATEMENTS

1. STATEMENT OF ACCOUNTING POLICIES (continued)

(XV) EMPLOYEE RELATED LIABILITIES

(a) Restructuring liabilities

Voluntary termination benefits are payable under various collective agreements between the Board of ESB and Union Staff when an employee accepts voluntary redundancy in exchange for these benefits. The Group recognises termination benefits when it is demonstrably committed, without realistic possibility of withdrawal, to a formal detailed plan to either terminate employment before the normal retirement age, or to provide termination benefits as a result of an offer made to employees to encourage voluntary redundancy. Ordinary termination benefits not covered by the aforementioned agreement are recognised at the earlier of when the Group can no longer withdraw the offer of those benefits and when the Group begins to implement the restructuring plan. Benefits expected to be settled more than twelve months after the balance sheet date are discounted to present value. Future operating losses are not provided for.

(b) Other short-term employee related liabilities

The costs of holiday leave and bonuses accrued are recognised when employees render the service or performance that increases their entitlement to future compensated absences or payments.

(XVI) PENSION OBLIGATIONS

The Group companies operate various pension schemes in the Republic of Ireland and Northern Ireland, which are funded through payments to trustee administered funds.

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.

NOTES TO THE FINANCIAL STATEMENTS

1. STATEMENT OF ACCOUNTING POLICIES (continued)

(XVII) REVENUE FROM CONTRACTS WITH CUSTOMER (continued)

Great Britain

British Electricity Trading and Transmission Arrangements is the wholesale electricity market operating in Great Britain (GB). Unlike the I-SEM, trading can take place between generators and suppliers either bilaterally or through exchanges. Both physical and financial contracts can be struck to manage price volatility, for timescales ranging from several years ahead to on-the-day trading markets. The British Government operates a capacity remuneration scheme and under the scheme, generators are awarded capacity contracts (based on the outcome of an auction) that enable them to receive payments for the provision of generation capacity while also receiving penalties for non-delivery during scarcity events. Revenue in respect of capacity payments is recognised over time.

On 15 November 2018, the General Court of the European Union annulled the European Commission's decision to not raise objections to state aid approval for the GB capacity market arrangements. The decision meant the UK government could not issue capacity market payments to energy firms or hold auctions.

On 25 October 2019 the European Commission advised the Department for Business, Energy & Industrial Strategy that following its formal Phase II investigation, it has decided the GB Capacity Market scheme is compatible with EU State aid rules. Accordingly all Capacity Market functions that had been suspended were restarted and Settlement Body were instructed to make capacity payments to holders of agreements in respect of the standstill period.

Capacity revenue in respect of the standstill period was recognised when the market restarted. Revenue from capacity income is recognised over time.

Revenue derived from GB is through the sale of power to individual UK counterparties and is recognised over time when performance obligations are satisfied. Revenue relating to the GB market is recognised as other electricity receivables on the balance sheet and settled daily or monthly depending on the terms of the individual contract.

Other Segments - Other revenue

Other revenue comprises of income derived from the provision of electrical, mechanical, civil, environmental, engineering and consultancy services and represents the fair value of services and works delivered to customers.

Services are deemed to have been delivered to customers when, and to the extent that, the entity has met its performance obligations under its contracts. Revenue is recognised over time in accordance with the input method in the income statement in line with the contract terms in proportion to the stage of completion, based on total costs of the contract. Billed revenue is recognised as a trade receivable-non electricity and settled in 30 business days. Unbilled revenue is recognised in other receivables.

(XVIII) OTHER OPERATING INCOME

Other operating income comprises of income which accrues to the Group outside of the Group's normal trading activities.

(XIX) OPERATING SEGMENTS - IFRS 8

ESB have voluntarily applied the disclosure requirements of IFRS 8 Operating Segments to the Group. IFRS 8 specifies how an entity should disclose information about its segments using a "management approach" under which segment information is presented on the same basis as that used for internal reporting. Financial information for segments whose operating activities are regularly reviewed by the Executive Team and the Board, collectively the Chief Operating Decision Maker (CODM), in order to make decisions about allocating resources and assessing performance has been presented in note 2 to the financial statements.

(XX) COSTS

(a) Employee costs

Salaries, overtime, expenses, bonuses, social welfare contributions (PRSI), national insurance, paid annual leave and sick leave are accrued in the period in which the associated services are rendered by the employees of the Group.

(b) Energy costs

Energy costs comprise direct fuel (primarily coal and gas), purchased electricity, Use of System charges (other electricity costs) and net emissions costs. Fuel and purchased electricity costs are recognised as they are utilised. The Group has entered into certain long-term power purchase agreements for fixed amounts. Amounts payable under the contracts that are in excess of or below market rates are recoverable by the Group or repayable to the market under the Public Service Obligation (PSO) levy.

(c) Operating and other maintenance costs

Operating and other maintenance costs relate primarily to overhaul and project costs, contractor costs and establishment costs. These costs are recognised in the income statement as they are incurred.

(d) Finance income and finance costs

Finance income comprises interest income on bank deposits, which attract interest at prevailing deposit interest rates in addition to interest income on loans.

Finance costs comprise interest expense on borrowings, unwinding of the discount on provisions, pension financing charges, fair value gains and losses on financial instruments not qualifying or designated for hedge accounting, losses on hedging instruments that are not recognised in operating costs and reclassifications of amounts previously recognised in other comprehensive income.

NOTES TO THE FINANCIAL STATEMENTS

1. STATEMENT OF ACCOUNTING POLICIES (continued)

(XVII) REVENUE FROM CONTRACTS WITH CUSTOMER (continued)

ESB Networks - Revenue from Use of System charges to customers

ESB Networks also recognises revenue from a number of unregulated sources. Revenue is recognised from providing ancillary network services and other miscellaneous income. All unregulated income is recognised at a point in time with a corresponding receivable carried on the balance sheet for each item.

NIE Networks - Revenue from Use of System charges to customers

NIE Networks derives its revenue principally through charges for use of the distribution system (DUoS) levied on electricity suppliers and transmission service charges (TSC) mainly for use of the transmission system levied on System Operator for Northern Ireland (SONI). NIE Networks operates in Northern Ireland and is a regulated business, earning its revenue primarily from an allowed return on its Regulated Asset Base (RAB).

DUoS revenue is recognised in line with the use of the system by suppliers and any outstanding billed and unbilled usage for DUoS is included within Use of System receivable at the balance sheet date.

TSC revenue is earned by maintaining the transmission assets to facilitate the effective operation by SONI. For this fixed price contract TSC revenue is recognised over time on a straight line basis and a Use of System receivable is recognised on the balance sheet.

NIE Networks receives non-repayable supply contributions income as a result of providing new connections to its existing network in respect of property, plant and equipment. These contributions are held in trade payables as progress payments until their performance obligation is satisfied, when the work on the connection has met the performance obligation they are transferred to deferred income and released to revenue in the income statement over the estimated useful economic lives of the related assets. The useful life of these assets is estimated at 25 and 30 years for distribution and transmission respectively.

Generation and Trading (formerly Generation and Wholesale Markets) revenue derives mainly from electricity generation

Republic of Ireland

Single Electricity Market (SEM)

The Group operates power stations and wind farms and revenue earned derives mainly from the generation of electricity from such assets. Until 30 September 2018 the Single Electricity Market (SEM) was the single wholesale market (pool) for electricity in the Republic of Ireland (ROI) and Northern Ireland (NI). It was a mandatory gross pool, so all generators were required to sell and suppliers were required to buy power through the pool. The pool set the spot price for electricity, known as the System Marginal Price (SMP) every half hour.

Generators also received separate payments for the provision of stable generation capacity through the Capacity Remuneration Mechanism (CRM). Price volatility in the pool was managed by generators and suppliers who entered into fixed financial contracts (contracts for differences). Refer to policy on hedge accounting.

Revenue in respect of the SEM pool was recognised on consumption of electricity. A SEM pool receivable was recognised on the balance sheet and generally settled monthly.

Integrated-Single Electricity Market (I-SEM)

The I-SEM is a new wholesale electricity market arrangement for Ireland and Northern Ireland that went live on 1 October 2018. The SEM market is now replaced by multiple markets or auctions, each spanning different trading time frames, with separate (although related) clearing and settlement mechanisms.

There are two ex-ante markets for physical energy: the Day-Ahead Market and the Intraday Market. In addition, Energy balancing services are offered into the Balancing Market by generators (energy producers) and suppliers (energy consumers). Capacity is a commitment by a generator or interconnector owner to be available to deliver energy into the grid, if called on to do so. Capacity providers who are successful in the Capacity Market receive a regular capacity payment, which assists with funding generation capacity. Revenue from the sale of electricity in the I-SEM markets are recognised over time on consumption of electricity and an I-SEM receivable is recognised on the balance sheet and settled daily for the ex-ante market and weekly for the ex-post market.

Capacity income is received through the 'Capacity Remuneration Mechanism' (CRM) where a capacity payment is made to a participant in respect of a Generator Unit in each Capacity Period on the basis of the Unit's Eligible Availability, which is based on the Unit's Availability Profile. Revenue is recognised over time and recognised as an I-SEM receivable on the balance sheet and settled within one month.

Ancillary income is received through 'Delivering a Secure Sustainable Electricity System' (DS3) programme for provision of frequency response services to the grid. Ancillary income is recognised over time. Ancillary income is recognised as a SEM/I-SEM receivable on the balance sheet and settled within one month.

NOTES TO THE FINANCIAL STATEMENTS

1. STATEMENT OF ACCOUNTING POLICIES (continued)

(XVII) REVENUE FROM CONTRACTS WITH CUSTOMER (continued)

Great Britain

British Electricity Trading and Transmission Arrangements is the wholesale electricity market operating in Great Britain (GB). Unlike the I-SEM, trading can take place between generators and suppliers either bilaterally or through exchanges. Both physical and financial contracts can be struck to manage price volatility, for timescales ranging from several years ahead to on-the-day trading markets. The British Government operates a capacity remuneration scheme and under the scheme, generators are awarded capacity contracts (based on the outcome of an auction) that enable them to receive payments for the provision of generation capacity while also receiving penalties for non-delivery during scarcity events. Revenue in respect of capacity payments is recognised over time.

On 15 November 2018, the General Court of the European Union annulled the European Commission's decision to not raise objections to state aid approval for the GB capacity market arrangements. The decision meant the UK government could not issue capacity market payments to energy firms or hold auctions.

On 25 October 2019 the European Commission advised the Department for Business, Energy & Industrial Strategy that following its formal Phase II investigation, it has decided the GB Capacity Market scheme is compatible with EU State aid rules. Accordingly all Capacity Market functions that had been suspended were restarted and Settlement Body were instructed to make capacity payments to holders of agreements in respect of the standstill period.

Capacity revenue in respect of the standstill period was recognised when the market restarted. Revenue from capacity income is recognised over time.

Revenue derived from GB is through the sale of power to individual UK counterparties and is recognised over time when performance obligations are satisfied. Revenue relating to the GB market is recognised as other electricity receivables on the balance sheet and settled daily or monthly depending on the terms of the individual contract.

Other Segments - Other revenue

Other revenue comprises of income derived from the provision of electrical, mechanical, civil, environmental, engineering and consultancy services and represents the fair value of services and works delivered to customers.

Services are deemed to have been delivered to customers when, and to the extent that, the entity has met its performance obligations under its contracts. Revenue is recognised over time in accordance with the input method in the income statement in line with the contract terms in proportion to the stage of completion, based on total costs of the contract. Billed revenue is recognised as a trade receivable-non electricity and settled in 30 business days. Unbilled revenue is recognised in other receivables.

(XVIII) OTHER OPERATING INCOME

Other operating income comprises of income which accrues to the Group outside of the Group's normal trading activities.

(XIX) OPERATING SEGMENTS - IFRS 8

ESB have voluntarily applied the disclosure requirements of IFRS 8 Operating Segments to the Group. IFRS 8 specifies how an entity should disclose information about its segments using a "management approach" under which segment information is presented on the same basis as that used for internal reporting. Financial information for segments whose operating activities are regularly reviewed by the Executive Team and the Board, collectively the Chief Operating Decision Maker (CODM), in order to make decisions about allocating resources and assessing performance has been presented in note 2 to the financial statements.

(XX) COSTS

(a) Employee costs

Salaries, overtime, expenses, bonuses, social welfare contributions (PRSI), national insurance, paid annual leave and sick leave are accrued in the period in which the associated services are rendered by the employees of the Group.

(b) Energy costs

Energy costs comprise direct fuel (primarily coal and gas), purchased electricity, Use of System charges (other electricity costs) and net emissions costs. Fuel and purchased electricity costs are recognised as they are utilised. The Group has entered into certain long-term power purchase agreements for fixed amounts. Amounts payable under the contracts that are in excess of or below market rates are recoverable by the Group or repayable to the market under the Public Service Obligation (PSO) levy.

(c) Operating and other maintenance costs

Operating and other maintenance costs relate primarily to overhaul and project costs, contractor costs and establishment costs. These costs are recognised in the income statement as they are incurred.

(d) Finance income and finance costs

Finance income comprises interest income on bank deposits, which attract interest at prevailing deposit interest rates in addition to interest income on loans.

Finance costs comprise interest expense on borrowings, unwinding of the discount on provisions, pension financing charges, fair value gains and losses on financial instruments not qualifying or designated for hedge accounting, losses on hedging instruments that are not recognised in operating costs and reclassifications of amounts previously recognised in other comprehensive income.

NOTES TO THE FINANCIAL STATEMENTS

1. STATEMENT OF ACCOUNTING POLICIES (continued)

(XXI) EXCEPTIONAL ITEMS

The Group has used the term "exceptional" to describe certain items which, in management's view, warrant separate disclosure by virtue of their size or incidence, or due to the fact that certain gains or losses are determined to be non-recurring in nature. Exceptional items may include restructuring, significant impairments, profit or loss on asset disposals, material changes in estimates or once off costs where separate identification is important to gain an understanding of the financial statements. Further details of the Group's exceptional items are provided in note 5 of the financial statements.

2. SEGMENT REPORTING

The Group has applied IFRS 8 Operating Segments, and has made the appropriate disclosures in these financial statements.

For management purposes, the Group is organised into four key reportable segments, being the Group's strategic divisions which are managed separately and in respect of which internal management information is supplied to Executive Management and to the Board being collectively the Chief Operating Decision Maker (CODM) of the Group. Three further corporate divisions provide support and other services to the principal operating divisions of the Group and are combined as Other Segments in the information below.

A description of the Group's key reportable segments is as follows:

- (a) **Customer Solutions** develops, markets, sells and services innovative energy supply and service offerings through all of ESB's customer-facing brands (Electric Ireland, Smart Energy Services, ESB e-Cars, ESB Telecoms and ESB Energy) in Ireland (ROI and NI) and Great Britain (GB). Electric Ireland is a leading supplier of electricity and gas to domestic customers on the island of Ireland. Customer Solutions operates in the GB domestic market through ESB Energy. Electric Ireland also has a substantial market share in the non-domestic sector in both the ROI and NI. Revenues are primarily derived from sales to electricity and gas customers.
- (b) **ESB Networks** is principally concerned with the ownership and operation of the electricity distribution network and the ownership of the electricity transmission network in ROI. ESB Networks is a regulated business earning an allowed return on its Regulated Asset Base (RAB) and derives its revenue principally from charges for the use of the distribution system levied on electricity suppliers and from charges for transmission services collected from Eirgrid Plc. It is ring-fenced by regulation from the Group's generation and supply business.
- (c) **Generation and Trading** operates, develops, constructs and trades the output of power stations and wind farms in ROI, NI and GB. This includes wholly owned subsidiaries and investments in joint ventures.
- (d) **NIE Networks** is principally concerned with the ownership and operation of the electricity distribution network and the ownership of the electricity transmission network in NI. NIE Networks is a regulated business earning an allowed return on its Regulated Asset Base (RAB) and derives its revenue principally from charges for the use of the distribution system levied on electricity suppliers and from charges for transmission services collected from the System Operator for Northern Ireland (SONI).
- (e) **Other Segments** include the results of internal service providers, which supply the main business units of the Group with support services. These segments are governed by regulation, and service level agreements are designed to ensure that transactions between operating segments are on an arm's length basis similar to transactions with third parties. This segment also includes most finance costs in the Group, as the majority of Treasury activity is conducted centrally. Finance costs incurred centrally are not recharged to other operating segments.

The CODM monitors the operating results of the segments separately in order to allocate resources between segments and to assess performance. Segment performance is predominantly evaluated based on operating profit. Assets and liabilities are not reported by segment to the CODM.

Revenue by product

Reportable segments are split by type of product revenue earned. Customer Solutions revenues consist of sales to electricity and gas customers and other related services as set out at (a) above. Generation and Trading revenue derives mainly from electricity generation. ESB Networks and NIE Networks earn Use of System income in the ROI and NI respectively. Revenue included within Other Segments relates primarily to engineering services.

NOTES TO THE FINANCIAL STATEMENTS

2. SEGMENT REPORTING (continued)

(a) Income statement

(i) Segment revenue - 2019

	Customer Solutions €m	ESB Networks €m	Generation and Trading €m	NIE Networks €m	Other Segments €m	Consolidation and eliminations €	Total €m
External revenues	2,061.2	787.3	557.3	267.7	36.0	-	3,709.5
Inter-segment revenue	8.2	368.7	961.0	34.8	290.0	(1,662.7)	-
Revenue	2,069.4	1,156.0	1,518.3	302.5	326.0	(1,662.7)	3,709.5

(ii) Segment operating costs - 2019

Depreciation and amortisation	(30.5)	(435.0)	(159.6)	(154.3)	(26.8)	-	(806.2)
Net other operating costs	(1,968.4)	(376.7)	(1,149.4)	(87.4)	(278.3)	1,662.7	(2,197.5)
Impairment charge	-	-	(11.9)	-	-	-	(11.9)
Net impairment losses on financial assets	(11.1)	-	(34.4)	-	(0.7)	-	(46.2)
Exceptional operating costs excluding impairment	-	-	(59.8)	-	-	-	(59.8)

(iii) Operating result - 2019

Operating profit including exceptional items	59.4	344.3	103.2	60.8	20.2	-	587.9
Net finance cost	(0.2)	(2.2)	(36.8)	(42.6)	(100.6)	-	(182.4)
Share of equity accounted investees' profit / (loss)	-	-	4.5	-	(12.8)	-	(8.3)
Profit / (loss) before taxation	59.2	342.1	70.9	18.2	(93.2)	-	397.2

(i) Segment revenue - 2018

	Customer Solutions ¹ €m	ESB Networks €m	Generation and Trading €m	NIE Networks €m	Other Segments ¹ €m	Consolidation and eliminations ¹ €m	Total €m
External revenues	1,855.7	751.4	517.3	273.0	34.4	-	3,431.8
Inter-segment revenue	11.5	386.9	973.8	29.4	248.7	(1,650.3)	-
Revenue	1,867.2	1,138.3	1,491.1	302.4	283.1	(1,650.3)	3,431.8

(ii) Segment operating costs - 2018

Depreciation and amortisation	(12.6)	(412.4)	(192.2)	(143.1)	(19.1)	-	(779.4)
Net other operating costs	(1,799.2)	(371.1)	(1,260.1)	(97.4)	(304.1)	1,650.3	(2,181.6)
Net impairment losses on financial assets	(9.1)	(0.3)	(17.5)	(0.4)	(0.6)	-	(27.9)
Impairment charge	(3.1)	-	(124.4)	-	-	-	(127.5)

(iii) Operating result - 2018

Operating profit / (loss) - including exceptional items	43.2	354.5	(103.1)	61.5	(40.7)	-	315.4
Net finance cost	(0.1)	(2.2)	(51.3)	(44.7)	(124.8)	-	(223.1)
Share of equity accounted investees' loss	(0.4)	-	(0.6)	-	(13.0)	-	(14.0)
Profit / (loss) before taxation	42.7	352.3	(155.0)	16.8	(178.5)	-	(78.3)

All inter-segment revenues are eliminated upon consolidation and are reflected in the eliminations column above.

¹The 2018 reported numbers have been restated due to the organisational effectiveness review that came into effect on 1 January 2019. A number of entities transferred from Other Segments to the Customer Solutions reporting segment.

NOTES TO THE FINANCIAL STATEMENTS

2. SEGMENT REPORTING (continued)

(b) Other disclosures	2019 €m	2018 €m
Additions to non-current assets		
Customer Solutions ¹	28.4	25.5
ESB Networks	580.8	589.6
Generation and Trading	423.9	298.6
NIE Networks	154.2	171.3
Other Segments ¹	55.3	79.8
Total	1,242.6	1,164.8

¹The 2018 reported numbers have been restated due to the organisational effectiveness review that came into effect on 1 January 2019. A number of entities transferred from Other Segments to the Customer Solutions reporting segment.

Additions to non-current assets (excluding acquisitions) includes investments in property, plant and equipment, intangible assets (excluding emission allowances), financial assets and equity accounted investees.

3. REVENUE FROM CONTRACTS WITH CUSTOMERS

IFRS 15 requires disclosure to reflect the nature, timing, amount and uncertainty of its revenue within its disclosure requirements. ESB has determined that the disaggregation using existing segments and the nature of revenues is appropriate for its circumstances.

2019	Customer Solutions €m	ESB Networks €m	Generation and Trading €m	NIE Networks €m	Other Segments €m	Consolidation and eliminations €m	Total €m
External revenues							
Revenue from Power Generation	-	-	557.3	-	-	-	557.3
Revenue from Use of System charges to customers	-	734.9	-	251.6	-	-	986.5
Revenue from supply contributions	-	52.4	-	16.1	-	-	68.5
Revenue from sales to electricity and gas customers	2,030.7	-	-	-	-	-	2,030.7
Other revenue	30.5	-	-	-	36.0	-	66.5
Revenue from contracts with customers	2,061.2	787.3	557.3	267.7	36.0	-	3,709.5
Inter-segment revenue	8.2	368.7	961.0	34.8	290.0	(1,662.7)	-
Total ESB Group revenue	2,069.4	1,156.0	1,518.3	302.5	326.0	(1,662.7)	3,709.5

2018	Customer Solutions ¹ €m	ESB Networks €m	Generation and Trading €m	NIE Networks €m	Other Segments ¹ €m	Consolidation and eliminations ¹ €m	Total €m
External revenues							
Revenue from Power Generation	-	-	517.3	-	-	-	517.3
Revenue from Use of System charges to customers	-	702.1	-	258.0	-	-	960.1
Revenue from supply contributions	-	49.3	-	15.0	-	-	64.3
Revenue from sales to electricity and gas customers	1,826.0	-	-	-	-	-	1,826.0
Other revenue	29.7	-	-	-	34.4	-	64.1
Revenue from contracts with customers	1,855.7	751.4	517.3	273.0	34.4	-	3,431.8
Inter-segment revenue	11.5	386.9	973.8	29.4	248.7	(1,650.3)	-
Total ESB Group revenue	1,867.2	1,138.3	1,491.1	302.4	283.1	(1,650.3)	3,431.8

¹The 2018 reported numbers have been restated due to the organisational effectiveness review that came into effect on 1 January 2019. A number of entities transferred from Other Segments to the Customer Solutions reporting segment.

NOTES TO THE FINANCIAL STATEMENTS

4. GEOGRAPHIC INFORMATION

(a) Non-current assets by geographic location	2019 €m	2018 €m
Ireland	8,386.7	8,019.3
UK including Northern Ireland	3,460.4	3,307.3
Total	11,847.1	11,326.6

Non-current assets for this purpose consist of property, plant and equipment, intangible assets, right of use assets, and goodwill. Investments in equity accounted investees, financial asset investments, trade and other receivables, derivative financial instruments and deferred tax assets are excluded.

(b) External revenue by geographic market	2019 €m	2018 €m
Ireland	2,822.3	2,566.4
UK including Northern Ireland	858.2	837.0
Rest of world	29.0	28.4
Total	3,709.5	3,431.8

5. EXCEPTIONAL ITEMS

	2019 €m	2018 €m
Impairment charges	34.4	139.7
Exit costs - severance schemes	54.8	-
Operating costs	5.0	-
	94.2	139.7

2019 Impairment charges

Tilbury Green Power Holdings Limited owns a 40MW biomass fuelled power plant that ESB jointly invested in along with UK Green Infrastructure Platform and the EPC consortium. The plant is located approximately 30km east of London and uses sustainable, locally sourced, waste wood from the greater London area. The plant achieved commercial operation in 2019. An impairment review of the shareholder loan to the project was completed prompted by the existence of impairment indicators primarily due to delays in achieving commercial operation and reduced plant running versus expected levels arising from technical issues. The impairment assessment of the shareholder loan was based on forecast interest and debt repayments and was discounted at 12.56% (2018: 12.56%) being the effective rate of interest on the loan in line with IFRS 9. Impairment charges of €34.4 million (2018: €17.5 million) have been recognised in operating costs in relation to the shareholder loan. The full value of the loan outstanding has been impaired at 31 December 2019.

Exit costs - severance schemes

During the year the closure of the Peats stations in the midlands at the end of 2020 was announced and the North Wall plant in Dublin ceased operations. Demand for coal fired generation has fallen in 2019 and this has led to a significant rationalisation of operations at the Moneypoint plant. As a result of these developments in the business and after consultation with stakeholders a provision for the cost of severance schemes has been put in place. At 31 December 2019 a charge of €54.8 million was taken to the Income Statement in respect of the severance schemes.

Operating costs

In addition to the severance schemes, a charge of €5.0 million has been included in operations and maintenance costs representing ESB's contribution to a 'Just Transition Fund' for the midlands in recognition of the economic impact on region in the wake of announcement of the planned closure of the two peat stations.

NOTES TO THE FINANCIAL STATEMENTS

5. EXCEPTIONAL ITEMS (continued)

2018 Impairment charges

IAS 36 - Impairment of Assets stipulates that an impairment loss is the amount by which the carrying value of an asset exceeds its recoverable amount. Recoverable amount is the higher of its fair value less costs of disposal and its value in use. Value in use is calculated by taking the Net Present Value (NPV) of expected future cash flows from the asset discounted at an appropriate discount rate. Entities are required to conduct impairment tests where there is an indication of impairment of an asset. Lower forecast wholesale electricity margins in the new Integrated Single Electricity Market (I-SEM) is an indicator that has prompted impairment reviews on certain of the Group's generation assets at 31 December 2018.

Aghada Unit Two (435 MW) and Synergen (410 MW) are Combined Cycle Gas Turbines (CCGT's) based in Cork and Dublin respectively. Aghada reached its commercial operation date in May 2010 and Synergen commenced operation in August 2002. The impairment review undertaken has highlighted an impairment charge of €87.3 million for Aghada Unit 2 and €33.4 million for Synergen which are included in the Generation and Trading segment. The impairments arose as a result of lower projected revenue due to lower forecasted wholesale electricity margins for gas fired plants in the I-SEM market driven by lower spark spreads and forecast lower running volumes for these plants. The real discount rate applied to the cash flows to determine the NPV was a pre-tax rate of 6.11%.

The review of the I-SEM windfarm portfolio highlighted the requirement for an impairment charge of €1.4 million. The driver of the impairment charge is a reduction in market revenue due to a decrease in price at Hunters Hill windfarm based in Northern Ireland. The real discount rate applied to the cash flows of Hunters Hill windfarm to determine the NPV was a pre-tax rate of 4.02%.

All forecast cash inflows for each asset and generation plant are based on the forecasted running profiles for the plants, regulatory support, forward prices for electricity, gas and carbon. The cash outflows reflect the forecast operating and capital expenditure plans based on the Board approved five-year business plans, and thereafter, on long-term production and cash flow forecasts.

6. OTHER OPERATING INCOME / (EXPENSES)

	2019 €m	2018 €m
Profit on disposal of property, plant and equipment and intangible assets	7.1	8.6
Gain on Castlepook Power DAC becoming a 100% subsidiary undertaking ¹	-	4.7
Other operating income	-	0.1
Dividends received	1.6	-
Fair value movements on assets held at fair value through profit and loss ²	-	(12.0)
Total	8.7	1.4

¹ Refer to note 15 for further information relating to the purchase of Castlepook Power DAC.

² These fair value movements relate to adjustments to the value of investments in renewables enterprises held by ESB Novusmodus Limited Partnership, a subsidiary, as detailed in note 15.

NOTES TO THE FINANCIAL STATEMENTS

7. OPERATING COSTS (including net impairment losses on financial assets)

	2019 €m	2018 €m
Employee costs (note 9)	545.1	492.8
Energy costs ¹	1,287.1	1,140.8
Operations and maintenance ²	433.8	549.4
Net impairment losses on financial assets (notes 15 / 17) ³	46.2	27.9
Depreciation and amortisation (notes 11 / 12 / 13)	806.2	779.4
Other impairment charges ⁴	11.9	127.5
Total	3,130.3	3,117.8

¹ Included in energy costs is a charge of €8.7 million (2018: €10.7 million) relating to the fair valuing of fuel commodity swaps which have not been designated as accounting hedges.

² Included in operations and maintenance is a foreign exchange retranslation gain of €25.0 million (2018: €5.1 million loss) on sterling denominated intercompany positions.

³ Net impairment losses on financial assets include impairment losses incurred on trade and other receivables of €11.8 million (2018: €10.4 million) and exceptional impairment charges incurred on loans to equity accounted investees of €34.4 million (2018: €17.5 million) - see further detail in notes 5 and 17.

⁴ Impairment charges of €11.9 million (2018: €127.5 million) in respect of Property, Plant and Equipment and Intangible Assets have been recognised in 2019, €nil (2018: €122.2 million) of which have been disclosed as exceptional items in the income statement.

8. NET FINANCE COST AND OTHER FINANCING CHARGES

	2019 €m	2018 €m
Interest payable on borrowings	179.7	203.0
Less capitalised interest	(27.5)	(25.4)
Net interest on borrowings	152.2	177.6
Financing charges:		
- on NIE Networks pension scheme (note 23)	2.7	3.4
- on ESB pension scheme (note 24)	9.5	14.0
- on employee related liabilities (note 24)	-	-
- on asset retirement costs (note 27)	2.4	2.5
- on lease obligations (note 13)	2.0	-
- on other provisions (note 27)	-	(0.5)
Total financing charges	16.6	19.4
Fair value (gains) / losses on financial instruments:		
- currency / interest rate swaps: cash flow hedges, transfer from OCI	(2.4)	29.0
- interest rate swaps and inflation-linked swaps not qualifying for hedge accounting	18.1	0.5
- foreign exchange contracts not qualifying for hedge accounting	0.1	0.3
Total fair value losses on financial instruments	15.8	29.8
Finance cost	184.6	226.8
Finance income	(2.2)	(3.7)
Net finance cost	182.4	223.1

The financing charges on provisions are calculated in accordance with the policy for discounting of future payment obligations as disclosed in the accounting policies - see note 1.

In addition to the amounts transferred from other comprehensive income relating to interest rate swaps and foreign exchange contracts disclosed above, a gain of €8.3 million (2018: gain of €23.3 million) has been transferred from the cash flow hedging reserve to net finance cost and other financing charges during the year. However, these amounts are substantially offset by movements in the translation of the underlying hedged foreign currency borrowings at the prevailing exchange rates.

Included in finance income is interest on borrowings receivable from Aldeburgh Offshore Wind Holdings Limited €0.2 million (2018: €1.6 million), Oweninny Power DAC €0.3 million (2018: €0.4 million) - see note 15 for further details.

Fair value movements on the inflation linked swaps reflecting lower interest rates and a lower Retail Price Index (RPI) in the UK have been recognised within finance costs in the income statement, as hedge accounting is not available for these instruments.

NOTES TO THE FINANCIAL STATEMENTS

9. EMPLOYEES

GROUP

(a) Average number of employees in year by business activity, including temporary employees:	2019 Number	2018 Number
Generation and Trading	914	1,009
Customer Solutions ¹	551	459
ESB Networks	3,490	3,440
NIE Networks	1,208	1,206
Other Segments ¹	1,811	1,760
Total	7,974	7,874

¹The 2018 reported headcount numbers have been restated due to the organisational effectiveness review that came into effect on 1 January 2019. A number of entities transferred from Other Segments to the Customer Solutions reporting segment.

(b) Employee costs in year	2019 €m	2018 €m
Current staff costs (excluding pension)		
Salaries	529.2	513.6
Overtime	41.2	44.6
Social welfare costs (PRSI and national insurance)	43.0	40.4
Other payroll benefits ¹	37.0	36.8
Payroll cost for employees	650.4	635.4
(c) Pension and other employee benefit costs		
Exit costs - severance programmes ³	55.2	13.7
Pensions charge - other schemes ²	52.5	51.8
NIE Networks pension scheme charge ⁴	7.9	7.8
	766.0	708.7
Capitalised payroll	(220.9)	(215.9)
Total employee related costs charged to the income statement	545.1	492.8

¹ These benefits primarily include travel and subsistence allowances.

² The pension charge for other schemes include contributions of €30.1 million (2018: €30.6 million) to the ESB Defined Benefit Pension Scheme, €14.1 million (2018: €12.5 million) to the ESB Defined Contribution Pension Scheme, €7.3 million (2018: €6.0 million) to the Options section of the NIE Networks Pension Scheme (NIE Networks Scheme) and €1.0 million (2018: €0.8 million) to the stakeholder pension scheme for Great Britain (GB) employees (FMUK Pension Scheme). This charge also includes past service costs of €nil (2018: €1.9 million). See note 23 and 24 for further details.

³ During the year the ESB announced the planned closure of two peat-fired powered generating plants in 2020, closure of North Wall station and significant rationalisation of Moneypoint operations. Further details are set out in note 5. Included in severance programme costs for 2018 are pension curtailment costs in respect of NIE Networks of €4.7 million.

⁴ The NIE Networks pension scheme charge relates solely to the Focus section of the Northern Ireland Electricity Scheme (the NIE Networks Scheme). See note 23 for further details.

NOTES TO THE FINANCIAL STATEMENTS

9. EMPLOYEES (continued)

PARENT

(a) Average number of employees in year by business activity, including temporary employees:	2019 Number	2018 Number
Generation and Trading	636	638
Customer Solutions	343	295
ESB Networks	3,473	3,429
Other Segments	1,649	969
Total	6,101	5,331
(b) Employee costs in year	2019 €m	2018 €m
Current staff costs (excluding pension)		
Salaries	421.2	367.6
Overtime	34.9	37.3
Social welfare costs (PRSI)	33.4	27.3
Other payroll benefits ¹	30.4	25.2
Payroll cost for employees	519.9	457.4
(c) Pension and other employee benefit costs		
Exit costs - severance programmes	55.2	5.3
Pension charge ²	30.6	34.2
	605.7	496.9
Capitalised payroll	(166.2)	(162.0)
Total employee related costs charged to the income statement	439.5	334.9

¹ These benefits primarily include travel and subsistence allowances.

² The pension charge includes contributions to the ESB Defined Benefit Pension Scheme and the ESB Defined Contribution Pension Scheme. See note 23 for further details.

10. PROFIT FOR THE FINANCIAL YEAR	2019 €m	2018 €m
The profit for the financial year is stated after charging / (crediting):		
Auditor's remuneration:		
- Audit of individual and Group financial statements ¹	1.3	1.0
- Other assurance services	0.2	0.2
- Tax advisory services (Parent and NIE Networks entities only)	-	-
- Other non-audit services ²	0.1	0.5
ESB (Parent) Board members' remuneration:		
- Emoluments	0.5	0.5
- Pension contributions	0.1	0.1

The details of Board members remuneration do not include amounts paid to four Worker Board members as employees of ESB (as such pay is neither increased nor decreased because of their membership of the Board), but do include amounts paid to them by way of Board fees.

¹ €0.4 million (2018: €0.4 million) related to the audit of Parent company. Additionally, €0.1 million is payable to PwC Belfast in respect of the 2019 audit of NIE Networks (2018: €0.1 million). The audit of individual and Group financial statements includes the audit of subsidiary companies.

² Included in other non-audit services for financial year ended 2019 is €nil (2018: €0.4 million) in respect of permitted services under a contract awarded to PwC prior to their appointment as auditors.

NOTES TO THE FINANCIAL STATEMENTS

11. PROPERTY, PLANT & EQUIPMENT

GROUP	Land and buildings €m	Plant and machinery €m	Total assets in commission €m	Assets under construction €m	Total €m
Cost					
Balance at 1 January 2018	1,314.4	18,192.8	19,507.2	880.6	20,387.8
IFRS 15 transfer to deferred income	-	687.8	687.8	103.9	791.7
Restated balance at 1 January 2018	1,314.4	18,880.6	20,195.0	984.5	21,179.5
Additions	-	461.3	461.3	453.2	914.5
Retirements / disposals	(38.1)	(131.8)	(169.9)	(6.6)	(176.5)
Transfers out of assets under construction	20.2	175.9	196.1	(196.1)	-
Transfers from / (to) intangible assets	(0.4)	(3.9)	(4.3)	1.3	(3.0)
Other transfers	(79.0)	79.0	-	-	-
Translation differences	(0.1)	(43.2)	(43.3)	-	(43.3)
Balance at 31 December 2018	1,217.0	19,417.9	20,634.9	1,236.3	21,871.2
Balance at 1 January 2019	1,217.0	19,417.9	20,634.9	1,236.3	21,871.2
Additions	12.4	430.5	442.9	444.8	887.7
Retirements / disposals	(35.4)	(184.9)	(220.3)	-	(220.3)
Transfers out of assets under construction	25.6	288.9	314.5	(314.5)	-
Transfers from intangible assets	-	0.6	0.6	-	0.6
Translation differences	0.5	260.1	260.6	0.2	260.8
Balance at 31 December 2019	1,220.1	20,213.1	21,433.2	1,366.8	22,800.0
Depreciation					
Balance at 1 January 2018	769.3	9,613.5	10,382.8	-	10,382.8
IFRS 15 transfer to deferred income	-	58.4	58.4	-	58.4
Restated balance at 1 January 2018	769.3	9,671.9	10,441.2	-	10,441.2
Charge for the year	26.5	708.8	735.3	-	735.3
Retirements / disposals	(37.3)	(125.6)	(162.9)	-	(162.9)
Impairment	-	122.2	122.2	-	122.2
Transfers to intangible assets	(3.3)	(0.3)	(3.6)	-	(3.6)
Other transfers	(41.9)	41.9	-	-	-
Translation differences	-	(16.2)	(16.2)	-	(16.2)
Balance at 31 December 2018	713.3	10,402.7	11,116.0	-	11,116.0
Balance at 1 January 2019	713.3	10,402.7	11,116.0	-	11,116.0
Charge for the year	20.5	696.1	716.6	-	716.6
Retirements / disposals	(34.8)	(184.0)	(218.8)	-	(218.8)
Impairment	-	5.3	5.3	-	5.3
Translation differences	0.1	103.4	103.5	-	103.5
Balance at 31 December 2019	699.1	11,023.5	11,722.6	-	11,722.6
Net book value at 31 December 2019	521.0	9,189.6	9,710.6	1,366.8	11,077.4
Net book value at 31 December 2018	503.7	9,015.2	9,518.9	1,236.3	10,755.2
Net book value at 1 January 2018	545.1	8,579.3	9,124.4	880.6	10,005.0

NOTES TO THE FINANCIAL STATEMENTS

11. PROPERTY, PLANT & EQUIPMENT (continued)

During the year the Group capitalised interest of €27.5 million (2018: €25.4 million) in assets under construction, using an effective interest rate of 2.9% (2018: 3.6%).

The carrying value of non-depreciable assets (land) at 31 December 2019 is €94.4 million (2018: €89.9 million).

Property, plant and equipment with a net book value of €nil at 31 December 2019 is included above at a cost of €5,039.0 million (2018: €4,632.2 million).

Included in additions in 2018 is €55.6 million regarding assets acquired in relation to the acquisition of Castlepook Power DAC. See note 15 (c) - Group acquisitions for further details.

Retirements / disposals in both 2019 and 2018 primarily relate to the retirement of assets that have been fully depreciated.

Included within additions in 2019 is the capitalisation of an increase in the asset retirement provision for Generation and Trading and ESB Networks for €10.8 million (2018: €19.9 million). See note 27 for further details.

Due to the new accounting standard IFRS 15 becoming effective on 1 January 2018, supply contributions are now accounted for as deferred income and released to the income statement on a basis consistent with the depreciation policy of the underlying asset. Included in the transfers to deferred income are €791.7 million of gross supply contributions and accumulated amortisation of €58.4 million at 1 January 2018 which have been reclassified to deferred income.

Impairment charge

IAS 36 - Impairment of Assets stipulates that an impairment loss is the amount by which the carrying value of an asset exceeds its recoverable amount. Recoverable amount is the higher of its fair value less costs of disposal and its value in use. Value in use is calculated by taking the Net Present Value (NPV) of expected future cash flows from the asset discounted at an appropriate discount rate. Entities are required to conduct impairment tests where there is an indication of impairment of an asset. Lower forecast wholesale electricity margins in the new Integrated Single Electricity Market (I-SEM) is an indicator that has prompted impairment reviews on certain of the Group's generation assets at 31 December 2019.

An impairment review has been carried out on assets displaying indications of impairment by comparing the net present value of future cash flows to their net book value as at 31 December 2019 resulting in an impairment charge of €5.3 million (2018: €122.2 million).

A review of the I-SEM wind farm portfolios highlighted the requirement for an impairment charge of €5.3 million. The driver of the impairment charge is a reduction in market revenue. The real discount rate applied to the cash flows to determine the NPV was a pre-tax rate of 3.5%.

A review of a number of thermal generation assets in I-SEM and GB concluded an impairment charge of €nil (2018: €122.2 million). The real discount rates applied to the cash flows to determine the NPV were pre-tax rates of 6.2% and 6.1% respectively.

All forecast cash inflows for each asset and generation plant are based on the forecasted running profiles for the plants, regulatory support, forward prices for electricity, gas and carbon. The cash outflows reflect the forecast operating and capital expenditure plans based on the Board approved five-year business plans, and thereafter, on long-term production, cash flow forecasts and plant closure dates.

Refer to note 5 for further details on 2018 impairment charges.

NOTES TO THE FINANCIAL STATEMENTS

11. PROPERTY, PLANT & EQUIPMENT (continued)

PARENT	Land and buildings €m	Plant and machinery €m	Total assets in commission €m	Assets under construction €m	Total €m
Cost					
Balance at 1 January 2018	1,255.9	13,417.2	14,673.1	831.5	15,504.6
IFRS 15 transfer to deferred income	-	297.5	297.5	103.9	401.4
Restated balance at 1 January 2018	1,255.9	13,714.7	14,970.6	935.4	15,906.0
Additions	-	235.8	235.8	325.3	561.1
Retirements / disposals	(37.1)	(129.2)	(166.3)	(5.0)	(171.3)
Transfers out of assets under construction	19.6	141.8	161.4	(161.4)	-
Transfers from / (to) intangible assets	-	(4.4)	(4.4)	1.3	(3.1)
Other transfers	(51.5)	51.5	-	-	-
Balance at 31 December 2018	1,186.9	14,010.2	15,197.1	1,095.6	16,292.7
Balance at 1 January 2019	1,186.9	14,010.2	15,197.1	1,095.6	16,292.7
Additions	0.6	282.1	282.7	288.3	571.0
Retirements / disposals	(31.8)	(183.7)	(215.5)	-	(215.5)
Transfers out of assets under construction	25.5	275.0	300.5	(300.5)	-
Transfers from intangible assets	-	0.6	0.6	-	0.6
Other transfers	2.2	14.5	16.7	-	16.7
Balance at 31 December 2019	1,183.4	14,398.7	15,582.1	1,083.4	16,665.5
Depreciation					
Balance at 1 January 2018	742.7	7,935.8	8,678.5	-	8,678.5
IFRS 15 transfer to deferred income	-	18.6	18.6	-	18.6
Restated balance at 1 January 2018	742.7	7,954.4	8,697.1	-	8,697.1
Charge for the year	25.0	448.0	473.0	-	473.0
Retirements / disposals	(37.0)	(125.0)	(162.0)	-	(162.0)
Transfers to intangible assets	(3.3)	(0.4)	(3.7)	-	(3.7)
Impairment	-	87.3	87.3	-	87.3
Other transfers	(34.4)	34.4	-	-	-
Balance at 31 December 2018	693.0	8,398.7	9,091.7	-	9,091.7
Balance at 1 January 2019	693.0	8,398.7	9,091.7	-	9,091.7
Charge for the year	20.1	459.7	479.8	-	479.8
Retirements / disposals	(31.1)	(183.3)	(214.4)	-	(214.4)
Other transfers	-	8.3	8.3	-	8.3
Balance at 31 December 2019	682.0	8,683.4	9,365.4	-	9,365.4
Net book value at 31 December 2019	501.4	5,715.3	6,216.7	1,083.4	7,300.1
Net book value at 31 December 2018	493.9	5,611.5	6,105.4	1,095.6	7,201.0
Net book value at 1 January 2018	513.2	5,481.4	5,994.6	831.5	6,826.1

During the year the Parent capitalised interest of €20.7 million (2018: €24.1 million) in assets under construction, using an effective interest rate of 2.9% (2018: 4.5%).

The carrying value of non-depreciable assets (land) at 31 December 2019 is €77.8 million (2018: €85.3 million).

Property, plant and equipment with a net book value of €nil at 31 December 2019 are included above at a cost of €4,034.6 million (2018: €3,678.9 million).

Retirements / disposals in both 2019 and 2018 primarily relate to the retirement of assets that have been fully depreciated.

Due to the new accounting standard IFRS 15 becoming effective on 1 January 2018, supply contributions are now accounted for as deferred income and released to the income statement on a basis consistent with the depreciation policy of the underlying assets. Included in the transfers to deferred income are €401.4 million of gross supply contributions and accumulated amortisation of €18.6 million at 1 January 2018 which have been reclassified to deferred income.

Impairment charge

IAS 36 - Impairment of Assets stipulates that an impairment loss is the amount by which the carrying value of an asset exceeds its recoverable amount. Recoverable amount is the higher of its fair value less costs of disposal and its value in use. Value in use is calculated by taking the Net Present Value (NPV) of expected future cash flows from the asset discounted at an appropriate discount rate. Entities are required to conduct impairment tests where there is an indication of impairment of an asset. Lower forecast wholesale electricity margins in the new Integrated Single Electricity Market (I-SEM) is an indicator that has prompted impairment reviews on certain of the Group's generation assets at 31 December 2019.

An impairment review has been carried out on assets displaying indications of impairment by comparing the net present value of future cash flows using a pre-tax discount rate of 6.2% to their net book value as at 31 December 2019 resulting in a charge of €nil (2018: €87.3 million).

NOTES TO THE FINANCIAL STATEMENTS

11. PROPERTY, PLANT & EQUIPMENT (continued)

Impairment charge (continued)

All forecast cash inflows for each asset and generation plant are based on the forecasted running profiles for the plants, regulatory support, forward prices for electricity, gas and carbon. The cash outflows reflect the forecast operating and capital expenditure plans based on the Board approved five-year business plans, and thereafter, on long-term production, cash flow forecasts and plant closure dates.

Refer to note 5 for further details on 2018 impairment charges.

12. INTANGIBLE ASSETS

GROUP	Software and other intangible assets €m	Emission allowances & ROCs ¹ €m	Software under development €m	Total €m
Cost				
Balance at 1 January 2018	707.1	29.0	96.7	832.8
Software additions	6.3	-	96.0	102.3
Acquisitions	11.6	-	-	11.6
Purchase of allowances	-	118.2	-	118.2
Settlement of allowances	-	(59.5)	-	(59.5)
Software retirements	(88.8)	-	-	(88.8)
Transfers out of software under development	80.9	-	(80.9)	-
Transfers from / (to) property, plant and equipment	5.6	-	(2.6)	3.0
Translation differences	(1.7)	-	-	(1.7)
Balance at 31 December 2018	721.0	87.7	109.2	917.9
Balance at 1 January 2019	721.0	87.7	109.2	917.9
Software additions	3.4	-	105.7	109.1
Purchase of allowances	-	92.4	-	92.4
Settlement of allowances	-	(70.5)	-	(70.5)
Software retirements	(3.9)	-	-	(3.9)
Transfers out of software under development	45.5	-	(45.5)	-
Transfers from to property, plant and equipment	(0.6)	-	-	(0.6)
Translation differences	9.7	0.8	0.1	10.6
Balance at 31 December 2019	775.1	110.4	169.5	1,055.0
Amortisation				
Balance at 1 January 2018	557.1	-	-	557.1
Charge for the year	44.1	-	-	44.1
Retirements	(88.8)	-	-	(88.8)
Transfers from property, plant and equipment	3.6	-	-	3.6
Impairment	1.2	-	-	1.2
Translation differences	(1.1)	-	-	(1.1)
Balance at 31 December 2018	516.1	-	-	516.1
Balance at 1 January 2019	516.1	-	-	516.1
Charge for the year	70.9	-	-	70.9
Retirements	(3.9)	-	-	(3.9)
Impairment	6.6	-	-	6.6
Translation differences	7.2	-	-	7.2
Balance at 31 December 2019	596.9	-	-	596.9
Net book value at 31 December 2019	178.2	110.4	169.5	458.1
Net book value at 31 December 2018	204.9	87.7	109.2	401.8
Net book value at 1 January 2018	150.0	29.0	96.7	275.7

¹Emission allowances and Renewable Obligation Certificates (ROCs) are not amortised as they are held for settlement in the following year and therefore are current assets under IAS 1.

Acquisitions in 2018 relate to the purchase of Castlepook Power DAC. See note 15 (c) - Group acquisitions for further details.

Software assets include both internally developed and externally purchased assets with the majority being represented by internally developed assets.

Other intangibles include grid connections with a net book value of €6.1 million (2018: €10.8 million).

NOTES TO THE FINANCIAL STATEMENTS

12. INTANGIBLE ASSETS (continued)

Impairment

An impairment review has been carried out on assets displaying indications of impairment by comparing the net present value of future cash flows using a pre-tax discount rate of 3.5% to their net book value as at 31 December 2019 resulting in a charge of €6.6 million (2018: €1.2 million).

All forecast cash inflows for each asset are based on the forecasted running profiles for the asset, regulatory support and forward prices for electricity. The cash outflows reflect the forecast operating and capital expenditure plans based on the Board approved five-year business plans, and thereafter, on long-term production and cash flow forecasts.

Refer to note 5 for further details on 2018 impairment charges.

	Software and other intangible assets €m	Emission allowances €m	Software under development €m	Total €m
PARENT				
Cost				
Balance at 1 January 2018	545.5	29.1	87.4	662.0
Software additions	-	-	90.8	90.8
Purchase of emission allowances	-	89.3	-	89.3
Software retirements	(81.7)	-	-	(81.7)
Settlement of emission allowances	-	(36.6)	-	(36.6)
Transfers out of software under development	72.1	-	(72.1)	-
Transfers from / (to) property, plant and equipment	4.5	-	(1.4)	3.1
Other transfers	1.3	-	-	1.3
Balance at 31 December 2018	541.7	81.8	104.7	728.2
Balance at 1 January 2019	541.7	81.8	104.7	728.2
Software additions	-	-	101.8	101.8
Purchase of emission allowances	-	71.8	-	71.8
Software retirements	(2.6)	-	-	(2.6)
Settlement of emission allowances	-	(46.2)	-	(46.2)
Transfers out of software under development	40.4	-	(40.4)	-
Transfers from to property, plant and equipment	(0.6)	-	-	(0.6)
Other transfers	1.6	-	-	1.6
Balance at 31 December 2019	580.5	107.4	166.1	854.0
Amortisation				
Balance at 1 January 2018	442.4	-	-	442.4
Charge for the year	37.0	-	-	37.0
Retirements	(81.7)	-	-	(81.7)
Transfers from property, plant and equipment	3.7	-	-	3.7
Balance at 31 December 2018	401.4	-	-	401.4
Balance at 1 January 2019	401.4	-	-	401.4
Charge for the year	51.6	-	-	51.6
Retirements / disposals	(2.6)	-	-	(2.6)
Other transfers	1.6	-	-	1.6
Balance at 31 December 2019	452.0	-	-	452.0
Net book value at 31 December 2019	128.5	107.4	166.1	402.0
Net book value at 31 December 2018	140.3	81.8	104.7	326.8
Net book value at 1 January 2018	103.1	29.1	87.4	219.6

Emission allowances are not amortised as they are held for settlement in the following year and therefore are current assets under IAS 1.

Software assets include both internally developed and externally purchased assets with the majority being represented by internally developed assets.

Other intangible assets include grid connections with a net book value of €1.9 million (2018: €6.6 million).

NOTES TO THE FINANCIAL STATEMENTS

13. RIGHT OF USE ASSETS AND LEASE LIABILITIES

GROUP

(a) Amounts recognised in the balance sheet

	Land and buildings €m	Motor vehicles €m	Total €m
Right of use assets			
Balance at 1 January 2019	127.6	5.3	132.9
Additions	8.3	2.9	11.2
Depreciation	(16.2)	(2.5)	(18.7)
Remeasurement of RoU Assets	6.5	-	6.5
Translation differences	1.2	0.2	1.4
Balance at 31 December 2019	127.4	5.9	133.3
Lease liabilities			
Balance at 1 January 2019			(132.9)
Additions			(11.2)
Interest expense			(2.0)
Effect of modification of lease liability			(3.2)
Lease payments ¹			18.6
Translation differences			(1.3)
Balance at 31 December 2019			(132.0)
Analysed as follows:			
Non-current liabilities			(112.4)
Current liabilities			(19.6)
Total			(132.0)

¹Lease payments include principal elements shown as financing activities of €16.6 million.

(b) Other amounts recognised in the statement of profit or loss

	2019 €m
Expenses relating to short-term leases	1.4
Expenses relating to low-value assets that are not short-term leases	0.1
Expenses relating to variable lease payments not included in lease liabilities	2.0
Total	3.5

Payments associated with short-term leases and leases of low-value assets are recognised on a straight-line basis as an expense in profit or loss. Short-term leases are leases with a lease term of 12 months or less.

NOTES TO THE FINANCIAL STATEMENTS

13. RIGHT OF USE ASSETS AND LEASE LIABILITIES (continued)

PARENT

(a) Amounts recognised in the balance sheet

	Land and buildings €m
Right of use assets	
Balance at 1 January 2019	77.6
Additions	3.1
Depreciation	(12.3)
Remeasurement of RoU Assets	4.8
Balance at 31 December 2019	73.2
Lease liabilities	
	Total €m
Balance at 1 January 2019	(77.6)
Additions	(3.1)
Interest expense	(0.8)
Effect of modification of lease liability	(1.9)
Lease payments ¹	11.7
Balance at 31 December 2019	(71.7)
Analysed as follows:	
Non-current liabilities	(58.9)
Current liabilities	(12.8)
Total	(71.7)

¹Lease payments include principal elements shown as financing activities of €11.0 million.

(b) Other amounts recognised in the statement of profit or loss

	2019 €m
Expenses relating to short-term leases	0.8
Expenses relating to low-value assets that are not short-term leases	0.1
Expenses relating to variable lease payments not included in lease liabilities	0.2
Total	1.1

Payments associated with short-term leases and leases of low-value assets are recognised on a straight-line basis as an expense in profit or loss. Short-term leases are leases with a lease term of 12 months or less.

NOTES TO THE FINANCIAL STATEMENTS

14. GOODWILL

	€m
Balance at 1 January 2018	171.0
Translation differences	(1.4)
Balance at 31 December 2018	169.6
Balance at 1 January 2019	169.6
Translation differences	8.7
Balance at 31 December 2019	178.3

Goodwill was recognised on the acquisition of Northern Ireland Electricity Networks (NIE Networks) in December 2010. Goodwill is reviewed annually in December for impairment, by assessing the recoverable amount of the investment, based on its value in use.

The annual impairment test of goodwill was carried out in December 2019 in accordance with IAS 36. No reduction in the value of goodwill was deemed to be required.

The Group calculates the value in use using a 20-year discounted cash flow model and a terminal value based on the Regulated Asset Base (RAB), corresponding to the expected useful life of the underlying asset base. The future cash flows are adjusted for risks specific to the investment and are discounted using a post-tax discount rate of 5.6% (2018: 5.6%).

Key drivers of the discounted cash flow include inflation and regulatory assumptions. Inflation rates used were sourced from the UK Office of Budget Responsibility and Bloomberg and a long-term rate of 3.08% (2018: 3.0%) was applied. Assumptions in relation to regulatory return and capital expenditure are made by reference to previous regulatory decisions for NIE Networks. The discount rate used is also a key driver for valuation and the rate was determined by building up an appropriate Weighted Average Cost of Capital (WACC) for the NIE Networks business.

Key drivers also include expectations of future levels of capital spend and the allowed return on the RAB. Both are agreed with the Utility Regulator in Northern Ireland (NIAUR) as part of the Regulatory Price Reviews, the most recent of which, RP6, was published on 30 June 2017.

NOTES TO THE FINANCIAL STATEMENTS

15. FINANCIAL ASSET INVESTMENTS AT FAIR VALUE THROUGH PROFIT OR LOSS AND EQUITY ACCOUNTED INVESTEEES

(a) GROUP	Equity accounted investees €m	Financial assets at fair value through profit or loss €m	Total €m
Balance at 1 January 2018	68.3	22.2	90.5
Additions	135.2	1.3	136.5
Share of loss (net)	(14.0)	-	(14.0)
Fair value movement on cash flow hedges	1.7	-	1.7
Fair value movement through profit or loss (note 6)	3.1	(12.0)	(8.9)
Repayments	-	(1.0)	(1.0)
Impairments	(2.8)	-	(2.8)
Translation differences	(1.7)	-	(1.7)
Balance at 31 December 2018	189.8	10.5	200.3
Balance at 1 January 2019	189.8	10.5	200.3
Additions	242.9	2.9	245.8
Share of loss (net)	(8.3)	-	(8.3)
Fair value movement on cash flow hedges	(3.2)	-	(3.2)
Dividends received	(13.7)	-	(13.7)
Translation differences	6.0	-	6.0
Balance at 31 December 2019	413.5	13.4	426.9

Castlepeak Power DAC became a 100% subsidiary undertaking in 2018 from the purchase of the remaining 50% of shares from the joint venture partner Coillte Teoranta. The carrying value of the Group's investment in Castlepeak Power DAC at the date of full acquisition was €nil. The details of this acquisition are included in the disclosures in section (c) of this note.

Equity accounted investees

The fair value movement on cash flow hedges for equity accounted investees relates to derivatives held in Aldeburgh Offshore Wind Holdings Limited and Raheenleagh Power DAC which have been designated as cash flow hedging relationships in these entities.

Translation differences for equity accounted investees relate to Aldeburgh Offshore Wind Holdings Limited and NNG Windfarm Holdings Limited as these companies' functional currency is sterling.

Interests in equity accounted investees

Name of the company	Country	Holding 2019 % of share capital owned	Holding 2018 % of share capital owned
NNG Windfarm Holdings Limited	Great Britain	50	0
Aldeburgh Offshore Wind Holdings Limited	Great Britain	50	50
SIRO Limited	Republic of Ireland	50	50
Tilbury Green Power Holdings Limited	Great Britain	47	47
Raheenleagh Power DAC	Republic of Ireland	50	50
Oweninny Power DAC	Republic of Ireland	50	50
Emerald Bridge Fibres DAC	Republic of Ireland	50	50
Terra Solar Limited	Republic of Ireland	25	25
Kingspan ESB Limited	Great Britain	50	50

NNG Windfarm Holdings Limited (Near na Gaoithe)

During the year ended 31 December 2019, the Group acquired a 50% stake in NNG Windfarm Holdings Limited (NNGWH), a joint arrangement with EDF Renewables UK Limited. The amount invested to date is €242.7 million.

NNGWH owns 100% of Near na Gaoithe Offshore Wind Limited (NNGOW). The purpose of this joint arrangement is to develop a 448 MW wind farm off the east coast of Scotland. The 50% investment in NNGWH indirectly provides ESB with a 50% stake in NNGOW.

NNGWH is legally separated from the parties and the legal form and the contractual arrangement do not give the parties direct rights to the assets and liabilities of the vehicle. Having assessed the investment in NNGWH, ESB have concluded that they have joint control under IFRS 10 and IFRS 11. Accordingly, ESB's 50% investment in NNGWH is equity accounted in line with IAS 28.

The Group's share of capital commitments at 31 December 2019 amounts to €352.6 million (2018: €nil).

NOTES TO THE FINANCIAL STATEMENTS

15. FINANCIAL ASSET INVESTMENTS AT FAIR VALUE THROUGH PROFIT OR LOSS AND EQUITY ACCOUNTED INVESTEEES (continued)

Aldeburgh Offshore Wind Holdings Limited (AOWHL)

In March 2018 the Group acquired 50% of the issued share capital of AOWHL. The Group also acquired 50% of the loan notes issued by Aldeburgh Offshore Wind Investments Limited (AOWIL) a 100% owned subsidiary of AOWHL from Macquarie Corporate Holdings Pty Limited to become a 50% Joint Venture Partner with Sumitomo Corporation Europe Limited. The amount invested by ESB to date amounts to €126.8 million, all of which was advanced as equity. The shareholder loans were repaid in full in January 2019.

AOWHL has a 25% stake in the Galloper Wind Farm project. The Galloper project is a 353 MW development located in the Outer Thames estuary, 30km off the coast of Suffolk, England. The 50% investment in AOWHL indirectly provides ESB with a 12.5% stake in the Galloper project.

AOWHL is legally separated from the parties and the legal form and the contractual arrangement do not give the parties direct rights to the assets and liabilities of the vehicle. Having assessed the investment in AOWHL/AOWIL ESB have concluded that they have joint control under IFRS 10 and IFRS 11. Accordingly, ESB's 50% investment in AOWHL/AOWIL is equity accounted in line with IAS 28.

SIRO Limited (SIRO)

SIRO is an unlisted joint arrangement in which the Group has joint control and a 50% ownership interest. SIRO was founded by the Group with Vodafone Ireland Limited acquiring a 50% stake in November 2014.

Vodafone's acquisition of shares in SIRO was pursuant to a Joint Venture Arrangement (JVA) concluded between both parties.

SIRO is structured as a separate vehicle, is jointly controlled by the Group and Vodafone Ireland Limited, and the Group has a residual interest in the net assets of the Company. Accordingly, the Group has classified its interest in SIRO as an equity accounted investee. ESB has committed to provide capital funding to SIRO of €93.0 million, of which €93.0 million has been advanced as a short-term shareholder loan to date. The Group's share of capital commitments at 31 December 2019 amounts to €37.5 million (2018: €47.1 million).

The Group has guaranteed 50% of the drawings on a €200.0 million loan facility of SIRO, the amount drawn down at 31 December 2019 is €123.0 million (Group share: €61.5 million). (2018: €28.0 million (Group share: €14.0 million)).

Tilbury Green Power Holdings Limited (Tilbury)

The Group is a 47% partner in Tilbury, a joint arrangement formed with Green Investment Bank (47%) and Scandinavian equipment suppliers BWSC and AET (6%). The purpose of this joint arrangement is to construct and operate a waste wood to energy plant in Great Britain.

The amount invested in Tilbury to date amounts to €nil (after impairment). Interest on borrowings receivable from Tilbury amount to €nil (2018: €nil). Loans to Tilbury were impaired by €51.9 million at 31 December 2019 (2018: €17.5 million) in relation to outstanding loans and accrued interest.

Tilbury is legally separated from the parties and the legal form and the contractual arrangement do not give the parties direct rights to the assets and liabilities of the vehicle. Accordingly, the Group has classified its interest in Tilbury as an equity accounted investee as both parties have a residual interest in the net assets of the arrangement.

The Group has entered into a 15-year arrangement with Tilbury to purchase physical power and renewable obligation certificates from the plant. Payments made under this contract are contingent upon actual production.

Raheenleagh Power DAC (Raheenleagh)

The Group is a 50% partner in Raheenleagh, a joint arrangement with GR Wind Farms 1 Limited. This joint arrangement operates a 35 MW wind farm in Co. Wicklow. The amount invested in Raheenleagh to date amounts to €3.3 million of which €3.1 million was advanced as equity and €0.2 million as shareholder loans.

Raheenleagh is legally separated from the parties and the legal form and the contractual arrangement do not give the parties direct rights to the assets and liabilities of the vehicle. Accordingly, the Group has classified its interest in Raheenleagh as an equity accounted investee as both parties have a residual interest in the net assets of the arrangement.

The Group entered into a 15-year arrangement with Raheenleagh in 2015 to purchase physical power from the wind farm. Payments made under this contract are based upon actual production.

Raheenleagh reached commercial operation in 2016.

Oweninny Power DAC (Oweninny)

The Group is a 50% partner in Oweninny, a joint arrangement formed with Bord na Móna. The purpose of this joint arrangement is to develop a 172 MW wind farm located in Bellacorrick, Co. Mayo. As at 31 December 2019 the amount invested in Oweninny as a shareholder loan amounts to €12.2 million. Interest on borrowings receivable to date from Oweninny amounts to €1.4 million (2018: €1.1 million). The Group's share of capital commitments at 31 December 2019 amounts to €7.5 million (2018: €38.6 million).

Investment in Oweninny was held at €nil at 31 December 2019 (2018: €nil).

Oweninny reached commercial operation in November 2019.

Emerald Bridge Fibres DAC (EBFD)

The Group is a 50% partner in EBFD, a joint arrangement with ZAYO Group. The purpose of this joint arrangement is the development and provision of telecommunication infrastructure between Ireland and the United Kingdom in the form of a subsea fibre optic cable network. The amount invested in EBFD to date amounts to €6.2 million of which €2.5 million was advanced as equity and €3.7 million as shareholder loans. Loans and interest on borrowings receivable from EBFD were impaired by €5.7 million at 31 December 2019 (2018: €5.5 million).

Investment in EBFD was held at €nil at 31 December 2019 (2018: €nil).

Terra Solar Limited

During the year ended 31 December 2016, the Group invested €2.5 million in Terra Solar Limited for a 25% equity shareholding in the company. Terra Solar Limited is a developer of ground mounted solar parks. This investment is classified as an associate and is accounted for using the equity method. ESB's investment in Terra Solar was impaired by €1.8 million at 31 December 2019 (2018: €1.8 million).

Please refer to note 30 for further information regarding transactions with equity accounted investees for the years ended 31 December 2019 and 2018.

NOTES TO THE FINANCIAL STATEMENTS

15. FINANCIAL ASSET INVESTMENTS AT FAIR VALUE THROUGH PROFIT OR LOSS AND EQUITY ACCOUNTED INVESTEEES (continued)

The Group's aggregate share of the non-current assets, current assets, non-current liabilities, current liabilities, income and expenses related to its interests in these joint ventures are as follows:

Summarised income statement ¹	NNG Windfarm Holdings Limited		Aldeburgh Offshore Wind Holdings Limited		SIRO Limited		Tilbury Green Power Holdings Limited		Other equity accounted investees ⁴	
	2019 €m	2018 €m	2019 €m	2018 €m	2019 €m	2018 €m	2019 €m	2018 €m	2019 €m	2018 €m
Revenue	-	-	-	-	15.0	8.0	15.7	-	11.9	9.5
Depreciation	-	-	-	-	(23.0)	(17.4)	(9.3)	-	(2.1)	(3.8)
Interest income / (interest paid)	-	-	(0.4)	-	(1.9)	(0.9)	(14.0)	-	(3.0)	(3.3)
Income tax	-	-	0.2	0.1	5.5	5.0	-	-	0.1	0.1
Total gain / (loss)	-	-	10.5	7.6	(25.1)	(26.0)	(61.5)	(24.6)	1.9	(0.9)
Group share of (loss) / gain	-	-	5.3	3.8	(12.6)	(13.0)	(28.9)	(11.5)	0.8	0.5
Other adjustments ²	-	-	(1.7)	-	-	-	28.9	8.0	(0.1)	(0.3)
Group share of fair value movements on cash flow hedges	-	-	(2.7)	(1.5)	-	-	-	-	(0.5)	-
Total comprehensive (loss) / gain	-	-	0.9	2.3	(12.6)	(13.0)	-	(3.5)	0.2	0.2
Summarised balance sheet	2019 €m	2018 €m	2019 €m	2018 €m	2019 €m	2018 €m	2019 €m	2018 €m	2019 €m	2018 €m
Cash	49.9	-	2.7	-	3.5	27.7	5.5	14.9	14.4	10.8
Current assets	148.1	-	-	9.0	6.4	16.4	8.0	35.5	8.3	3.9
Non-current assets	1,092.7	-	43.2	116.6	419.3	312.5	190.7	197.4	202.2	134.2
Current liabilities	(16.3)	-	(3.5)	(12.9)	(226.6)	(255.8)	(23.1)	(22.3)	(21.1)	(7.6)
Non-current liabilities	(1,257.1)	-	-	(51.1)	(127.4)	(0.6)	(263.7)	(246.6)	(223.5)	(144.4)
Net assets / (liabilities)	17.3	-	42.4	61.6	75.2	100.2	(82.6)	(21.1)	(19.7)	(3.1)

Reconciliation of the above amounts to the investment recognised in the consolidated balance sheet.

Group equity interest	50%	50%	50%	50%	50%	50%	47%	47%		
Net assets / (liabilities)	17.3	-	42.4	61.6	75.2	100.2	(82.6)	(21.1)	(19.7)	(3.1)
Group share	8.7	-	21.2	30.8	37.6	50.1	(38.9)	(9.9)	(10.6)	(2.9)
Other adjustments ³	234.0	-	101.7	98.9	6.0	6.0	38.9	9.9	14.9	6.8
Carrying value of Group's equity interest	242.7	-	122.9	129.7	43.6	56.2	-	-	4.3	3.9

¹The numbers included in the above table are based on unaudited management accounts. When audited financial statements become available, any adjustments are reflected in the following year.

²Where the Group's share of losses of an associate or joint venture equals or exceeds its interest in the associate or joint venture, the Group discontinues recognising its share of further losses unless there is legal or constructive obligation to recognise further losses. Unrecognised losses in 2019 include Tilbury Green Power Limited of €28.9 million (cumulative unrecognised losses to date of €38.9 million); Oweninny Power DAC of €nil (cumulative unrecognised losses to date of €1.6 million); Emerald Bridge Fibres DAC of €0.3 million (cumulative unrecognised losses to date of €0.3 million) and Kingspan ESB Limited of €nil (cumulative unrecognised losses to date of €0.3 million).

³Other adjustments represent the difference between the carrying value of the Group's share of the net assets acquired and the investment amount.

⁴Other equity accounted investees¹ includes ESB's 50% share in Emerald Bridge Fibres DAC, Kingspan ESB DAC, Raheenleagh Power DAC, Oweninny Power DAC and 25% share in Terra Solar Limited.

Interest in financial assets held at fair value through profit and loss

The Group owns a venture capital fund, ESB Novusmodus Limited Partnership, in which seed capital is invested into emerging technology entities. These investments are managed purely for an investment return and are consequently carried at fair value through the income statement. No financial assets held at fair value through profit or loss are controlled by ESB. The investments comprise of a number of clean energy and new technology companies. These investments have been fair valued at the year end and the movement is reflected in the income statement. The fair value movements in 2018 primarily relate to adjustments to the value of certain investments in the fund.

During the year, the Group invested €2.4 million for a 5% share in Oriol Windfarm Limited. This investment is accounted under fair value as a financial asset investment in line with IFRS 9.

NOTES TO THE FINANCIAL STATEMENTS

15. FINANCIAL ASSET INVESTMENTS AT FAIR VALUE THROUGH PROFIT OR LOSS AND EQUITY ACCOUNTED INVESTEEES (continued)

(b) PARENT

	Equity accounted investees €m	Subsidiary undertakings €m
Balance at 1 January 2018	100.0	61.8
Additions	6.5	-
Balance at 31 December 2018	106.5	61.8
Balance at 1 January 2019	106.5	61.8
Balance at 31 December 2019	106.5	61.8

(c) GROUP ACQUISITIONS

On 20 December 2018 the Group completed the acquisition of the remaining 50% shareholding in Castlepeak Power DAC, an Irish based wind farm.

The acquisition was completed in order to acquire the wind farm following the decision by Coillte Teoranta to dispose of their 50% shareholding.

The details of the assets and liabilities recognised as a result of the acquisition are as follows:

	€m
Property, plant and equipment	55.6
Intangible assets	11.6
Cash and cash equivalents	-
Trade and other receivables	0.8
Deferred tax liabilities	(1.3)
External borrowings	(44.9)
Financial instruments	(1.5)
Trade and other payables	(2.7)
Asset retirement provision	(1.1)
Net identifiable assets and liabilities	16.5
Fair value of the Group's previously held 50% interest in Castlepeak Power DAC at the acquisition date	4.7
Cash consideration paid - equity	4.7
Cash consideration paid - repayment of Coillte Teoranta shareholder loan	7.1
Total deemed purchase consideration	16.5

The assets and liabilities acquired as set out above were reflected in the Group financial statements at their fair value on acquisition.

In order to account for the acquisition, the Group completed an exercise to fair value its interest in Castlepeak Power DAC as at 20 December 2018. The acquisition gave rise to a €4.7 million gain, which is included within other operating income (see note 6).

Purchase consideration - cash outflow	€m
Outflow of cash to acquire subsidiary, net of cash acquired	(4.7)
Cash consideration paid - equity	(7.1)
Cash consideration paid - repayment of Coillte Teoranta shareholder loan	(7.1)
Less balances acquired:	-
Cash and cash equivalents	-
Net outflow of cash - investing activities	(11.8)

NOTES TO THE FINANCIAL STATEMENTS

16. INVENTORIES

	GROUP		PARENT	
	2019 €m	2018 €m	2019 €m	2018 €m
Materials	33.4	39.8	12.7	19.6
Fuel	48.8	59.5	41.3	52.0
Construction work in progress	68.8	34.7	-	-
Total	151.0	134.0	54.0	71.6

Inventories consumed during the year ended 31 December 2019 totalled €57.6 million (2018: €95.7 million). Provision for impairments recognised during the year was €9.2 million (2018: €3.2 million).

Construction work in progress includes property assets which are being constructed for resale and stated at the lower of cost and net realisable value.

17. TRADE AND OTHER RECEIVABLES

	GROUP		PARENT	
	2019 €m	2018 €m	2019 €m	2018 €m
Current receivables:				
Retail electricity receivables - billed	70.6	58.6	41.6	45.3
Retail electricity receivables - unbilled	212.8	200.7	137.2	132.7
Total retail electricity receivables	283.4	259.3	178.8	178.0
I-SEM / SEM pool related receivables	26.0	14.8	21.6	10.3
Use of System receivables (including unbilled)	235.0	217.4	48.4	44.1
Other electricity receivables	27.8	13.5	-	0.9
Total electricity receivables	572.2	505.0	248.8	233.3
Trade receivables - non-electricity	286.9	111.8	243.8	78.5
Amounts due from equity accounted investees	111.8	141.4	97.2	96.4
Other receivables	58.8	94.5	21.7	15.5
Amounts due from subsidiary undertakings	-	-	3,065.3	2,937.4
Prepayments	75.4	89.6	14.4	37.5
Total	1,105.1	942.3	3,691.2	3,398.6

	GROUP		PARENT	
	2019 €m	2018 €m	2019 €m	2018 €m
Non-current receivables:				
Trade receivables - non-electricity	-	-	-	-
Amounts due from equity accounted investees	12.4	47.2	-	-
Total non-current receivables	12.4	47.2	-	-
Total receivables	1,117.5	989.5	3,691.2	3,398.6

Wholesale and retail credit risk

Trade and other receivables can be divided into final retail electricity customers (billed and unbilled), I-SEM pool related receivables, Use of System receivables, other (non-electricity) receivables, equity accounted investees and amounts due from subsidiary undertakings.

Expected credit loss allowance

Under IFRS 9 an expected credit loss (ECL) impairment model is in place for the calculation of impairment loss allowances. Under this impairment model, it is assumed that all receivables carry a risk of default. This impairment model is used to calculate the probability of default at a range of possible outcomes, weighted by the probability of their occurrence. These ECLs are measured under the general approach or simplified approach.

The simplified approach is applied to ESB's trade and other receivables within the scope of IFRS 15. Under the simplified approach, an entity will recognise a loss based on the lifetime ECLs. It allows an entity to use a provision matrix for calculating the ECLs. This matrix considers the historical default rates over the expected life of the trade receivable and is adjusted for forward-looking estimates.

NOTES TO THE FINANCIAL STATEMENTS

17. TRADE AND OTHER RECEIVABLES (continued)

The general approach is applied to the Group's shareholder loans advanced to equity accounted investees. Under the general approach, an entity must determine whether the financial asset is in one of three stages in order to determine the amount of ECL to recognise;

Stage 1 is where credit risk has not increased significantly since initial recognition. For financial assets in stage 1, entities are required to recognise 12 month ECL and recognise interest income on a gross basis – this means that interest will be calculated on the gross carrying amount of the financial asset before adjusting for ECL.

Stage 2 is where credit risk has increased significantly since initial recognition. When a financial asset transfers to stage 2 entities are required to recognise lifetime ECL but interest income will continue to be recognised on a gross basis.

Stage 3 is where the financial asset is credit impaired. This is effectively the point at which there has been an incurred loss event. For financial assets in stage 3, entities will continue to recognise lifetime ECL but they will now recognise interest income on a net basis. This means that interest income will be calculated based on the gross carrying amount of the financial asset less ECL.

The general approach applies to all loans and receivables not eligible for application of the simplified approach, which for the Group are primarily loans to equity accounted investees and for Parent also includes amounts due from subsidiary undertakings. Assessment of the probability of default for loans to equity accounted investees is included below. For further details of these loans see note 15.

The maximum credit exposure of the Group at 31 December 2019 and 31 December 2018 is set out on the following tables. In the case of the Parent company balances stated in the following tables also exclude amounts due from subsidiary undertakings of €3,065.3 million (2018: €2,937.4 million).

Simplified approach - Expected Credit Losses

	2019*			2018*		
	Gross amount receivable €m	GROUP Loss allowance €m	Net amount receivable €m	Gross amount receivable €m	PARENT Loss allowance €m	Net amount receivable €m
Not past due receivables	547.9	(4.3)	543.6	229.5	(2.8)	226.7
Past due < 30 days	321.5	(2.7)	318.8	265.9	(2.3)	263.6
Past due 30 - 120 days	22.4	(5.0)	17.4	11.3	(4.1)	7.2
Past due > 120 days	37.7	(11.0)	26.7	19.2	(9.0)	10.2
Past due by more than one year	29.4	(18.0)	11.4	19.4	(12.8)	6.6
Total	958.9	(41.0)	917.9	545.3	(31.0)	514.3

	2018*			2018*		
	Gross amount receivable €m	GROUP Loss allowance €m	Net amount receivable €m	Gross amount receivable €m	PARENT Loss allowance €m	Net amount receivable €m
Not past due remaining receivables	534.4	(3.2)	531.2	212.9	(2.4)	210.5
Past due < 30 days	152.8	(3.0)	149.8	94.3	(2.8)	91.5
Past due 30 - 120 days	21.6	(5.4)	16.2	13.9	(4.6)	9.3
Past due > 120 days	28.2	(11.2)	17.0	23.4	(10.6)	12.8
Past due by more than one year	24.8	(17.0)	7.8	15.3	(12.1)	3.2
Total	761.8	(39.8)	722.0	359.8	(32.5)	327.3

*Included in the above are amounts due from equity accounted investees at 31 December 2019 of €8.3 million (2018: €10.7 million) in respect of normal trading activities.

NOTES TO THE FINANCIAL STATEMENTS

17. TRADE AND OTHER RECEIVABLES (continued)

General approach - Expected Credit Losses

	GROUP			PARENT		
	2019	2019	2019	2019	2019	2019
	Gross amount receivable	Loss allowance	Net amount receivable	Gross amount receivable	Loss allowance	Net amount receivable
	€m	€m	€m	€m	€m	€m
Stage 1 - 12 Month ECL (not credit impaired)	124.2	-	124.2	97.2	-	97.2
Stage 2 - Lifetime ECL (not credit impaired)	-	-	-	-	-	-
Stage 3 - Lifetime ECL (credit impaired)	51.9	(51.9)	-	-	-	-
Total	176.1	(51.9)	124.2	97.2	-	97.2

	GROUP			PARENT		
	2018	2018	2018	2018	2018	2018
	Gross amount receivable	Loss allowance	Net amount receivable	Gross amount receivable	Loss allowance	Net amount receivable
	€m	€m	€m	€m	€m	€m
Stage 1 - 12 Month ECL (not credit impaired)	144.6	-	144.6	96.4	-	96.4
Stage 2 - Lifetime ECL (not credit impaired)	-	-	-	-	-	-
Stage 3 - Lifetime ECL (credit impaired)	50.8	(17.5)	33.3	-	-	-
Total	195.4	(17.5)	177.9	96.4	-	96.4

Expected Credit Losses Reconciliation	GROUP		PARENT	
	2019	2018	2019	2018
	€m	€m	€m	€m
Simplified approach	917.9	722.0	514.3	327.3
General approach	124.2	177.9	97.2	96.4
Prepayments ¹	75.4	89.6	14.4	37.5
Amounts due from subsidiary undertakings	-	-	3,065.3	2,937.4
Total	1,117.5	989.5	3,691.2	3,398.6

¹Prepayments are excluded from the analysis as no credit exposure is perceived in relation to this balance.

PARENT

Amounts due from subsidiary undertakings

At 31 December 2019, the Parent company had balances receivable of €3,065.3 million (2018: €2,937.4 million) from its subsidiaries. These receivables mainly relate to management services and loans to subsidiaries as well as electricity charges including Use of System charges. Total provision in respect of amounts due from subsidiary undertakings at 31 December 2019 is €396.5 million (2018: €365.3 million).

The impairment loss recognised in the Parent company in respect of amounts due from subsidiary undertakings has been calculated using expected credit loss model as required by IFRS 9. In determining the impairment loss, amounts due from subsidiaries were classified as either amounts repayable on demand, low credit risk receivables or amounts for which there has been a substantial increase in credit risk since initial recognition. In determining the expected credit loss (including probability of default and loss given default), regard was given to the historic performance of the relevant loan as well as forward looking information for the relevant subsidiary including detailed discounted cash flow forecasts. For repayable on demand loans where the loan could not be repaid at the reporting date, expected credit losses were calculated by considering the likely recovery strategies of the Parent company, including consideration of 'repay over time' strategies. For loans with a substantial increase in credit risk, consideration was given to the future activities and cash flows of the subsidiary and life time expected credit losses were recognised accordingly where appropriate.

Movement in the expected credit loss of trade and other receivables

The loss allowances for financial assets are based on assumptions about risk of default and expected loss rates. The Group uses judgement in making these assumptions and selecting the inputs to the expected credit loss calculations, based on the Group's past history, existing market conditions as well as forward looking estimates at the end of each reporting period. The movement in the expected credit loss in respect of trade receivables during the year was as follows:

	GROUP		PARENT	
	2019	2018	2019	2018
	€m	€m	€m	€m
Balance at 1 January	39.8	38.9	32.4	32.0
Impairment loss recognised (net)	11.8	10.4	8.3	9.8
Bad debts recovered	(0.7)	-	-	-
Provision utilised	(9.9)	(9.5)	(9.7)	(9.4)
Balance at 31 December	41.0	39.8	31.0	32.4

NOTES TO THE FINANCIAL STATEMENTS

17. TRADE AND OTHER RECEIVABLES (continued)

Amounts due from equity accounted investees

Amounts due from equity accounted investees include shareholder loans, interest on these loans and trade receivable balances. Trade receivable balances from equity accounted investees are assessed for probability of default using the simplified approach under IFRS 9. All other balances due from equity accounted investees are assessed for probability of default using the general approach. In applying the general approach, the Group has used judgement in making assumptions and selecting the inputs to the expected credit loss calculation based on market conditions as well as forward looking estimates at the end of the reporting period. The Group has no purchased credit impaired loans.

Following the assessment of the carrying value of all ESB's shareholder loans advanced to equity accounted investees, it was determined that there was an increase in the credit risk of loans to one of ESB's equity accounted investees since initial recognition; Tilbury Green Power Holdings Limited (TGPHL). The assessment on the amount due from TGPHL was based on the expected available cash flows, and discounted cash flows at the effective rate of interest on this shareholder loan, in line with the requirements of IFRS 9. As a result, this loan was accounted for as a stage 3 (credit impaired) asset and expected credit losses of €34.4 million (2018: €17.5 million) in relation to TGPHL, and €nil (2018: €1.6 million) in relation to EBFD are recognised in the income statement. Both TGPHL and EBFD shareholder loans are fully impaired at 31 December 2019.

The remaining shareholder loans to equity accounted investees are assessed as stage 1 (not credit impaired) financial assets. The 12 month expected credit loss approach has been applied to the stage 1 loans consisting of analysis on both historical and forward looking qualitative and quantitative information to determine the credit risk. These loans are deemed to be of low credit risk given no indications of an increase in credit risk since initial recognition. As a result, no expected credit loss has been recognised in relation to these loans. The total amount of undiscounted expected credit losses at initial recognition on financial assets that were initially purchased or originated credit-impaired during the year ended 31 December 2019 is €nil (2018: €nil).

Retail electricity receivables

Retail electricity receivables which includes electricity and gas customers relate to both residential and business customers. The credit risk on electricity accounts is managed through the ongoing monitoring of debtor days, putting in place appropriate collateral and a collection policy based on the credit worthiness, size and duration of debt. The concentration of risk in Customer Solutions is in relation to retail electricity accounts that have closed in arrears. In addition, given the continuing increase in competition, certain customers may switch suppliers before they have settled their outstanding balances. These accounts are managed within the Group's debt collection policy by a combination of internal debt follow-up, the use of debt collection agencies and legal action where necessary including the obtaining of publication of judgements.

Providing for future expected losses in relation to retail electricity receivables, including both billed and unbilled, is based on analysis of recent debt performance and an evaluation of the impact of economic conditions and particular industry issues. An additional provision may be made on a portfolio basis to cover additional anticipated losses. Collateral is held in the form of security deposits on new customer accounts not on direct debit arrangements.

Controls around electricity receivables are focused on the full recovery of amounts invoiced. Electricity receivables to the value of €41.0 million (2018: €39.8 million) were provided for at year end. The single largest customer amount written off during the year was €31,000 (2018: €48,000) relating to a customer that went into liquidation. Retail electricity receivables arise largely in the Republic of Ireland (ROI), with 12% (2018: 10%) relating to Northern Ireland (NI) revenue and 2% (2018: 1%) relating to Great Britain (GB) revenue.

Unbilled electricity receivables represent estimates of consumption not yet invoiced. Credit risk in relation to unbilled electricity is managed in line with billed electricity receivables as discussed above.

Integrated Single Electricity Market (I-SEM) receivables

Credit risk in relation to the I-SEM related receivables is managed by the Energy Trading and Risk functions (ET&R) within those business units engaged in electricity trading through the I-SEM. Each of these functions is ring-fenced from each other and segregation of responsibilities between the back office, middle office and front office functions is maintained in each case. The Trading back office function is responsible for invoicing customers and maintaining all accounts receivable. Payment terms for all trading balances relating to each of the I-SEM revenue streams are governed by the I-SEM settlement calendar.

Use of System receivables

Use of System income in ROI comprises of Distribution Use of System (DUoS) income, Transmission Use of System (TUoS) income and Operation and Maintenance (O&M) charges for generators connected to the Distribution System. The credit terms for DUoS are 10 business days and there are currently 51 suppliers. TUoS is collected by EirGrid, and the Transmission Asset Owner (TAO) allowed revenue is invoiced to EirGrid over 12 monthly instalments with each invoice due 36 days after month end. Invoices were issued in respect of 208 generators during 2019 for O&M charges, credit terms for O&M charges are 30 days. Generators are invoiced on a staged basis, as approved by CRU, with 65% of the capital contribution recouped in advance of construction, 90% in advance of energisation and the balance post energisation. Included in amounts due from subsidiary undertakings in Parent are amounts billed and collected through ESB Networks DAC, a subsidiary of the Parent in respect of Use of System receivables €233.9 million (2018: €222.9 million).

The credit risk in relation to DUoS is managed by the invocation of section 7 of the DUoS Framework Agreement approved by CRU on 1 August 2002. This section provides for the provision of security by each supplier. Before a supplier can register as a customer they must sign up to the DUoS agreement. All suppliers must provide security in accordance with section 7.2. The DUoS credit risk is also managed through the timely collection procedures in place which are in line with what is outlined in section 6 of the DUoS Framework Agreement and the monitoring of debtor days to keep these to a minimum. In the event of a supplier defaulting in line with section 7 of the DUoS Framework Agreement there is security cover in place for all suppliers.

NOTES TO THE FINANCIAL STATEMENTS

17. TRADE AND OTHER RECEIVABLES (continued)

Use of System receivables (continued)

TUoS credit risk is managed through the timely collection procedures in place and the monitoring of debtor days to keep these to a minimum. Procedures for the payment by EirGrid of TUoS income due to ESB Networks DAC as TAO are governed by the Infrastructure Agreement between EirGrid and ESB. This is not a normal bilateral contract freely entered into by the will of the parties, but an arrangement required by legislation and many of whose terms are specified in that legislation. Accordingly, the credit risk in relation to TUoS receivables is considered to be low. The amount due in respect of TUoS income at 31 December 2019 was €48.4 million (2018: €44.1 million), which is the largest Use of System receivable balance in ROI.

In respect of the Networks business in NI, revenue is derived principally from charges for use of the distribution system, PSO charges levied on electricity suppliers and charges for transmission services levied on SONI (System Operator for Northern Ireland). Credit risk in respect of Use of System receivables from electricity suppliers is mitigated by security received in the form of cash deposits, letters of credit or Parent company guarantees. With the exception of public bodies, payments in relation to new connections or alterations are paid for in advance of the work being carried out. Normal credit terms and debtor days in respect of trade receivables from electricity suppliers are less than 30 days. The largest Use of System electricity receivable in NI at 31 December 2019 is €10.7 million (2018: €9.4 million).

Other electricity receivables

Other electricity receivables include amounts in relation to ancillary services and amounts in relation to electricity trading in the UK market which is not included in the I-SEM.

Trade receivables - non-electricity

Trade receivables (non-electricity) relate to balances due in respect of the Group's non-electricity trading and other operations. It includes amounts due in respect of the Group's telecommunications, consultancy, facility management and other ancillary operations. Credit risk with regard to these balances is not considered to be significant. The largest unsecured single balance included within this category at 31 December 2019 is an amount of €11.8 million (2018: €3.1 million) due from an external company. Included within these categories are collateral amounts pledged by the Group to bilateral parties and clearing banks for exchange trading of gas, carbon and power of €195.9 million (2018: €115.6 million). The amounts pledged cover initial margin and daily mark to market movements which are returned to ESB prior to or on settlement.

18. CASH AND CASH EQUIVALENTS

	GROUP		PARENT	
	2019	2018	2019	2018
	€m	€m	€m	€m
Cash at bank and in hand	125.1	229.1	58.2	122.3

19. CHANGES IN EQUITY

(i) Capital stock

There are 1,966,381,855 units of capital stock in issue at a par value of €1.00 each (2018: 1,970,781,855 units)

	2019	2018
	€m	€m
Comprised as:		
Stock issued from converted reserves	1,880.9	1,880.9
Stock issued for subscription by ESOT	85.5	89.9
Total	1,966.4	1,970.8

In accordance with the Electricity (Supply) (Amendment) Act 2001, on 30 December 2001, the equity of ESB was converted to capital stock which was issued to the Department of Finance. At the same time, ESB ESOP Trustee Limited, established to act as Trustee for an ESB employee shareholding scheme, subscribed for 5% of the stock. The principal rights attaching to each unit of capital stock include the rights to exercise a vote at annual meetings, entitlements to dividends from profits when declared and the rights to proportionate participation in a surplus on winding up.

The Energy (Miscellaneous Provisions) Act 2006 amended Section 2 of the 2001 Act and as a result 10.1% of issued capital stock in ESB now stands vested in the Minister for Communications, Climate Action and Environment, with the Minister for Finance retaining 85.6% of ESB's capital stock and the ESOP retaining 4.3% of the stock at that date.

The Ministers and Secretaries Amendment Act 2011, which came into force on 6 July 2011, establishes the office of the Minister for Public Expenditure and Reform. The 2011 Act has the effect of transferring ownership of the stock previously held by the Minister for Finance in ESB to the Minister for Public Expenditure and Reform as and from 6 July 2011.

NOTES TO THE FINANCIAL STATEMENTS

19. CHANGES IN EQUITY (continued)

(ii) Capital redemption reserve

In May 2015, the ESB Board approved an ESOP market liquidity proposal. The objective of the proposal is to improve liquidity in the Employee Share Ownership Plan (ESOP) market whereby the ESOP Trustee is committing to spend €25.0 million of funds to acquire capital stock in the ESOP internal market. ESB will match the expenditure committed by the ESOP Trustee up to €25.0 million from 2014.

During 2019, ESB continued to repurchase ESOP capital stock and consequently the capital redemption reserve increased due to the purchase and cancellation of own share capital €4.4 million (2018: €4.4 million) for a consideration of €4.6 million (2018: €4.9 million) and represents the nominal amount of the share capital cancelled (note 32).

(iii) Cash flow hedging and other reserves – Group and Parent

The hedging reserve primarily represents the fair value of derivatives which are part of effective cash flow hedging relationships at year end. As the derivatives are held for hedging purposes as defined by IFRS 9 and designated as hedges, their fair value movements are retained in OCI instead of being charged to the income statement during the year and will be charged to income in the same period as the corresponding transaction.

(iv) Other reserves

Group other reserves include the following:

- Non-distributable reserves of (€5.0) million which was created on the sale of the Group's share in Ocean Communications Limited in 2001; and
- Actuarial movements on the NIE Networks defined benefit scheme, net of the related deferred tax adjustments, totalling (€219.5) million (2018: (€205.0) million); and
- ESOP repurchase provision of (€7.5) million (2018: (€11.8) million) which relates to the amount that ESB has committed to date to repurchase from the ESOP internal market.

Parent other reserves include the following:

ESOP repurchase provision of (€7.5) million (2018: (€11.8) million) which relates to the amount that ESB has committed to date to repurchase from the ESOP internal market.

(v) Non-controlling interest - Group

Non-controlling interests at 31 December 2019 relate to the minority shareholdings in Crockahenny Wind Farm DAC, Mountain Lodge Power DAC, Airvolution Energy Limited and wind farms associated with Coriolis Energy.

Dividends	2019	2018
GROUP	€m	€m
Dividends of capital stock:		
Total dividend paid 2.18 (2018: 1.75) cents per capital stock unit	42.9	34.6
Dividend to non-controlling interest	-	0.3
Total	42.9	34.9

Dividends	2019	2018
PARENT	€m	€m
Dividends of capital stock:		
Total dividend paid 2.18 cent (2018: 1.75) cents per capital stock unit	42.9	34.6
Total	42.9	34.6

Total dividends paid during 2019 amounted to €42.9 million and include a final dividend of €4.9 million (0.25 cents per unit of stock) in respect of 2018 and an interim dividend, declared and paid, of €38.0 million (1.94 cents per unit of stock).

The Board is now recommending that a final dividend of 2.53 cent per unit of capital stock, or €49.8 million in aggregate, in accordance with the dividend policy of 40% of adjusted profit after tax agreed with the government.

NOTES TO THE FINANCIAL STATEMENTS

20. TAXATION

	2019 €m	2018 €m
(a) Income tax expense		
Current tax expense		
Current tax	62.0	34.0
Prior year (over) / under provision	(2.4)	2.6
Value of tax losses surrendered by equity accounted investees	3.6	2.6
	63.2	39.2
Deferred tax expense		
Origination and reversal of temporary differences	(3.6)	(14.8)
Prior year over provision	(0.2)	(6.3)
	(3.8)	(21.1)
Total	59.4	18.1
	2019 €m	2018 €m
Reconciliation of effective tax rate		
Profit before tax	397.2	78.3
Plus: after tax share of equity accounted investees	8.3	14.0
Profit before tax (excluding equity accounted investees loss)	405.5	92.3
Taxed at 12.5%	50.7	11.5
Expenses not deductible	6.9	9.5
Higher tax on chargeable gains	2.2	0.7
Income taxed at higher rate of corporation tax	1.5	0.3
Higher tax rates on overseas profits	0.7	(0.2)
Prior year over provisions	(2.6)	(3.7)
Income tax expense	59.4	18.1

NOTES TO THE FINANCIAL STATEMENTS

20. TAXATION (continued)

(b) Deferred tax assets and liabilities

GROUP	2019 €m	2018 €m
Deferred tax assets		
Property, plant and equipment and intangible assets	6.7	4.5
Liability – NIE Networks pension scheme	19.8	18.9
Liability – ESB pension scheme	49.1	49.4
Borrowings	5.4	7.2
Provisions	1.0	2.5
Tax losses forward	7.9	9.7
Derivative financial instruments	90.8	84.1
Total deferred tax assets	180.7	176.3
Deferred tax liabilities		
Property, plant and equipment and intangible assets	611.3	623.4
Provisions	7.2	7.2
Derivative financial instruments	26.0	16.3
Capital gains tax	1.3	1.2
Total deferred tax liabilities	645.8	648.1
Net deferred tax liability	(465.1)	(471.8)

The movement in temporary differences for the Group were as follows:

2019	Balance at 1 January €m	Recognised in income €m	Recognised in OCI €m	Translation differences €m	Balance at 31 December €m
ASSETS					
Property, plant and equipment and intangible assets	4.5	2.2	-	-	6.7
Liability – NIE Networks pension scheme	18.9	(2.1)	3.0	-	19.8
Liability – ESB pension scheme	49.4	(0.3)	-	-	49.1
Borrowings	7.2	(1.8)	-	-	5.4
Provisions	2.5	(1.5)	-	-	1.0
Tax losses forward	9.7	(1.8)	-	-	7.9
Derivative financial instruments	84.1	5.3	2.5	(1.1)	90.8
Total deferred tax assets	176.3	-	5.5	(1.1)	180.7
LIABILITIES					
Property, plant and equipment and intangible assets	623.4	(13.7)	-	1.6	611.3
Provisions	7.2	-	-	-	7.2
Derivative financial instruments	16.3	9.8	(2.5)	2.4	26.0
Capital gains tax	1.2	0.1	-	-	1.3
Total deferred tax liabilities	648.1	(3.8)	(2.5)	4.0	645.8
Net deferred tax (liability) / asset	(471.8)	3.8	8.0	(5.1)	(465.1)

NOTES TO THE FINANCIAL STATEMENTS

20. TAXATION (continued)

(b) Deferred tax assets and liabilities (continued)

2018	Balance at 1 January €m	Recognised in Income €m	Recognised in OCI €m	Translation differences €m	Acquisition of Castlepool Power DAC €m	Balance at 31 December €m
ASSETS						
Property, plant and equipment and intangible assets	2.2	2.3	-	-	-	4.5
Liability – NIE Networks pension scheme	24.3	(2.2)	(3.2)	-	-	18.9
Liability – ESB pension scheme	49.3	0.1	-	-	-	49.4
Borrowings	9.0	(1.8)	-	-	-	7.2
Provisions	2.0	0.5	-	-	-	2.5
Tax losses forward	6.2	3.5	-	-	-	9.7
Derivative financial instruments	94.7	(4.1)	(6.7)	0.2	-	84.1
Total deferred tax assets	187.7	(1.7)	(9.9)	0.2	-	176.3
LIABILITIES						
Property, plant and equipment and intangible assets	646.0	(23.5)	-	(0.3)	1.2	623.4
Provisions	6.7	0.5	-	-	-	7.2
Derivative financial instruments	24.0	0.3	(7.7)	(0.3)	-	16.3
Capital gains tax	1.2	-	-	-	-	1.2
Total deferred tax liabilities	677.9	(22.7)	(7.7)	(0.6)	1.2	648.1
Net deferred tax (liability) / asset	(490.2)	21.0	(2.2)	0.8	(1.2)	(471.8)

There is no expiry date to when tax losses in the Group can be utilised.

Deferred tax has not been provided for in relation to unremitted reserves of the Group's overseas subsidiaries for two reasons; either there is no commitment for these reserves to be distributed in the foreseeable future or it has been established that no tax would arise on the remittance. Deferred tax has not been provided for in relation to unremitted reserves of the Group's overseas joint ventures as the Group has the ability to control the repatriation of these reserves to the Republic of Ireland. Cumulative unremitted reserves of overseas subsidiaries and joint ventures totalled €673.4 million (2018: €648.5 million) as at 31 December 2019.

PARENT	2019 €m	2018 €m
Deferred tax assets		
Liability - ESB pension scheme	49.1	49.4
Borrowings	5.4	7.2
Provisions	17.9	18.0
Derivative financial instruments	5.6	6.2
Total deferred tax assets	78.0	80.8
Deferred tax liabilities		
Property, plant and equipment	424.0	429.1
Derivative financial instruments	3.8	4.2
Capital gains tax	1.2	1.2
Total deferred tax liabilities	429.0	434.5
Net deferred tax liability	(351.0)	(353.7)

NOTES TO THE FINANCIAL STATEMENTS

20. TAXATION (continued)

(b) Deferred tax assets and liabilities (continued)

PARENT (continued)

The movement in temporary differences for the Parent were as follows:

2019	Balance at 1 January €m	Recognised in income €m	Recognised in OCI €m	Balance at 31 December €m
ASSETS				
Liability – ESB pension scheme	49.4	(0.3)	-	49.1
Borrowings	7.2	(1.8)	-	5.4
Provisions	18.0	(0.1)	-	17.9
Derivative financial instruments	6.2	-	(0.6)	5.6
Total deferred tax assets	80.8	(2.2)	(0.6)	78.0
LIABILITIES				
Property, plant and equipment	429.1	(5.2)	-	423.9
Derivative financial instruments	4.2	-	(0.3)	3.9
Capital gains tax	1.2	-	-	1.2
Total deferred tax liabilities	434.5	(5.2)	(0.3)	429.0
Net deferred tax (liability) / asset	(353.7)	3.0	(0.3)	(351.0)

2018	Balance at 1 January €m	Recognised in income €m	Recognised in OCI €m	Balance at 31 December €m
ASSETS				
Liability – ESB pension scheme	49.3	0.1	-	49.4
Borrowings	9.0	(1.8)	-	7.2
Provisions	17.9	0.1	-	18.0
Derivative financial instruments	7.4	-	(1.2)	6.2
Total deferred tax assets	83.6	(1.6)	(1.2)	80.8
LIABILITIES				
Property, plant and equipment	439.3	(10.2)	-	429.1
Derivative financial instruments	3.7	-	0.5	4.2
Capital gains tax	1.2	-	-	1.2
Total deferred tax liabilities	444.2	(10.2)	0.5	434.5
Net deferred tax (liability) / asset	(360.6)	8.6	(1.7)	(353.7)

NOTES TO THE FINANCIAL STATEMENTS

21. BORROWINGS AND OTHER DEBT

GROUP	Recourse	Non-recourse	2019	2018
	borrowings	borrowings	Total	Total
	€m	€m	€m	€m
Current borrowings				
- Repayable by instalments	86.8	1.9	88.7	85.9
- Repayable other than by instalments	392.0	-	392.0	520.4
Total current borrowings	478.8	1.9	480.7	606.3
Non-current borrowings				
- Repayable by instalments				
Between one and two years	73.7	2.0	75.7	85.9
Between two and five years	209.7	6.5	216.2	220.0
After five years	290.0	4.2	294.2	406.3
	573.4	12.7	586.1	712.2
- Repayable other than by instalments				
Between one and two years	57.6	-	57.6	307.4
Between two and five years	553.7	-	553.7	305.4
After five years	2,675.8	878.5	3,554.3	3,212.7
	3,287.1	878.5	4,165.6	3,825.5
Total non-current borrowings	3,860.5	891.2	4,751.7	4,537.7
Total borrowings outstanding	4,339.3	893.1	5,232.4	5,144.0

See section (b) for details of applicable interest rates.

Current borrowings by facility	Ref	2019	2018
		€m	€m
ESB Eurobonds	1	323.2	214.2
Non-recourse long-term project finance debt	2	1.9	1.8
Long-term bank borrowings	4	155.6	152.9
Private placement borrowings	5	-	237.4
		480.7	606.3

Non-current borrowings by facility	Ref	2019	2018
		€m	€m
ESB Eurobonds	1	2,973.1	2,684.6
Non-recourse long-term project finance debt	2	12.7	58.8
Non-recourse NIE Networks Sterling Bonds	3	878.5	835.0
Long-term bank borrowings	4	573.4	653.4
Private placement borrowings	5	314.0	305.9
		4,751.7	4,537.7

With the exception of borrowings relating to non-recourse project finance debt, which is secured against specific assets, none of the borrowings are secured against the Group assets.

ESB was rated A- by Standard & Poor's (outlook stable) and A3 (equivalent to A-) from Moody's (outlook stable) during 2019.

1. ESB Eurobonds

The table below provides details of ESB Eurobonds included in borrowings at 31 December 2019:

Issuer	Value	Issue Date	Tenor	Coupon
ESB Finance DAC	Stg£275.0 million	March 2010	10 years	6.500%
ESB Finance DAC	Euro €300.0 million	November 2013	10 years	3.494%
ESB Finance DAC	Euro €500.0 million	June 2015	12 years	2.125%
ESB Finance DAC	Euro €600.0 million	June 2016	15 years	1.875%
ESB Finance DAC	Euro €500.0 million	January 2017	12 years	1.750%
ESB Finance DAC	Euro €500.0 million	November 2018	15 years	2.125%
ESB Finance DAC	Euro €100.0 million	April 2019	25 years	2.000%
ESB Finance DAC	Euro €500.0 million	June 2019	11 years	1.125%

NOTES TO THE FINANCIAL STATEMENTS

21. BORROWINGS AND OTHER DEBT (continued)

2. Non-recourse long-term project finance debt

Castlepeak Power DAC became a 100% subsidiary in December 2018 and at 31 December 2019 has outstanding debt of €nil (2018: €44.9 million). The remainder of this debt is fully in relation to a wind farm in Great Britain (GB).

3. Non-recourse NIE Networks Sterling Bonds

In June 2011, NIE Networks Limited issued a Stg£400.0 million 15 year sterling bond with a fixed coupon rate of 6.375%.

In September 2018, NIE Networks Limited issued a Stg£350.0 million 7 year sterling bond with a fixed coupon rate of 2.5%.

4. Long-term bank borrowings

Long-term bank borrowings include €233 million (2018: €267 million) of floating rate debt borrowed on a bilateral basis, while the remainder is fixed.

A €1.44 billion revolving credit facility with a syndicate of 14 banks to draw down bank finance as required up to February 2022 is available to the Group. €70.0 million is drawn down as at 31 December 2019 (2018: €70.0 million).

A €200.0 million facility with the European Investment Bank (EIB) to support renewable connections to the electricity network in the southwest of Ireland was drawn down in full at 31 December 2019 (2018: €200.0 million).

5. Private placement borrowings

The first private placement senior unsecured notes were issued, to a range of institutional investors, in December 2003. These fixed rate notes were issued in US dollars and sterling and at 31 December 2019 comprise US\$237.5 million, maturing in 2023, and Stg£10.0 million, maturing in 2023.

The second private placement senior unsecured notes were issued in June 2009. These notes were issued in US dollars, sterling and euro and at 31 December 2019 comprise Stg£50.0 million, maturing in 2021. USD\$226.0 million and €40.0 million of this debt was repaid in June 2019 as scheduled. The private placement debt and certain other facilities have conditions which require ESB to maintain certain interest cover and asset covenants. At 31 December 2019 ESB is fully in compliance with all the covenant requirements associated with the private placement debt and other facilities.

Hedge of net investment in foreign operations

Included in borrowings above are sterling denominated bank loans, which have been designated as a hedge of the Group's investment in a sterling denominated subsidiary in the United Kingdom, as outlined below:

Sterling denominated loans designated as a hedge of Group's investment in subsidiary	2019	2018
	€m	€m
Value at 1 January	32.0	32.3
Repayments in year	(11.2)	-
Gain / (loss) on translation to Euro	1.6	(0.3)
Value at 31 December	22.4	32.0
Gain / (loss) on translation of intragroup euro loan to subsidiary (taken to OCI)	1.2	(0.2)

NOTES TO THE FINANCIAL STATEMENTS

21. BORROWINGS AND OTHER DEBT (continued)

	RECOURSE BORROWINGS	
	2019 Total €m	2018 Total €m
PARENT		
Current borrowings		
- Repayable by instalments	86.8	84.1
- Repayable other than by instalments	68.9	306.2
Total current borrowings	155.7	390.3
Non-current borrowings		
- Repayable by instalments		
Between one and two years	73.7	85.2
Between two and five years	209.7	216.3
After five years	290.0	354.3
	573.4	655.8
- Repayable other than by instalments		
Between one and two years	57.6	-
Between two and five years	256.3	303.5
After five years	-	-
	313.9	303.5
Total non-current borrowings	887.3	959.3
Total borrowings outstanding	1,043.0	1,349.6

(a) Funding and liquidity management

The principal liquidity risks faced by the Group relate to cash flow requirements arising from day-to-day operations, maturing debt obligations and the funding of capital investment programmes. The Group's treasury function manages this risk through a combination of liquid investments, cash and cash equivalents and undrawn committed bank facilities. The Group negotiates facilities with relationship banks and raises funds in debt capital markets to pre-fund, or pre-hedge, any funding requirements arising from maturing debt, capital expenditure and general business requirements.

At 31 December 2019 the Group had €1.5 billion available in cash or cash equivalents and committed bank facilities, ensuring liquidity demands can be met as required. The committed bank facilities comprise a syndicated loan facility with a large number of well-rated financial institutions.

The Group's debt management strategy targets a debt portfolio profile with a diverse mix of counterparties, funding sources and maturities. Structured non-recourse and limited recourse financing is used where appropriate, taking into account both funding costs and risk mitigation. All borrowing facilities are in compliance with the Electricity Acts and relevant regulatory requirements.

The maturity profile of the carrying amount of the Group's borrowings, and the expiry of material undrawn committed bank borrowing facilities are as follows:

Maturing	Drawn Debt - Group		Drawn Debt - Parent		Undrawn Facility - Group and Parent	
	2019 €m	2018 €m	2019 €m	2018 €m	2019 €m	2018 €m
In one year or less	480.7	606.3	155.7	390.3	-	-
Between one and two years	133.3	393.3	131.3	85.2	-	-
Between two and five years	769.9	525.4	466.0	519.8	1,370.0	1,370.0
In more than five years	3,848.5	3,619.0	290.0	354.3	-	-
	5,232.4	5,144.0	1,043.0	1,349.6	1,370.0	1,370.0

NOTES TO THE FINANCIAL STATEMENTS

21. BORROWINGS AND OTHER DEBT (continued)

(a) Funding and liquidity management (continued)

The following table sets out the contractual maturities of Group borrowings, including the associated interest payments. Borrowings with a carrying value of €4,189.4 million (2018: €3,794.4 million) are included in the Group balances below.

	Carrying amount €m	Contractual cash outflows / (inflows) - net €m	Within 1 year €m	1 - 2 years €m	2 - 5 years €m	More than 5 years €m
31 December 2019						
Recourse borrowings	4,339.3	5,200.3	600.8	227.9	1,016.4	3,355.2
Non-recourse borrowings	893.1	1,169.3	42.6	42.5	128.0	956.2
Total borrowings	5,232.4	6,369.6	643.4	270.4	1,144.4	4,311.4

31 December 2018

Recourse borrowings	4,248.4	5,091.0	735.4	501.2	764.0	3,090.4
Non-recourse borrowings	895.6	1,198.0	41.2	40.4	120.3	996.1
Total borrowings	5,144.0	6,289.0	776.6	541.6	884.3	4,086.5

(b) Interest rate risk management

The Group's interest rate policy was updated in 2019 and the target is to have a significant majority of its debt at fixed (or inflation linked) interest rate to maturity, with a minimum of 60% fixed (or inflation linked) at all times. This is achieved either by borrowing directly at fixed interest rates or via interest rate swaps. At 31 December 2019, 97.2% of the Group's debt was fixed to maturity or inflation linked (31 December 2018: 94.8%). The fair value of interest rate swaps is disclosed in note 22.

In respect of interest-bearing financial liabilities, the following table indicates their effective interest rates at the balance sheet date taking into account the effect of interest rate swaps and cross currency swaps:

	Effective interest rate %	Total €m	Within 1 year €m	1 - 2 years €m	2 - 5 years €m	More than 5 years €m
Private placement borrowings (fixed interest rate)	6.29	314.0	-	58.8	255.2	-
Non-recourse borrowings (fixed interest rate)	4.28	893.1	1.9	2.0	6.5	882.7
Other long-term borrowings (fixed and variable interest rate)	3.08	4,025.3	478.8	72.5	508.2	2,965.8

Included within other long-term borrowings in this analysis are floating rate liabilities of €233 million (31 December 2018: €267 million).

The effective interest rate on the private placement borrowings has been fixed through the use of cross currency swaps and interest rate swaps. The effective rate of non-recourse sterling borrowings of £12.8 million has been fixed using interest rate swaps. In the absence of these interest rate swaps, the floating rate on the underlying sterling and euro borrowings at 31 December 2019 would be 1.68%, in line with prevailing interest rates in those monetary areas on borrowings of a similar duration. Inflation linked swaps are included at equivalent nominal interest rate levels.

NOTES TO THE FINANCIAL STATEMENTS

21. BORROWINGS AND OTHER DEBT (continued)

(b) Interest rate risk management (continued)

In managing interest rate risk, the Group aims to reduce the impact of short-term fluctuations on the Group's earnings. Over the longer term however, permanent changes in interest rates will have an impact on consolidated earnings. It is estimated that a general increase of 50 basis points in interest rates (and corresponding real interest rates) at 31 December would have increased profit before taxation and reduced equity by the amounts shown below. This analysis assumes that all other variables, in particular foreign currency rates, remain constant, including the assumption that there is no change in inflation rates.

	31 December 2019		31 December 2018	
	50 bp increase gain / (loss) €m	50 bp decrease gain / (loss) €m	50 bp increase gain / (loss) €m	50 bp decrease gain / (loss) €m
Profit before taxation				
Interest payable	(0.8)	0.4	(0.8)	0.2
Fair value movements on financial instruments	58.6	(62.5)	57.4	(61.4)
Other comprehensive income				
Fair value gains / (losses)	(0.3)	0.3	1.4	(1.4)

The following assumptions were made in respect of the sensitivity analysis above:

- the balance sheet sensitivity to interest rates relates only to derivative financial instruments, as debt and other deposits are carried at amortised cost and so their carrying value does not change as interest rates move;

- the sensitivity of accrued interest to movements in interest rates is calculated on net floating rate exposures on debt, deposits and derivative instruments;

- derivatives designated as cash flow hedges against movements in interest rates are assumed to be fully effective, recorded fully within equity with no impact on the income statement;

- changes in the carrying value of derivative financial instruments not in hedging relationships affect the income statement only; and

- the floating leg of any swap or any floating rate debt is treated as not having any interest rate already set, therefore a change in interest rates affects a full 12-month period for the accrued interest portion of the sensitivity calculations.

NOTES TO THE FINANCIAL STATEMENTS

21. BORROWINGS AND OTHER DEBT (continued)

(c) Reconciliation of external borrowings (excluding lease liabilities)

GROUP

	Balance at 1 January €m	Proceeds €m	Repayments €m	Acquisition of subsidiary €m	Effects of foreign exchange €m	Other €m	Balance at 31 December €m
2019							
Debt Facilities							
ESB Eurobonds	2,898.8	592.9	(214.9)	-	15.8	3.7	3,296.3
Non-recourse long-term project finance debt	60.6	-	(46.8)	-	0.8	-	14.6
Non-recourse NIE Networks Sterling bonds	835.0	-	-	-	43.9	(0.4)	878.5
Long-term bank borrowings	806.3	-	(85.1)	-	7.8	-	729.0
Private placement borrowings	543.3	-	(201.2)	-	12.6	(40.7)	314.0
Total	5,144.0	592.9	(548.0)	-	80.9	(37.4)	5,232.4

	Balance at 1 January €m	Proceeds €m	Repayments €m	Disposal/ Acquisition of subsidiary €m	Effects of foreign exchange €m	Other €m	Balance at 31 December €m
2018							
Debt Facilities							
ESB Eurobonds	2,334.0	500.0	-	-	(2.5)	67.3	2,898.8
Non-recourse long-term project finance debt	444.7	-	(445.2)	44.9	(0.1)	16.3	60.6
Non-recourse NIE Networks Sterling bonds	648.5	394.5	(200.5)	-	(3.7)	(3.8)	835.0
Long-term bank borrowings	715.0	170.4	(84.0)	-	(1.4)	6.3	806.3
Private placement borrowings	615.6	-	(93.5)	-	19.2	2.0	543.3
Total	4,757.8	1,064.9	(823.2)	44.9	11.5	88.1	5,144.0

PARENT

	Balance at 1 January €m	Proceeds €m	Repayments €m	Effects of foreign exchange €m	Other €m	Balance at 31 December €m
2019						
Debt Facilities						
Long-term bank borrowings	806.3	-	(85.1)	7.8	-	729.0
Private placement borrowings	543.3	-	(201.2)	12.6	(40.7)	314.0
Total	1,349.6	-	(286.3)	20.4	(40.7)	1,043.0

	Balance at 1 January €m	Proceeds €m	Repayments €m	Effects of foreign exchange €m	Other €m	Balance at 31 December €m
2018						
Debt Facilities						
Long-term bank borrowings	715.0	170.0	(83.7)	(1.4)	6.4	806.3
Private placement borrowings	615.7	-	(93.5)	19.2	1.9	543.3
Total	1,330.7	170.0	(177.2)	17.8	8.3	1,349.6

NOTES TO THE FINANCIAL STATEMENTS

22. DERIVATIVE FINANCIAL INSTRUMENTS

(a) Fair value by class of derivative financial instrument

Derivative financial instruments are carried at fair value. The fair value of a financial instrument is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The method used to calculate the fair value of the Group's financial instruments is discounted cash flow analysis, using a zero coupon discount rate and reflecting counterparty credit risk. This method enables the Group to discount the cash flows at a rate equal to the prevailing market rate of interest taking into account maturity and credit margin.

The fair values of financial instruments, grouped by class of instrument, are as follows:

GROUP	Non-current assets	Current assets	2019 Non-current liabilities	Current liabilities	Total €m
	€m	€m	€m	€m	
Interest rate swaps	1.1	4.6	(1.9)	-	3.8
Inflation linked interest rate swaps	-	-	(578.5)	(16.9)	(595.4)
Currency swaps	-	-	(24.9)	-	(24.9)
Foreign exchange contracts	4.6	20.7	(7.3)	(5.4)	12.6
Forward fuel price contracts	17.7	180.3	(49.9)	(245.5)	(97.4)
Forward electricity price contracts	42.1	39.2	-	-	81.3
	65.5	244.8	(662.5)	(267.8)	(620.0)

	Non-current assets	Current assets	2018 Non-current liabilities	Current liabilities	Total €m
	€m	€m	€m	€m	
Interest rate swaps	5.1	-	(3.7)	(0.1)	1.3
Inflation linked interest rate swaps	-	-	(544.4)	(13.9)	(558.3)
Currency swaps	4.1	35.5	(21.3)	-	18.3
Foreign exchange contracts	0.9	2.3	(0.3)	(2.1)	0.8
Forward fuel price contracts	10.5	82.9	(55.4)	(91.3)	(53.3)
Forward electricity price contracts	48.0	35.8	(0.1)	(0.9)	82.8
	68.6	156.5	(625.2)	(108.3)	(508.4)

PARENT	Non-current assets	Current assets	2019 Non-current liabilities	Current liabilities	Total €m
	€m	€m	€m	€m	
Interest rate swaps	1.1	-	-	-	1.1
Currency swaps	-	-	(24.9)	-	(24.9)
Foreign exchange contracts	9.0	21.1	(7.2)	(5.3)	17.6
Forward fuel price contracts	17.7	180.3	(10.9)	(207.0)	(19.9)
	27.8	201.4	(43.0)	(212.3)	(26.1)

	Non-current assets	Current assets	2018 Non-current liabilities	Current liabilities	Total €m
	€m	€m	€m	€m	
Interest rate swaps	0.9	-	(0.1)	(0.1)	0.7
Currency swaps	4.1	35.5	(21.3)	-	18.3
Foreign exchange contracts	0.9	2.3	(0.9)	(1.8)	0.4
Forward fuel price contracts	10.4	69.9	(7.7)	(81.8)	(9.1)
	16.3	107.7	(30.0)	(83.7)	10.3

NOTES TO THE FINANCIAL STATEMENTS

22. DERIVATIVE FINANCIAL INSTRUMENTS (continued)

(a) Fair value by class of derivative financial instrument (continued)

The Group decides at inception whether to designate financial instruments into hedge relationships for certain arrangements that meet the specific hedging accounting criteria of IFRS 9.

When interpreting the positive and negative fair values of derivative financial instruments, it should be noted that they are matched with underlying transactions with offsetting risks.

(i) Interest rate swaps

The Group has executed interest rate swaps of Stg£431.1 million (2018: Stg£470.7 million) in connection with a certain portion of its borrowings held by the Parent and ESB Finance DAC and certain debt held in other wind farms assets within the Group. These have all been classified as cash flow hedges.

For interest rate swaps, the fair value takes into account the fixed, floating and market rates prevailing at the balance sheet date. As interest rate swaps are marked to market at 31 December 2019, their carrying value is equal to their fair value.

The fair value of the interest rate swaps has increased by €2.6 million. The movement reflects positive mark to market movements in the underlying swaps of €1.0 million and payments on the swaps of €1.6 million during the year.

(ii) Inflation linked interest rate swaps

Inflation linked interest rate swaps with a fair value liability on acquisition of €272.5 million were acquired in December 2010 as part of the purchase of the NIE Networks business. The inflation linked interest rate swaps did not qualify for hedge accounting under IFRS 9 on acquisition of the NIE Networks business. The fair value of the inflation linked interest rate swaps is affected by relative movements in interest rates and in market expectations of future retail price index (RPI) movements in the United Kingdom (UK).

Arising from movements in forward interest rates, UK RPI forward prices, foreign currency exchange rates and payments during the year, the fair value of the liability has increased by €37.1 million on these swaps in the year ended 31 December 2019 (2018: fair value of the liability decreased by €94.9 million). The movement reflects negative mark to market movements in the underlying swaps of €23.3 million (2018: negative movement €6.5 million), reflected in finance costs in the income statement (note 8) and payments of €15.2 million (2018: €95.6 million) arising under the swaps during the year. In addition, negative translation movements of €29.0 million (2018: positive translation movements of €5.8 million) during the year on translation of the swaps from sterling to euro are reflected in the OCI.

(iii) Currency swaps

The fair value of currency swaps is affected by movements in foreign exchange and interest rates. ESB's currency swaps are primarily classified as cash flow hedges and relate mainly to the cross-currency swaps entered into in connection with the private placement debt, which is described in note 21. These cross-currency swaps were entered into in order to swap US dollar and sterling interest and principal repayments on the underlying debt to euro, thereby hedging the risk on these payments over the years to maturity from 2010 to 2023. During 2019, a portion of the cross currency swaps matured due to US\$226.0 million of private placement debt being repaid.

No ineffectiveness under the meaning of IFRS 9 arose on the currency swaps during the year (2018: debit €0.1 million). Separately included in the income statement for the year 31 December 2019 is a gain of €8.3 million (2018: gain of €23.3 million) arising on cross currency swaps which is substantially offset by movements in the translation of the underlying hedged foreign currency borrowings at the prevailing exchange rates (see note 8).

In addition to foreign exchange contracts entered into in relation to the Group's borrowings, the Group has entered into foreign exchange contracts in relation to energy costs, Long Term Service Agreements (LTSAs) and fuel purchase requirements (which are in US dollar and sterling). These contracts have maturities extending until 2024. Total positive fair value movements of €2.3 million (2018: positive movements of €11.2 million) were recognised during the year in relation to such foreign exchange contracts, of which a negative fair value movement of €7.1 million (2018: positive movements of €0.3 million) was recognised through OCI and a positive fair value movement of €9.4 million (2018: positive movement of €10.9 million) was recognised in the income statement.

Fair value hierarchy

Further information on the methods of valuing financial instruments is included in note 28.

NOTES TO THE FINANCIAL STATEMENTS

22. DERIVATIVE FINANCIAL INSTRUMENTS (continued)

(b) Funding and liquidity management - maturity of derivative financial instruments

The following table sets out the contractual maturities of derivative financial instruments, including the associated undiscounted net cash flows attributable to them. These derivative financial instruments are expected to impact profit or loss over a time period similar to the cash outflows. Net derivative financial instrument liabilities of €593.9 million (2018: €518.7 million) are included in the Group balances below, but do not comprise part of the Parent's assets and liabilities as they are not held directly by the Parent. See note 28 (b) for further analysis of Group and Parent financial assets and liabilities.

	Carrying amount €m	Contractual cash outflows / (inflows) - net €m	Within 1 year €m	1 - 2 years €m	2 - 5 years €m	More than 5 years €m
31 December 2019						
Interest rate swaps	5.7	5.8	5.2	0.4	0.1	0.1
Foreign exchange contracts	25.3	25.3	20.6	4.5	0.2	-
Forward fuel price contracts	198.0	198.2	180.6	15.7	1.9	-
Forward electricity price contracts	81.3	81.0	39.1	38.1	3.8	-
Total assets	310.3	310.3	245.5	58.7	6.0	0.1
Interest rate swaps	(1.9)	(1.7)	(0.4)	(0.4)	(0.7)	(0.2)
Inflation linked interest rate swaps	(595.4)	(648.3)	(17.0)	(17.9)	(188.2)	(425.2)
Currency swaps	(24.9)	(23.0)	(4.2)	(4.6)	(3.9)	(10.3)
Foreign exchange contracts	(12.7)	(12.8)	(5.3)	(2.8)	(4.7)	-
Forward fuel price contracts	(295.4)	(295.4)	(245.8)	(46.5)	(3.1)	-
Total liabilities	(930.3)	(981.2)	(272.7)	(72.2)	(200.6)	(435.7)
Net derivative assets / (liabilities)	(620.0)	(670.9)	(27.2)	(13.5)	(194.6)	(435.6)
31 December 2018						
Interest rate swaps	5.1	6.2	1.7	4.2	0.2	0.1
Currency swaps	39.6	41.8	31.7	(3.7)	(1.6)	15.4
Foreign exchange contracts	3.2	8.8	7.7	0.5	0.2	0.4
Forward fuel price contracts	93.4	93.8	83.2	6.8	3.8	-
Forward electricity price contracts	83.8	83.7	35.9	24.1	23.7	-
Total assets	225.1	234.3	160.2	31.9	26.3	15.9
Interest rate swaps	(3.8)	(3.9)	(1.3)	(1.0)	(0.8)	(0.8)
Inflation linked interest rate swaps	(558.3)	(627.8)	(14.0)	(13.7)	(180.1)	(420.0)
Currency swaps	(21.3)	(23.8)	0.3	(0.1)	(0.5)	(23.5)
Foreign exchange contracts	(2.4)	(2.6)	(2.3)	(0.3)	-	-
Forward fuel price contracts	(146.7)	(147.1)	(92.3)	(30.6)	(24.2)	-
Forward electricity price contracts	(1.0)	(0.9)	(0.8)	(0.1)	-	-
Total liabilities	(733.5)	(806.1)	(110.4)	(45.8)	(205.6)	(444.3)
Net derivative assets / (liabilities)	(508.4)	(571.8)	49.8	(13.9)	(179.3)	(428.4)

NOTES TO THE FINANCIAL STATEMENTS

22. DERIVATIVE FINANCIAL INSTRUMENTS (continued)

(c) Hedging Reserves

The Group's hedging reserves movements relate to the following hedging instruments:

	Cash flow hedging reserve ¹				Total €m
	Cross currency interest rate swaps €m	Foreign exchange contracts €m	Forward fuel price contracts €m	Forward electricity price contracts €m	
Net fair value movements	(8.8)	(5.3)	(36.2)	27.6	(22.7)
Transfers to the income statement	8.8	-	0.1	(29.5)	(20.6)
Deferred tax movements	0.1	0.7	4.6	0.2	5.6
	0.1	(4.6)	(31.5)	(1.7)	(37.7)

¹The cash flow hedge reserve includes an amount of €1.3 million relating to the cost of hedging.

Hedge ineffectiveness

Hedge effectiveness is determined at the inception of the hedge relationship and through periodic prospective effectiveness assessments to ensure that an economic relationship exists between the hedged item and the hedging instrument.

Foreign exchange contracts

For hedges of foreign currency purchases, the Group enters into hedge relationships where the critical terms of the hedging instrument match exactly with the terms of the hedged item. The Group performs a qualitative assessment of effectiveness. If changes in circumstances affect the terms of the hedged item such that the critical terms no longer match exactly with the critical terms of the hedging instrument, the Group uses the hypothetical derivative method to determine ineffectiveness.

In hedges of foreign currency purchases, ineffectiveness may arise if the timing of the forecast transaction changes from what was originally estimated, or if there are changes in credit risk.

Forward fuel and electricity contracts

For hedges of forward fuel and forward electricity contracts, the Group enters into hedge relationships where the critical terms of the hedging instrument match with the terms of the hedged item. Ineffectiveness may arise if the timing or quantity of the forecast transaction changes from what was originally estimated, or if there are changes in credit risk. Hedge ineffectiveness for forward fuel and electricity contracts is measured using the hypothetical derivative method.

Within its regular course of business, the Group routinely enters into sale and purchase contracts for commodities, including gas and electricity. Where the contract was entered into and continues to be held for the purposes of receipt or delivery of the commodities in accordance with the Group's expected sale, purchase or usage requirements, the contracts are designated as own use contracts and are accounted for as executory contracts. These contracts are therefore not within the scope of IFRS 9 - Financial Instruments.

Cross currency interest rate swaps

The Group enters into interest rate swaps that have similar critical terms as the hedged item, such as reference rate, payment dates, maturities and notional amount. The hedged item is identified as a proportion of the outstanding amount up to the notional amount of the swaps. Hedge ineffectiveness for interest rate swaps is measured using the same principals as for hedges of foreign exchange contracts. It may occur primarily due to differences in critical terms between the interest rate swaps and the loans.

NOTES TO THE FINANCIAL STATEMENTS

22. DERIVATIVE FINANCIAL INSTRUMENTS (continued)

(d) Effects of hedge accounting on the financial position and performance

The effects of the hedging instruments for which hedge accounting has been used (before taxation) on the Group's financial position and performance are as follows:

	Cross currency interest rate swaps €m	Cross currency interest rate swaps €m	Interest rate swaps €m	Foreign exchange contracts - USD €m	Foreign exchange contracts - EUR ¹ €m	Forward fuel price contracts - Coal €m	Forward fuel price contracts - Gas (Level 3) ³ €m	Forward electricity price contracts (Level 3) ³
Carrying amount - asset / (liability) as at 31 December 2019	(0.7)	(20.3)	(2.1)	0.4	(4.9)	(0.6)	(77.5)	81.3
Notional amount	173.5	339.0	51.0	16.6	75.5	0.1	3.0	3.0
Notional unit	USD	GBP	EUR	USD	EUR	Tn	Mwh	Mwh
Maturity date - earliest	Dec-23	Nov-28	Jul-31	Feb-20	Jan-20	Dec-20	Jan-20	Jan-20
Maturity date - latest	Dec-23	Nov-28	Jul-31	Dec-21	Jan-24	Dec-21	Dec-22	Dec-22
Hedge ratio ²	1:1	1:1	1:1	1:1	1:1	1:1	1:1	1:1
Change in fair value of outstanding hedging instruments since 1 January	10.1	(24.4)	(0.7)	(4.6)	(5.5)	1.2	(21.2)	24.0
Change in value of hedged item used to determine hedge effectiveness	(10.1)	24.4	0.7	4.6	5.5	(1.2)	21.2	(23.8)
Weighted average hedged rate / price	6.07/1.19	3.37%/ 0.8882	1.53	1.10	0.95	89.05	-	-
Unit of rate/price	Interest rate %/ / FX rate	Interest rate %/ / FX rate	%	\$/€	€/£	€/Tn	-	-

¹ EUR exposures for UK operations

² The hedge ratio is the quantity of hedging instrument per quantity of hedged item. The appropriate hedge ratio is determined based on specific factors such as volumes of commodities required, contracted foreign exchange and interest rate exposures.

³ Weighted average hedged rate/price is not applicable to the Level 3 contracts above. Level 3 hedge instruments link electricity more closely to fuel inputs.

NOTES TO THE FINANCIAL STATEMENTS

23. PENSION LIABILITIES

The Group operates a number of pension Schemes for staff in both the Republic of Ireland, Northern Ireland and the United Kingdom (UK). Pension arrangements in respect of staff in the Republic of Ireland including ESB employees seconded overseas are set out in section (a) below. Pension arrangements in respect of staff in the UK and Northern Ireland are described in section (b) and (c).

(a) Parent and Group - Republic of Ireland

(i) ESB Defined Benefit Pension Scheme (The 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 a defined benefit Scheme and is registered as such 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. Notwithstanding the defined benefit nature of the benefits, ESB has no legal obligation to increase contributions to maintain those benefits in the event of a deficit. 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 a deficit arise in the future, ESB is obliged under the 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. This is different to the normal 'balance of cost' defined benefit approach, where the employer is liable to pay the balance of contributions required to fund benefits.

History

Historically the contributions of both ESB and members have been fixed by the Scheme regulations for long periods. On a number of occasions since the early 1980s, a deficit in the Scheme has been reported by the Scheme Actuary. On each occasion ESB has, in accordance with its obligations under the Scheme rules, consulted with the Committee, the Trustees and the Actuary. Following discussions with the unions, deficits were resolved by increasing contributions by both ESB and pension Scheme members.

The 2010 Pensions Agreement followed a 31 December 2008 actuarial deficit of €1,957.0 million. It was recognised that it was not feasible to address such a deficit through increased contributions. Negotiations between ESB and ESB Group of Unions (employee representatives) concluded with the landmark 2010 Pensions Agreement (approved by employees in July 2010 and formally ratified by the Board of ESB on 20 October 2010). The main features of the Agreement included the introduction of a Career Average Revalued Earnings (CARE) pension model for benefits earned after 1 January 2012, pension and pay freezes, the cessation of the historic link between salary and pension increases, and the application of a solvency test in relation to any future pension increases. The fixed contribution rates for the employer and for Scheme members were not changed. Under the Agreement 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. Under the Agreement membership of the Scheme has been closed to new joiners. The changes brought about by the 2010 Pensions Agreement were subsequently approved by the Minister.

The Scheme Actuary confirmed during 2019 that on an actuarial basis, the Scheme's assets were broadly in balance with its liabilities at the end of 2018. Should an actuarial deficit arise in the future, the obligation on ESB, as set out in the Scheme regulations, to consult with the parties to the Scheme remains unchanged. However, there is currently a shortfall in a wind-up scenario under the Minimum Funding Standard (MFS). The Trustees are in the process of finalising a new funding plan to resolve this MFS shortfall. This plan will be submitted to the Pensions Authority after its approval by the Department of Communications, Climate Action and Environment.

ESB does not intend that any further contributions, other than those currently provided for under the scheme regulations (described below) will be made.

Definitions

There are three different methods of assessing the financial status of the Scheme:

- Ongoing Actuarial Valuation.
- Minimum Funding Standard, under the Pensions Act.
- Accounting, as set out in International Accounting Standard 19, Employee Benefits.

Each of these methods assesses the Scheme from specific perspectives using assumptions and projections which may differ.

Ongoing Actuarial Valuation

This valuation method assumes that both the Scheme and ESB continue in existence for the foreseeable future - it is not a wind-up valuation. The Scheme Actuary confirmed in 2019 that the Scheme was broadly in balance on an on-going actuarial basis at the end of 2018 i.e. that based on the assumptions made, the Scheme is projected to be able to meet its obligations as they fall due.

Wind-Up / Minimum Funding Standard Valuation

The Pensions Act requires the Trustees of the Scheme to also assess whether it could meet a certain prescribed standard, known as the Minimum Funding Standard (MFS). This assesses whether if the Scheme were wound up on a specified theoretical valuation date, it could secure the benefits on that date. It should be noted that ESB does not envisage the winding up of the Scheme. The Scheme Actuary confirmed in 2019 that the MFS was not met as at 31 December 2018 and that the risk reserve requirement was also applicable for the Scheme. The Scheme Trustees are currently in consultation with ESB with a view to submitting a funding plan (to resolve this shortfall) to the Pensions Authority with the approval of the Department of Communications, Climate Action and the Environment. ESB does not intend that any further contributions, other than the normal on-going contributions (up to 16.4% of pensionable salary, in addition to employee contributions of up to 8.5%) and the balance of ESB's €591.0 million additional contribution (committed to as part of the 2010 Agreement), will be made.

NOTES TO THE FINANCIAL STATEMENTS

23. PENSION LIABILITIES (continued)

(a) Parent and Group - Republic of Ireland (continued)

(i) ESB Defined Benefit Pension Scheme (The Scheme) (continued)

Accounting

IAS 19 (revised) Employee Benefits is the relevant accounting standard to determine the way post-employment benefits should be reflected in ESB's financial statements.

The financial statements reflect the following obligations to the Scheme:

- Ongoing contributions - these are recognised in the income statement as incurred. Any unpaid amounts at year end are recognised as liabilities on the balance sheet.
- Obligations of €395.2 million to the Scheme are also included on the balance sheet, made up of:
 - 2010 Pension Agreement Injection – ESB committed to making an exceptional cash injection of €591.0 million (PV in 2010 money based on a rate of 6.25%) over an agreed period of time into the Scheme. The outstanding payable at 31 December 2019 is €286.9 million, following a request by the Scheme Trustees in 2018 to defer part of this payment. This is subject to an annual funding charge.
 - Past service contributions – the on-going rate of contribution by ESB includes a contribution towards past service accrued in 2010. The present value of future contributions in respect of that past service are recognised on the balance sheet. Amounts yet to be paid are subject to an annual financing charge and this is expensed in the income statement.
 - Past Voluntary Severance (VS) Programmes – in 2010 ESB recognised a future fixed commitment in respect of staff who had left the Company under previous VS programmes. ESB will make pension contributions in respect of those staff and the fair value of those future contributions are also recognised on the balance sheet. Amounts yet to be paid are subject to an annual financing charge and this is expensed in the income statement.

(ii) ESB Defined Contribution Pension Scheme

ESB also operates an approved defined contribution Scheme called ESB Defined Contribution Pension Scheme for employees of ESB subsidiary companies (other than NIE Networks) and, from 1 November 2010, new staff of the Parent. Contributions are paid by the members and the employer at fixed rates. The benefits secured at retirement reflect each employee's accumulated fund and the cost of purchasing benefits at that time. Death benefits are insured on a Group basis and may be paid in the form of a lump sum and/or survivor's pension. The pension charge for the year represents the defined employer contribution and amounted to €14.1 million (2018: €12.5 million).

(b) FM United Kingdom Stakeholder Scheme

In addition, ESB operates a stakeholder pension scheme in the UK for all its GB employees. Contributions are paid by the members and the employer at fixed rates. The benefits secured at retirement reflect each employee's accumulated fund and the cost of purchasing benefits at that time. Death benefits are insured on a Group basis and may be paid in the form of a lump sum and / or survivor's pension. The assets of this Scheme are held in individual stakeholder accounts managed by Legal & General Assurance Society Limited. The pension charge for the year represents the defined employer contribution and amounted to €1.0 million (2018: €0.8 million).

(c) Northern Ireland Electricity Pension Scheme

The majority of the employees in NIE Networks are members of the Northern Ireland Electricity Pension Scheme (the NIE Networks Scheme). This has two sections: Options, which is a money purchase arrangement whereby the employer generally matches the members' contributions up to a maximum of 7% of salary, and Focus which provides benefits based on pensionable salary at retirement or earlier exit from service. Focus has been closed to new members since 1998 and therefore under the projected unit credit method the current service cost for members of this section as a percentage of salary will increase as they approach retirement age. The assets of the NIE Networks Scheme are held under trust and invested by the Trustees on the advice of professional investment managers.

UK legislation requires that pension schemes are funded prudently. The last funding valuation of the Focus section of the scheme was carried out by a qualified actuary as at 31 March 2017 and showed a deficit of €154.7 million. The Company is paying deficit contributions of €19.4 million per annum (increasing in line with inflation) from 1 April 2018. The NIE Networks also pays contributions of 46.8% of pensionable salaries in respect of current accrual plus €90,000 monthly expenses (2018: 40.3% and €90,000 respectively), with active members paying a further 6% of pensionable salaries.

Profile of the Scheme

The net liability includes benefits for current employees, former employees and current pensioners. Broadly, about 20% of the liabilities are attributable to current employees, 5% to former employees and 75% to current pensioners. The Scheme duration is an indication of the weighted average time until benefit payments are made. For the NIE Networks Scheme, the duration is around 14 years (2018: 14 years) based on the last funding valuation.

Financial assumptions

The valuation of the Focus section of the NIE Networks Scheme by independent actuaries for the purpose of IAS 19 disclosures is based on the following assumptions:

	% at 31 December 2019	% at 31 December 2018
Rate of interest applied to discount liabilities ¹	2.00	2.80
Price inflation (CPI in the United Kingdom)	2.10	2.10
Rate of increase of pensionable salaries	2.75	3.20
Rate of increase of pensions in payment	2.10	2.10

¹The discount rate used in the calculation of the pension liability at 31 December 2019 was 2.0% (2018: 2.8%). This was determined by reference to market yields as at that date on high quality corporate bonds. The currency and term of the corporate bonds was consistent with the currency and estimated term of the post-employment benefit obligations.

NOTES TO THE FINANCIAL STATEMENTS

23. PENSION LIABILITIES (continued)

(c) Northern Ireland Electricity Pension Scheme (continued)

Mortality assumptions

The assumptions relating to life expectancy at retirement for members are set out below. These assumptions are based on standard actuarial mortality tables and include an allowance for future improvements in life expectancy.

	At 31 December 2019 Males Years	Females Years	At 31 December 2018 Males Years	Females Years
Current pensioners at aged 60	26.3	28.7	26.2	28.6
Future pensioners currently aged 40 (life expectancy age 60)	27.9	30.3	27.8	30.2

Pension assets and liabilities

The assets and liabilities in the Focus section of the NIE Networks Scheme are:

	At 31 December 2019 €m	At 31 December 2018 €m
Equities – quoted	253.3	256.7
Bonds – quoted	369.1	259.8
Multi-asset credit investments	443.2	422.6
Diversified growth – quoted	253.2	233.4
Cash	14.4	7.0
Fair value of plan assets	1,333.2	1,179.5
Present value of funded obligations	(1,449.2)	(1,290.3)
Net deficit	(116.0)	(110.8)

	At 31 December 2019 €m	At 31 December 2018 €m
Change in benefit obligation		
Benefit obligation at the beginning of the year	1,290.3	1,429.4
Movement during the year:		
Current service cost	6.1	7.8
Interest cost	35.7	34.7
Plan members' contributions	0.3	0.3
Actuarial loss / (gain) - impact of financial assumption changes	127.9	(50.1)
Actuarial gain - impact of demographic assumption changes	-	(51.7)
Actuarial (gain) / loss - experience loss	(3.0)	17.9
Benefits paid	(77.4)	(94.3)
Curtailed cost	0.1	4.7
Past service cost	-	1.9
Translation difference on benefit obligation in the year	69.2	(10.3)
Benefit obligation at the end of the year	1,449.2	1,290.3

Change in plan assets

	At 31 December 2019 €m	At 31 December 2018 €m
Fair value of plan assets at the beginning of the year	1,179.5	1,286.4
Movement during the year:		
Interest on plan assets	33.0	31.2
Actual returns on assets less interest	107.4	(64.7)
Employer contributions	28.6	31.8
Plan members' contributions	0.3	0.3
Actual admin expenses (incl PPF Levy) paid	(1.7)	(1.8)
Benefits paid	(77.4)	(94.3)
Translation difference on assets in the year	63.5	(9.4)
Fair value of plan assets at the end of the year	1,333.2	1,179.5

Actual return on plan assets for the year

	140.4	(33.5)
--	-------	--------

The curtailment loss (cost) arising in 2018 reflects the past service costs associated with the employees leaving the company under a restructuring exit arrangement.

Past service costs in 2018 arose from clarification of the law in respect of Guaranteed Minimum Pension Equalisation for male and female members.

The Group expects to make contributions of approximately €28.7 million to Focus in 2020.

NOTES TO THE FINANCIAL STATEMENTS

23. PENSION LIABILITIES (continued)

(c) Northern Ireland Electricity Pension Scheme (continued)

Analysis of the amounts recognised in the employee costs as part of the employee benefit charge were as follows:	2019	2018
	€m	€m
Current service cost	(6.1)	(7.8)
Curtailment cost	(0.1)	(4.7)
Past service cost	-	(1.9)
Actual admin expenses (incl PPF Levy) paid	(1.7)	(1.8)
Total defined benefit charge in year	(7.9)	(16.2)

Analysis of the amounts recognised in the finance costs, as net pension scheme interest:	2019	2018
	€m	€m
Interest on pension scheme assets	33.0	31.2
Interest on pension scheme liabilities	(35.7)	(34.7)
Net pension scheme charge	(2.7)	(3.5)

Analysis of the amounts recognised in the statement of comprehensive income (excluding translation)	2019	2018
	€m	€m
Actual returns on assets less interest	107.4	(64.7)
Actuarial (loss) / gain on liabilities	(124.9)	83.9
Net actuarial (loss) / gain	(17.5)	19.2

Sensitivity analysis

Reasonably possible changes at the reporting date to one of the relevant actuarial assumptions, holding other assumptions constant, would have affected the defined benefit obligation by the amounts shown below.

Pension liability	Impact on scheme liabilities (increase) / decrease	
	2019	2018
	€m	€m
Discount rate (0.1% increase)	19.1	15.7
Inflation rate (0.1% increase)	(17.8)	(14.6)
Future mortality (1 year increase)	(55.3)	(44.9)

Although the analysis does not take account of the full distribution of cash flows expected under the plan, it does provide an approximation of the sensitivity of the assumptions shown.

NOTES TO THE FINANCIAL STATEMENTS

24. LIABILITY - ESB PENSION SCHEME AND EMPLOYEE RELATED LIABILITIES

GROUP	Liability - ESB pension scheme €m	Employee related liabilities		Total €m
		Restructuring liabilities €m	Other €m	
Balance at 1 January 2018	394.3	61.2	50.8	112.0
Movements during the year:				
Charge to the income statement	-	13.7	53.2	66.9
Utilised during the year	(13.2)	(21.0)	(49.4)	(70.4)
Financing charge	14.1	-	-	-
Balance at 31 December 2018	395.2	53.9	54.6	108.5
Balance at 1 January 2019	395.2	53.9	54.6	108.5
Movements during the year:				
Charge to the income statement	-	55.2	68.1	123.3
Utilised during the year	(12.1)	(15.9)	(65.8)	(81.7)
Financing charge	9.5	-	-	-
Balance at 31 December 2019	392.6	93.2	56.9	150.1
Analysed as follows:				
Non-current liabilities	96.1	70.4	-	70.4
Current liabilities	296.5	22.8	56.9	79.7
Total	392.6	93.2	56.9	150.1

PARENT	Liability - ESB pension scheme €m	Employee related liabilities		Total €m
		Restructuring liabilities €m	Other €m	
Balance at 1 January 2018	394.3	60.0	40.6	100.6
Movements during the year:				
Charge to the income statement	-	5.3	44.5	49.8
Utilised during the year	(13.2)	(12.3)	(40.6)	(52.9)
Financing charge	14.1	-	-	-
Balance at 31 December 2018	395.2	53.0	44.5	97.5
Balance at 1 January 2019	395.2	53.0	44.5	97.5
Movements during the year:				
Charge to the income statement	-	55.2	63.4	118.6
Utilised during the year	(12.1)	(15.2)	(62.1)	(77.3)
Financing charge	9.5	-	-	-
Transfers from Group company	-	-	5.1	5.1
Balance at 31 December 2019	392.6	93.0	50.9	143.9
Analysed as follows:				
Non-current liabilities	96.1	70.3	-	70.3
Current liabilities	296.5	22.7	50.9	73.6
Total	392.6	93.0	50.9	143.9

NOTES TO THE FINANCIAL STATEMENTS

24. LIABILITY - ESB PENSION SCHEME AND EMPLOYEE RELATED LIABILITIES (continued)

Liability - ESB pension scheme

See note 23 (a) part (i).

Restructuring liabilities

This provision represents the estimated cost of providing post-employment payments to former employees, other than those amounts covered by the pension scheme. It includes liabilities for continuing payments to employees who left under past voluntary severance initiatives, which are expected to be materially discharged by 2035. Expected future cash flows are discounted to present value using long-term interest rates based on a zero discount curve at the reporting date plus an appropriate credit spread.

Other

In accordance with the requirements of IAS 19 Employee Benefits, provision has been made for employee remuneration liabilities, including accrued holiday leave and performance related payments.

25. TRADE AND OTHER PAYABLES

	GROUP		PARENT	
	2019	2018	2019	2018
	€m	€m	€m	€m
Current payables:				
Progress payments on work in progress	136.1	89.6	94.8	71.0
Trade payables	252.1	309.2	183.1	200.0
Capital creditors	78.9	66.4	59.0	48.4
Other payables	58.3	56.9	33.2	37.8
Payroll taxes	13.7	13.7	12.2	12.8
Pay related social insurance	5.7	5.3	4.7	4.5
Value added tax	42.6	42.8	14.7	13.4
Accruals	167.9	126.4	49.7	28.7
Amounts owed to subsidiary undertakings	-	-	4,258.0	4,044.8
Accrued interest on borrowings	79.3	78.8	41.8	40.7
Total	834.6	789.1	4,751.2	4,502.1

NOTES TO THE FINANCIAL STATEMENTS

26. DEFERRED INCOME

GROUP	Supply contributions and others €m
Balance at 1 January 2018	510.1
IFRS 15 transfer from property, plant and equipment	733.3
Restated balance at 1 January 2018	1,243.4
Receivable	148.8
Released to the income statement	(111.2)
Translation differences	(4.9)
Balance at 31 December 2018	1,276.1
Balance at 1 January 2019	1,276.1
Receivable	173.6
Released to the income statement	(122.7)
Translation differences	20.6
Balance at 31 December 2019	1,347.6
Analysed as follows:	
Non-current liabilities	1,259.3
Current liabilities	88.3
Total	1,347.6
	Supply contributions and others €m
PARENT	
Balance at 1 January 2018	469.6
IFRS 15 transfer from property, plant and equipment	382.8
Restated balance at 1 January 2018	852.4
Receivable	55.0
Released to the income statement	(49.4)
Balance at 31 December 2018	858.0
Restated balance at 1 January 2019	858.0
Receivable	98.3
Released to the income statement	(55.0)
Balance at 31 December 2019	901.3
Analysed as follows:	
Non-current liabilities	843.4
Current liabilities	57.9
Total	901.3

Non-repayable supply contributions and capital grants received prior to July 2009 were recorded as deferred income and released to the income statement on a basis consistent with the depreciation policy of the relevant assets.

As set out in note 1 all supply contributions (including contributions from July 2009 to 31 December 2017) are now recorded as deferred income and released to the income statement on a basis consistent with the depreciation policy of the related assets. Included in the Group balances above are supply contributions with a net book value of €733.3 million which were transferred from property, plant and equipment on 1 January 2018, due to this change in accounting treatment.

Included in the above Group closing balance are supply contributions €1,307.5 million (2018: €1,229.9 million) and deferred income €40.1 million (2018: €46.2 million).

NOTES TO THE FINANCIAL STATEMENTS

27. PROVISIONS

GROUP	Asset retirement provision €m	Emissions provision €m	Other €m	Total €m
Balance at 1 January 2018	260.7	68.9	84.3	413.9
Charged / (credited) to the income statement				
- Emission allowances	-	69.7	-	69.7
- Legal and other	-	-	15.0	15.0
- Asset retirement	2.2	-	-	2.2
Legal and other capitalised in the year	-	-	11.8	11.8
Provision capitalised in the year	19.9	-	-	19.9
ESOP provision charged to equity (note 32)	-	-	0.9	0.9
Utilised in the year	(1.9)	(59.5)	(19.1)	(80.5)
Financing charge	2.5	-	(0.5)	2.0
Translation differences	(0.2)	0.2	(0.1)	(0.1)
Balance at 31 December 2018	283.2	79.3	92.3	454.8
Balance at 1 January 2019	283.2	79.3	92.3	454.8
Charged / (credited) to the income statement				
- Emission allowances	-	105.4	-	105.4
- Legal and other	-	-	4.0	4.0
- Asset retirement	(6.8)	-	-	(6.8)
Reduction in other provisions capitalised	-	-	(9.7)	(9.7)
ESOP provision charged to equity (note 32)	-	-	0.3	0.3
Provision capitalised in the year (net)	10.8	-	-	10.8
Utilised in the year	(1.9)	(70.5)	(18.4)	(90.8)
Financing charge	2.4	-	-	2.4
Translation differences	1.6	-	0.5	2.1
Balance at 31 December 2019	289.3	114.2	69.0	472.5
Analysed as follows:				
Non-current liabilities	276.1	-	46.4	322.5
Current liabilities	13.2	114.2	22.6	150.0
Total	289.3	114.2	69.0	472.5

PARENT	Asset retirement provision €m	Emissions provision €m	Other €m	Total €m
Balance at 1 January 2018	227.8	41.1	78.3	347.2
Charged / (credited) to the income statement				
- Emission allowances	-	48.4	-	48.4
- Legal and other	-	-	3.1	3.1
- Asset retirement	2.0	-	-	2.0
Legal and other capitalised in the year	-	-	11.8	11.8
Provision capitalised in the year	(4.0)	-	-	(4.0)
ESOP provision charged to equity (note 32)	-	-	0.9	0.9
Utilised in the year	(1.9)	(36.6)	(18.1)	(56.6)
Financing charge	2.2	-	(0.5)	1.7
Balance at 31 December 2018	226.1	52.9	75.5	354.5
Balance at 1 January 2019	226.1	52.9	75.5	354.5
Charged / (credited) to the income statement				
- Emission allowances	-	47.9	-	47.9
- Legal and other	-	-	3.2	3.2
- Asset retirement	(7.5)	-	-	(7.5)
Reduction in other provisions capitalised	-	-	(9.7)	(9.7)
ESOP provision charged to equity (note 32)	-	-	0.3	0.3
Utilised in the year	(1.9)	(46.2)	(9.9)	(58.0)
Financing charge	2.1	-	-	2.1
Balance at 31 December 2019	218.8	54.6	59.4	332.8
Analysed as follows:				
Non-current liabilities	205.6	-	40.9	246.5
Current liabilities	13.2	54.6	18.5	86.3
Total	218.8	54.6	59.4	332.8

NOTES TO THE FINANCIAL STATEMENTS

27. PROVISIONS (continued)

Asset retirement provision

The Group provision at 31 December 2019 of €289.3 million (2018: €283.2 million) for asset retirement represents the present value of the current estimate of the costs arising from certain obligations in relation to the retirement and decommissioning of mainly generating stations, wind farms and ESB Networks creosote treated wood poles at the end of their useful economic lives.

The expected closure dates of generating stations are up to 2040. As the costs are provided on a discounted basis, a financing charge is included in the income statement and credited to the provision each year. The asset retirement provision is re-examined annually and the liability re-calculated in accordance with the most recent expected estimate.

Due to changes in estimates during the year ended 31 December 2019 the asset retirement provision increased by €4.0 million (2018: €22.1 million increase). The estimated value of future retirement costs at the balance sheet date includes physical dismantling, site remediation and associated costs.

There are a number of uncertainties that affect the calculation of the provision for asset retirement obligations, including the impact of regulation, the accuracy of the site surveys, unexpected contaminants, the impact of alternative technologies and changes in the discount rate. The Group has made its best estimate of the financial effect of these uncertainties in the calculation of the provision, but future material changes in any of the assumptions could materially impact on the calculation of the provision. Expected future cash flows are discounted to present value using an appropriate pre-tax discount rate.

Emissions provision

In accordance with the provisions of the European CO₂ emissions trading scheme, a provision is recognised to cover the liability for actual emissions during the year. Allowances purchased during the year are returned to the relevant Authority in charge of the scheme within four months from the end of that calendar year, in line with the actual emissions of CO₂ during the year. The provision represents the obligation to return emission allowances equal to the actual emissions. This obligation is measured at the carrying amount of the capitalised CO₂ emission allowances, in addition to the market value of any additional allowances required to settle the year end liability.

Other provisions

Other provisions represent estimates of liabilities to third parties, in respect of claims notified or provided for at year end. The year end provision includes an estimate for liabilities incurred but not yet reported.

Included in other provisions is an amount for gross insurance claims payable. Other receivables include €1.6 million insurance recoveries in respect of these claims.

NOTES TO THE FINANCIAL STATEMENTS

28. FINANCIAL RISK MANAGEMENT AND FAIR VALUE

(a) Overview of financial risk management

Risk environment

The main financial risks faced by the Group relate to foreign exchange (particularly movements in the value of the euro relative to sterling and the US dollar) and commodity (electricity and fuel) price movements. Liquidity risk, and exposure to interest rate volatility, are key long-term financial risks also, but have been substantially addressed in the short run. 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 as appropriate. During 2019 the Board has reviewed and approved the Group's Interest Rate, Foreign Exchange, and Funding & Liquidity policies. Group Treasury is responsible for the day-to-day treasury activities of the Group. The Finance and Investment Committee is regularly updated on key treasury matters, risk and associated mitigants.

Commodity price risk is managed by the front and middle office functions of the relevant business units: ESB Trading (within Generation and Trading) and Customer Solutions. This is done in the context of an overall Group risk management framework. These activities are reviewed regularly by Group Internal Audit and it is the responsibility of the Trading Risk Management Committees (overseen by the Group Trading Committee (GTC)) to ensure that internal audit findings and recommendations are adequately addressed. The Group Trading Risk Management function ensures that the Group's market, credit and operational risks are managed in a way designed to protect the Group from loss, while respecting the ring-fencing obligations in place between the business units.

Contracts entered into in order to hedge exposures arising from the production and sale of electricity may be divided into forward fuel price contracts, forward electricity price contracts and foreign exchange contracts. Financial instruments are derecognised on settlement or sale.

Risk reporting structure

Through the Chief Executive, the Board has delegated to the GTC the broader responsibility of managing ESB's trading risk in a manner consistent with the Group's risk tolerances and business strategies. The GTC has established risk limits to manage and limit trading risk exposure at Group and business unit level. These limits are documented for each of the ESB businesses engaged in wholesale trading activities. Furthermore the Group Trading Risk Management Policy is applicable to each of these businesses.

In both Generation and Trading and Customer Solutions, separate Trading Risk Management Committees meet on a monthly basis (or more frequently as required), and serve as the primary overseer of trading risk at individual ring-fenced business unit level. These committees include the head of the Front Office function, the Trading Risk (Middle Office) Manager, a representative from Group Trading Risk Management, and the business unit Financial Controller. The Trading Risk Management Committees are responsible for formulating trading risk strategy in accordance with the Group Trading Risk Management Policy and ensuring compliance with same, trading risk limit management, and for ensuring that an effective control framework is in place.

The Middle Office function in each business unit maintains a separate reporting line to the Group Trading Risk Management function, which is responsible for ensuring that the Group's net exposure to movements in commodity or other price movements is adequately managed in accordance with Group Trading Risk Management Policy.

Hedge accounting

ESB funds its operations using borrowings and uses deposit instruments to invest surplus funds. ESB also uses interest rate and foreign currency instruments to manage interest rate and currency risks that arise in the normal course of operations from US dollar and sterling denominated borrowings, from its foreign currency subsidiaries and from the use of foreign currency suppliers. Hedge accounting pursuant to IFRS 9 is used both for hedges of foreign currency liabilities and interest rate risks from current and non-current liabilities.

In addition, the Group enters into certain commodity hedging transactions to fix fuel costs and to link electricity revenues more closely to fuel inputs, where possible. The Group decides at inception whether to designate financial instruments into hedge relationships. Certain arrangements meet the specific hedging accounting criteria of IFRS 9.

Within its regular course of business, the Group routinely enters into sale and purchase contracts for commodities, including gas and electricity. Where the contract was entered into and continues to be held for the purposes of receipt or delivery of the commodities in accordance with the Group's expected sale, purchase or usage requirements, the contracts are designated as own use contracts and are accounted for as executory contracts. These contracts are therefore not within the scope of IFRS 9 - Financial Instruments.

NOTES TO THE FINANCIAL STATEMENTS

28. FINANCIAL RISK MANAGEMENT AND FAIR VALUE (continued)

(b) Overview of financial assets and liabilities

Financial assets and liabilities, excluding employee related liabilities, at 31 December 2019 and at 31 December 2018 can be analysed as follows:

GROUP	Financial assets at fair value through profit or loss		Assets / liabilities held at amortised cost		Derivative financial instruments with hedging relationships		Derivative financial instruments with no hedging relationships		Total	
	2019 €m	2018 €m	2019 €m	2018 €m	2019 €m	2018 €m	2019 €m	2018 €m	2019 €m	2018 €m
ASSETS										
Non-current assets										
Trade and other receivables	-	-	12.4	47.2	-	-	-	-	12.4	47.2
Financial asset investments	13.4	10.5	-	-	-	-	-	-	13.4	10.5
Derivative financial instruments	-	-	-	-	37.4	48.8	28.1	19.8	65.5	68.6
Total non-current financial assets	13.4	10.5	12.4	47.2	37.4	48.8	28.1	19.8	91.3	126.3
Current assets										
Trade and other receivables*	-	-	1,029.7	852.7	-	-	-	-	1,029.7	852.7
Cash and cash equivalents	-	-	125.1	229.1	-	-	-	-	125.1	229.1
Derivative financial instruments	-	-	-	-	44.4	90.9	200.4	65.6	244.8	156.5
Total current financial assets	-	-	1,154.8	1,081.8	44.4	90.9	200.4	65.6	1,399.6	1,238.3
Total financial assets	13.4	10.5	1,167.2	1,129.0	81.8	139.7	228.5	85.4	1,490.9	1,364.6
LIABILITIES										
Non-current liabilities										
Borrowings and other debt	-	-	4,751.7	4,537.7	-	-	-	-	4,751.7	4,537.7
Lease liabilities	-	-	112.4	-	-	-	-	-	112.4	-
Derivative financial instruments	-	-	-	-	51.7	70.6	610.8	554.6	662.5	625.2
Total non-current financial liabilities	-	-	4,864.1	4,537.7	51.7	70.6	610.8	554.6	5,526.6	5,162.9
Current liabilities										
Borrowings and other debt	-	-	480.7	606.3	-	-	-	-	480.7	606.3
Lease liabilities	-	-	19.6	-	-	-	-	-	19.6	-
Trade and other payables**	-	-	772.6	727.4	-	-	-	-	772.6	727.4
Derivative financial instruments	-	-	-	-	39.5	13.6	228.3	94.7	267.8	108.3
Total current financial liabilities	-	-	1,272.9	1,333.7	39.5	13.6	228.3	94.7	1,540.7	1,442.0
Total financial liabilities	-	-	6,137.0	5,871.4	91.2	84.2	839.1	649.3	7,067.3	6,604.9

* Prepayments have been excluded as they are not classified as a financial asset.

** VAT and employment taxes have been excluded as these are statutory liabilities.

The Group's provisions and employee related liabilities are not analysed in the table above, or in the further analysis on the following page. This includes the liability for pension obligation of €392.6 million at 31 December 2019 (2018: €395.2 million). See notes 23 and 24 in relation to this and employee related liabilities.

NOTES TO THE FINANCIAL STATEMENTS

28. FINANCIAL RISK MANAGEMENT AND FAIR VALUE (continued)

(b) Overview of financial assets and liabilities (continued)

	Financial assets at fair value through profit or loss		Assets / liabilities held at amortised cost		Derivative financial instruments with hedging relationships		Derivative financial instruments with no hedging relationships		Total	
	2019 €m	2018 €m	2019 €m	2018 €m	2019 €m	2018 €m	2019 €m	2018 €m	2019 €m	2018 €m
PARENT										
ASSETS										
Non-current assets										
Derivative financial instruments	-	-	-	-	4.4	0.7	23.4	15.6	27.8	16.3
Total non-current financial assets	-	-	-	-	4.4	0.7	23.4	15.6	27.8	16.3
Current assets										
Trade and other receivables*	-	-	3,676.8	3,361.2	-	-	-	-	3,676.8	3,361.2
Cash and cash equivalents	-	-	58.2	122.3	-	-	-	-	58.2	122.3
Derivative financial instruments	-	-	-	-	1.0	42.1	200.4	65.6	201.4	107.7
Total current financial assets	-	-	3,735.0	3,483.5	1.0	42.1	200.4	65.6	3,936.4	3,591.2
Total financial assets	-	-	3,735.0	3,483.5	5.4	42.8	223.8	81.2	3,964.2	3,607.5
LIABILITIES										
Non-current liabilities										
Borrowings and other debt	-	-	887.3	959.3	-	-	-	-	887.3	959.3
Lease liabilities	-	-	58.9	-	-	-	-	-	58.9	-
Derivative financial instruments	-	-	-	-	12.6	23.3	30.4	6.7	43.0	30.0
Total non-current financial liabilities	-	-	946.2	959.3	12.6	23.3	30.4	6.7	989.2	989.3
Current liabilities										
Borrowings and other debt	-	-	155.7	390.3	-	-	-	-	155.7	390.3
Lease liabilities	-	-	12.8	-	-	-	-	-	12.8	-
Trade and other payables**	-	-	4,719.6	4,471.4	-	-	-	-	4,719.6	4,471.4
Derivative financial instruments	-	-	-	-	0.9	2.9	211.4	80.8	212.3	83.7
Total current financial liabilities	-	-	4,888.1	4,861.7	0.9	2.9	211.4	80.8	5,100.4	4,945.4
Total financial liabilities	-	-	5,834.3	5,821.0	13.5	26.2	241.8	87.5	6,089.6	5,934.7

* Prepayments have been excluded as they are not classified as a financial asset.

** VAT and employment taxes have been excluded as these are statutory liabilities.

The Parent's employee related liabilities are not analysed in the table above, or in the further analysis on the following page. This includes the liability for pension obligation of €392.6 million at 31 December 2019 (2018: €395.2 million).

See notes 23 and 24 in relation to this and employee related liabilities.

NOTES TO THE FINANCIAL STATEMENTS

28. FINANCIAL RISK MANAGEMENT AND FAIR VALUE (continued)

(c) Funding and liquidity management

The following table sets out the contractual maturities of financial liabilities (and assets of a similar nature), including the interest payments associated with borrowings and the undiscounted net cash flows attributable to derivative financial instruments. Borrowings with a carrying value of €4,189.4 million (2018: €3,794.3 million) and net derivative financial instrument liabilities of €593.9 million (2018: €518.7 million) are included in the Group balances below, but do not comprise part of the Parent's assets and liabilities as they are not held directly by the Parent. See notes 13, 21, 22 and 25 for further analysis of Group and Parent financial assets and liabilities.

	Carrying amount €m	Contractual cash outflows / inflows - net €m	Within 1 year €m	1-2 years €m	2-5 years €m	More than 5 years €m
GROUP						
31 December 2019						
Borrowings	5,232.4	6,369.6	643.4	270.4	1,144.4	4,311.4
Lease liabilities	132.0	138.3	15.1	10.4	25.8	87.0
Trade and other payables (excluding tax balances and accrued interest on borrowings)	693.3	693.3	693.3	-	-	-
Derivative financial instruments	930.3	981.2	272.7	72.2	200.6	435.7
Total liabilities	6,988.0	8,182.4	1,624.5	353.0	1,370.8	4,834.1
Derivative financial instruments	310.3	310.3	245.5	58.7	6.0	0.1
Total assets	310.3	310.3	245.5	58.7	6.0	0.1
Net liabilities	6,677.7	7,872.1	1,379.0	294.3	1,364.8	4,834.0
31 December 2018						
Borrowings	5,144.0	6,289.0	776.6	541.6	884.3	4,086.5
Trade and other payables (excluding tax balances and accrued interest on borrowings)	648.6	648.6	648.6	-	-	-
Derivative financial instruments	733.5	806.1	110.4	45.8	205.6	444.3
Total liabilities	6,526.1	7,743.7	1,535.6	587.4	1,089.9	4,530.8
Derivative financial instruments	225.1	234.3	160.2	31.9	26.3	15.9
Total assets	225.1	234.3	160.2	31.9	26.3	15.9
Net liabilities	6,301.0	7,509.4	1,375.4	555.5	1,063.6	4,514.9

	Carrying amount €m	Contractual cash outflows / inflows - net €m	Within 1 year €m	1-2 years €m	2-5 years €m	More than 5 years €m
PARENT						
31 December 2019						
Borrowings	1,043.0	1,235.4	197.1	168.5	538.3	331.5
Lease liabilities	71.7	80.2	11.2	6.5	15.4	47.1
Trade and other payables (excluding tax balances and accrued interest on borrowings)	4,677.8	4,677.8	4,677.8	-	-	-
Derivative financial instruments	255.3	253.7	216.7	18.4	8.3	10.3
Total liabilities	6,047.8	6,247.1	5,102.8	193.4	562.0	388.9
Derivative financial instruments	229.2	229.4	202.2	20.5	6.6	0.1
Total assets	229.2	229.4	202.2	20.5	6.6	0.1
Net liabilities	5,818.6	6,017.7	4,900.6	172.9	555.4	388.8
31 December 2018						
Borrowings	1,349.6	1,558.5	439.0	122.1	608.8	388.6
Trade and other payables (excluding tax balances and accrued interest on borrowings)	4,430.7	4,430.7	4,430.7	-	-	-
Derivative financial instruments	113.7	116.4	84.7	7.1	1.1	23.5
Total liabilities	5,894.0	6,105.6	4,954.4	129.2	609.9	412.1
Derivative financial instruments	124.0	132.1	110.0	3.6	2.6	15.9
Total assets	124.0	132.1	110.0	3.6	2.6	15.9
Net liabilities	5,770.0	5,973.5	4,844.4	125.6	607.3	396.2

NOTES TO THE FINANCIAL STATEMENTS

28. FINANCIAL RISK MANAGEMENT AND FAIR VALUE (continued)

(d) Master netting or similar agreements

The Group enters into derivative transactions under International Swaps and Derivatives Association (ISDA) master netting agreements. The ISDA agreements do not meet the criteria for offsetting in the consolidated balance sheet. This is because the Group does not have any current legally enforceable right to offset recognised amounts, because the right to offset is enforceable only on the occurrence of future events such as a default on the bank loans or other credit events.

The following table sets out the carrying amounts of recognised financial instruments that are subject to the above agreements.

GROUP	Gross amount of financial instruments in the statement of financial position €m	Amounts not offset on the balance sheet €m	Net amount €m
31 December 2019			
Financial assets			
Interest rate swaps	5.7	(5.0)	0.7
Foreign exchange contracts	25.3	(20.1)	5.2
Forward fuel price contracts	198.0	(194.0)	4.0
Forward electricity price contracts	81.3	(77.5)	3.8
	310.3	(296.6)	13.7
Financial liabilities			
Interest rate swaps	(1.9)	0.9	(1.0)
Inflation linked interest rate swaps	(595.4)	-	(595.4)
Currency swaps	(24.9)	10.3	(14.6)
Foreign exchange contracts	(12.7)	12.1	(0.6)
Forward fuel price contracts	(295.4)	273.3	(22.1)
	(930.3)	296.6	(633.7)
31 December 2018			
Financial assets			
Interest rate swaps	5.1	(2.7)	2.4
Currency swaps	39.6	(10.9)	28.7
Foreign exchange contracts	3.2	(2.3)	0.9
Forward fuel price contracts	93.4	(18.1)	75.3
Forward electricity price contracts	83.8	(57.0)	26.8
	225.1	(91.0)	134.1
Financial liabilities			
Interest rate swaps	(3.8)	1.4	(2.4)
Inflation linked interest rate swaps	(558.3)	-	(558.3)
Currency swaps	(21.3)	13.4	(7.9)
Foreign exchange contracts	(2.4)	2.3	(0.1)
Forward fuel price contracts	(146.7)	73.0	(73.7)
Forward electricity price contracts	(1.0)	0.9	(0.1)
	(733.5)	91.0	(642.5)

NOTES TO THE FINANCIAL STATEMENTS

28. FINANCIAL RISK MANAGEMENT AND FAIR VALUE (continued)

(d) Master netting or similar agreements (continued)

PARENT	Gross amount of financial instruments in the statement of financial position €m	Amounts not offset on the balance sheet €m	Net amount €m
31 December 2019			
Financial assets			
Interest rate swaps	1.1	(0.8)	0.3
Foreign exchange contracts	30.1	(20.8)	9.3
Forward fuel price contracts	198.0	(193.9)	4.1
	229.2	(215.5)	13.7
Financial liabilities			
Currency swaps	(24.9)	10.6	(14.3)
Foreign exchange contracts	(12.5)	12.5	-
Forward fuel price contracts	(217.9)	192.4	(25.5)
	(255.3)	215.5	(39.8)
31 December 2018			
Financial assets			
Interest rate swaps	0.9	-	0.9
Currency swaps	39.6	(7.2)	32.4
Foreign exchange contracts	3.2	(1.1)	2.1
Forward fuel price contracts	80.3	(77.6)	2.7
	124.0	(85.9)	38.1
Financial liabilities			
Interest rate swaps	(0.2)	-	(0.2)
Currency swaps	(21.3)	7.8	(13.5)
Foreign exchange contracts	(2.7)	1.6	(1.1)
Forward fuel price contracts	(89.5)	76.6	(12.9)
	(113.7)	86.0	(27.7)

NOTES TO THE FINANCIAL STATEMENTS

28. FINANCIAL RISK MANAGEMENT AND FAIR VALUE (continued)

(e) Credit risk

Credit risk arises from cash and cash equivalents, derivative financial instruments and deposits with banks and financial institutions, as well as credit exposures to wholesale and retail customers, including amounts due from equity accounted investees, outstanding receivables and committed transactions. In Parent credit risk also arises in respect of amounts due from subsidiary undertakings.

	2019		2018	
	GROUP €m	PARENT €m	GROUP €m	PARENT €m
Financial assets				
Trade and other receivables*	1,042.1	3,676.8	899.8	3,398.6
Cash and cash equivalents	125.1	58.2	229.1	122.3
Derivative financial instruments	310.3	229.2	225.1	124.0
	1,477.5	3,964.2	1,354.0	3,644.9

*Prepayments have been excluded as they are not classified as a financial asset.

Trade and other receivables

Wholesale and credit risk arising from trade and other receivables has been disclosed in note 17. Trade and other receivables in Parent include amounts due from subsidiary undertakings.

Treasury related credit risk (relating to cash and derivative instruments)

The Group is exposed to credit risk from the counterparties with whom it holds its bank accounts and transacts with in the financial markets. The Group's policy is to limit its exposure to each financial institution based on accepted credit ratings of not less than BBB- or equivalent.

Trading in derivatives is performed to mitigate financial risks and is executed in compliance with the Specification and Requirements of the Minister for Finance issued under the aegis of the Financial Transactions of Certain Companies and Other Bodies Act 1992, most recently in December 2017. The Specification and Requirements outline the type of derivatives which ESB can transact and the associated requirements which ESB must satisfy regarding each derivative counterparty. Dealing activities are controlled by putting in place robust dealing mandates with counterparties. The Group does not hold or trade derivative instruments for speculative purposes. Exposures, related limits and compliance with the Minister's Specification and Requirements are subject to ongoing review and monitoring. The Group has not experienced any losses due to failure of such counterparties to deliver on their obligations.

Financial Guarantees

The Group enters into various commitments. These consist of financial guarantees, letters of credit and other commitments. Even though these obligations may not be recognised on the Group balance sheet, credit risk exists in relation to these instruments as they commit the Group to make payments on behalf of subsidiary companies in the event of a specific act and therefore they form part of the overall risk of the Group.

The nominal values of such commitments are listed below:

	2019 €m	2018 €m
Financial guarantees	316.8	365.5
Letters of credit	333.0	289.0
Other	3.4	4.7
Total	653.2	659.2

Commodity credit risk (relating to derivatives)

The Group also has credit risk associated with commodity positions. These arise from derivative financial instruments that are entered into to hedge energy and fuel price risks and are managed in accordance with the Minister's Specification and Requirements (Financial Transactions of Certain Companies and Other Bodies Act 1992). The Group establishes counterparty credit risk limits to restrict uncollateralised exposure. Net exposures, collateral requirements and compliance are monitored on an ongoing basis. Collateral, in the form of bonds and guarantees, is required by ESB business units from various parties, specifically in the form of Letters of Credit from certain power Contract for Differences (CfD) counterparties. Total collateral held at year end 31 December 2019 was €42.2 million (2018: €35.2 million). The Group is cognisant of any changes in the creditworthiness of counterparties, and all appropriate steps are taken to further secure the Group's position, both by negotiating adequate protections in advance in the underpinning contractual master agreements and active management of any exposures, particularly where indications exist of a deterioration in the financial standing of counterparties.

NOTES TO THE FINANCIAL STATEMENTS

28. FINANCIAL RISK MANAGEMENT AND FAIR VALUE (continued)

(f) Foreign currency risk management

Foreign currency exposures arise mainly through the purchase of fuel and power, station overhaul costs, other purchases denominated in foreign currencies, borrowings in foreign currencies (including the private placement as described in note 21) and investments outside the Eurozone.

Foreign currency forward purchase contracts and cross currency swaps are used to reduce volatility arising from foreign currency exposures. The foreign currency forward purchase contracts in place at 31 December 2019 relate to forecast cash flows expected to occur up to 2028.

At year end, ESB's total debt portfolio amounted to €5.2 billion (2018: €5.1 billion), of which the Parent held €1.0 billion (2018: €1.3 billion). The underlying debt, before and after swaps, was denominated in the following currencies:

GROUP	Before swaps		After swaps	
	2019 (%)	2018 (%)	2019 (%)	2018 (%)
Currency				
Euro	69	65	72	65
US dollar	4	8	-	-
Sterling	27	27	28	35
Total	100	100	100	100

PARENT	Before swaps		After swaps	
	2019 (%)	2018 (%)	2019 (%)	2018 (%)
Currency				
Euro	58	51	66	51
US dollar	22	32	-	-
Sterling	20	17	34	49
Total	100	100	100	100

As shown above, the majority of the debt portfolio is either denominated in or swapped into euro for both principal and interest, thereby reducing the foreign currency risk exposure in the Group. In managing its foreign operations, the Group is cognisant of borrowings in currencies that match the functional currency of the foreign operation. Therefore a proportion of debt is sterling-denominated primarily as a result of the NIE Networks acquisition and the operations of Carrington Power Limited.

A change of 10% in foreign currency exchange rates at 31 December 2019 would increase equity and profit before taxation by the amount set out below. This analysis assumes that all other variables remain constant.

GROUP	31 December 2019		31 December 2018	
	Other comprehensive income gain / (loss) €m	Profit before taxation gain / (loss) €m	Other comprehensive income gain / (loss) €m	Profit before taxation gain / (loss) €m
10% strengthening				
US dollar	0.5	1.3	(8.1)	1.6
Sterling	154.1	15.9	151.8	(2.3)
10% weakening				
US dollar	0.6	(1.6)	9.8	(2.0)
Sterling	(188.3)	(19.5)	(185.5)	3.0

The following assumptions were made in respect of the sensitivity analysis above:

- changes in the carrying value of derivative financial instruments not in hedging relationships affect the income statement only;
- changes in the carrying value of derivative financial instruments that are cash flow hedges impact other comprehensive income only;
- changes in the carrying value of derivative financial instruments designated as net investment hedges arising from movements in the euro to sterling exchange rate are recorded directly in equity, with no ineffectiveness assumed.

NOTES TO THE FINANCIAL STATEMENTS

28. FINANCIAL RISK MANAGEMENT AND FAIR VALUE (continued)

(g) Commodity price risk management

The volatility of the fuel prices required for the Group's electricity generation activities has been significant in recent years and the resulting exposures to fuel price movements are managed by the Group on a selective hedging basis. The Group has entered into forward commodity price contracts in relation to the purchase of gas and coal required for electricity generation activities, refer to note 22 for further details. Forward fuel price contracts are valued based on physical volumes contracted and outstanding, and on the forward prices of products of a similar nature, at the balance sheet date, discounted where necessary based on an appropriate forward interest curve.

Within its regular course of business, the Group routinely enters into sale and purchase contracts for commodities, including gas and electricity. Where the contract was entered into and continues to be held for the purposes of receipt or delivery of the commodities in accordance with the Group's expected sale, purchase or usage requirements, the contracts are designated as own use contracts and are accounted for as executory contracts.

A general increase of 10% in the price of gas and coal at 31 December 2019 would impact equity and profit before taxation by the amount set out below. This analysis assumes that all other variables, in particular foreign exchange rates remain constant and includes the impact of the value of commodity swaps in place. A 10% reduction would have an equal and opposite effect, on the basis that all other variables remain constant.

GROUP	31 December 2019		31 December 2018	
	Other comprehensive income gain €m	Profit before taxation (loss) €m	Other comprehensive income gain €m	Profit before taxation gain €m
Gain / (loss) due to 10% increase in gas and coal prices	8.3	(2.0)	25.9	1.4

PARENT	31 December 2019		31 December 2018	
	Other comprehensive income gain €m	Profit before taxation (loss) €m	Other comprehensive income gain €m	Profit before taxation gain €m
Gain / (loss) due to 10% increase in gas and coal prices	0.1	(2.0)	9.7	1.4

A general increase of 10% in the Wholesale Electricity Price of the I-SEM at 31 December 2019 would impact other comprehensive income and profit before taxation by the amounts set out below. This analysis assumes that all other variables, in particular foreign exchange rates remain constant. A 10% reduction would have an equal and opposite effect, on the basis that all other variables remained constant.

GROUP	31 December 2019		31 December 2018	
	Other comprehensive income loss €m	Profit before taxation loss €m	Other comprehensive income loss €m	Profit before taxation loss €m
Loss due to 10% increase in the Wholesale Electricity Price	(16.8)	-	(19.1)	-

PARENT	31 December 2019		31 December 2018	
	Other comprehensive income gain / (loss) €m	Profit before taxation gain / (loss) €m	Other comprehensive income gain / (loss) €m	Profit before taxation gain / (loss) €m
Gain / (loss) due to 10% increase in the Wholesale Electricity Price	-	-	-	-

The sensitivity analysis provided above for the Group and Parent has been calculated as at 31 December 2019 using the following base commodity prices and foreign currency rates:

	2019	2018
Gas (Stg. p/therm)	39.70	58.06
Wholesale Electricity Prices (€/MWh)	51.41	64.51
Coal (US\$/tonne)	56.50	85.90
Foreign currency rate (US\$ = €1)	1.12	1.15
Foreign currency rate (Stg£ = €1)	0.8508	0.8945

NOTES TO THE FINANCIAL STATEMENTS

28. FINANCIAL RISK MANAGEMENT AND FAIR VALUE (continued)

(h) Fair value

The fair values of financial assets and liabilities carried at amortised cost together with the carrying amounts shown in the balance sheet are as follows:

	GROUP		PARENT	
	Carrying value €m	Fair value €m	Carrying value €m	Fair value €m
31 December 2019				
Long-term debt	4,751.7	5,351.6	887.3	975.5
Short-term borrowings	480.7	505.6	155.7	177.2
Lease liabilities	132.0	132.0	71.7	71.7
Total borrowings	5,364.4	5,989.2	1,114.7	1,224.4
Current trade and other payables	772.6	772.6	4,719.6	4,719.6
Non-current trade and other receivables	(12.4)	(12.4)	-	-
Current trade and other receivables	(1,029.7)	(1,029.7)	(3,676.8)	(3,676.8)
Cash and cash equivalents	(125.1)	(125.1)	(58.2)	(58.2)
Net liabilities	4,969.8	5,594.6	2,099.3	2,209.0

	GROUP		PARENT	
	Carrying value €m	Fair value €m	Carrying value €m	Fair value €m

31 December 2018				
Long-term debt	4,537.7	5,364.7	959.3	988.4
Short-term borrowings	606.3	626.3	390.3	398.6
Total borrowings	5,144.0	5,991.0	1,349.6	1,387.0
Current trade and other payables	727.4	727.4	4,471.4	4,471.4
Non-current trade and other receivables	(47.2)	(47.2)	-	-
Current trade and other receivables	(852.7)	(852.7)	(3,361.2)	(3,361.2)
Cash and cash equivalents	(229.1)	(229.1)	(122.3)	(122.3)
Net liabilities	4,742.4	5,589.4	2,337.5	2,374.9

Current trade and other receivables and trade and other payables are all due within one year, and have been provided for where impaired, their carrying value is considered to be materially in line with their fair value.

ESB Eurobonds and NIE Networks Sterling bonds are regarded as Level 1 fair values. The fair value of these bonds are derived from observation of the most recent traded values for these bonds in liquid markets at the balance sheet date. Other borrowings and debt are Level 2 fair values. The primary valuation technique used for borrowings and other debt classified as Level 2 fair values is discounting of the future associated cash flows using the zero coupon discount curve of the relevant currency.

Fair value - discount rates

The interest rates used to discount future estimated cash flows, where applicable, are based on the applicable EURIBOR or LIBOR yield curve at the reporting date plus an appropriate constant credit spread.

NOTES TO THE FINANCIAL STATEMENTS

28. FINANCIAL RISK MANAGEMENT AND FAIR VALUE (continued)

(i) Fair value hierarchy

The table below analyses financial assets and liabilities carried at fair value, by valuation method. The different levels relevant to financial assets and liabilities held by the Group have been defined as follows:

- Level 2: inputs, other than unadjusted quoted prices in active markets for identical assets and liabilities, that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices);
- Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs).

GROUP	Level 2 €m	Level 3 €m	Total €m
31 December 2019			
ASSETS			
Derivative financial instruments			
- Interest rate swaps	5.7	-	5.7
- Foreign exchange contracts	25.3	-	25.3
- Forward fuel price contracts	198.0	-	198.0
- Forward electricity price contracts	-	81.3	81.3
Financial assets at fair value through profit or loss	-	13.4	13.4
	229.0	94.7	323.7
LIABILITIES			
Derivative financial instruments			
- Interest rate swaps	(1.9)	-	(1.9)
- Currency swaps	(24.9)	-	(24.9)
- Foreign exchange contracts	(12.7)	-	(12.7)
- Forward fuel price contracts	(217.9)	(77.5)	(295.4)
- Inflation-linked interest rate swaps	(595.4)	-	(595.4)
	(852.8)	(77.5)	(930.3)
Net (liability) / asset	(623.8)	17.2	(606.6)
	Level 2 €m	Level 3 €m	Total €m
31 December 2018			
ASSETS			
Derivative financial instruments			
- Interest rate swaps	5.1	-	5.1
- Currency swaps	39.6	-	39.6
- Foreign exchange contracts	3.2	-	3.2
- Forward fuel price contracts	80.4	13.0	93.4
- Forward electricity price contracts	-	83.8	83.8
Financial assets at fair value through profit or loss	-	10.5	10.5
	128.3	107.3	235.6
LIABILITIES			
Derivative financial instruments			
- Interest rate swaps	(3.8)	-	(3.8)
- Currency swaps	(21.3)	-	(21.3)
- Foreign exchange contracts	(2.4)	-	(2.4)
- Forward fuel price contracts	(89.4)	(57.3)	(146.7)
- Forward electricity price contracts	-	(1.0)	(1.0)
- Inflation-linked interest rate swaps	(558.3)	-	(558.3)
	(675.2)	(58.3)	(733.5)
Net (liability) / asset	(546.9)	49.0	(497.9)

When interpreting the positive and negative fair values of derivative financial instruments, it should be noted that they are matched with underlying offsetting risks. The fair value of derivative financial instruments is determined by discounting the difference between the contractual forward price and the current forward price for the residual maturity of the contract using a risk-free interest rate.

NOTES TO THE FINANCIAL STATEMENTS

28. FINANCIAL RISK MANAGEMENT AND FAIR VALUE (continued)

(i) Fair value hierarchy (continued)

PARENT	Level 2 €m	Level 3 €m	Total €m
31 December 2019			
ASSETS			
Derivative financial instruments			
- Interest rate swaps	1.1	-	1.1
- Foreign exchange contracts	30.1	-	30.1
- Forward fuel price contracts	198.0	-	198.0
	229.2	-	229.2
LIABILITIES			
Derivative financial instruments			
- Currency swaps	(24.9)	-	(24.9)
- Foreign exchange contracts	(12.5)	-	(12.5)
- Forward fuel price contracts	(217.9)	-	(217.9)
	(255.3)	-	(255.3)
Net Liability	(26.1)	-	(26.1)
	Level 2 €m	Level 3 €m	Total €m
31 December 2018			
ASSETS			
Derivative financial instruments			
- Interest rate swaps	0.9	-	0.9
- Currency swaps	39.6	-	39.6
- Foreign exchange contracts	3.2	-	3.2
- Forward fuel price contracts	80.3	-	80.3
	124.0	-	124.0
LIABILITIES			
Derivative financial instruments			
- Interest rate swaps	(0.2)	-	(0.2)
- Currency swaps	(21.3)	-	(21.3)
- Foreign exchange contracts	(2.7)	-	(2.7)
- Forward fuel price contracts	(89.5)	-	(89.5)
	(113.7)	-	(113.7)
Net asset	10.3	-	10.3

NOTES TO THE FINANCIAL STATEMENTS

28. FINANCIAL RISK MANAGEMENT AND FAIR VALUE (continued)

(i) Fair value hierarchy (continued)

Measurement of fair values - valuation techniques and significant unobservable inputs

The following table shows the valuation technique used in measuring Level 2 and Level 3 fair values, as well as the significant unobservable inputs used.

Type	Valuation techniques	Significant unobservable inputs	Inter relationship between significant unobservable inputs and fair value measurement
Currency swaps, foreign exchange contracts and interest rate swaps	Level 2 - Present valuation of future cash flows contracted using market observable inputs and discounted back to present value.		
Forward fuel and electricity price contracts	Level 2 - The fair value of forward fuel contracts is determined by reference to gas, coal and carbon prices with the resulting value discounted to present values. Level 3 - The fair value of some specific forward fuel and electricity contracts are determined by reference to forward electricity prices which are unobservable.	Forward electricity prices	The estimated fair value would increase / (decrease) if Wholesale Electricity Price was higher / (lower). Generally a change in gas prices is accompanied by a directionally similar change in Wholesale Electricity Price.
Inflation-linked interest rate swaps	Level 2 - Independent valuations are used and validated using the present valuation of expected cash flows using the interest rate yield curve of the relevant currency. The zero-coupon curve is based on using the interest rate yield curve of the relevant currency.		
Financial assets at fair value through profit or loss	Financial assets at fair value through profit or loss are carried at fair value. Where applicable, valuations are based on the most recent information available at the period end, taking into account any other known and relevant factors. Unquoted investments are valued by deriving an enterprise value using one of the following methodologies: <ul style="list-style-type: none"> the price of a recent investment; revenue multiple; cost, less any required provision; realised value. 	Forecast annual revenue growth rate. Forecast gross margin	Novusmodus typically assess the value of investments based on its expectations of the proceeds which could be realised in a disposal. See note 7 and 15. This value will usually be driven by a number of inputs including the ability of the investee to grow its revenue and associated margins leading to higher EBITDA thus higher values.

NOTES TO THE FINANCIAL STATEMENTS

28. FINANCIAL RISK MANAGEMENT AND FAIR VALUE (continued)

(i) Fair value hierarchy (continued)

The following table shows a reconciliation from opening balances at 1 January 2018 to the year ended 31 December 2019 for fair value measurements in Level 3 of the fair value hierarchy:

GROUP	Financial assets at fair value through profit or loss €m	Forward electricity price contracts €m	Forward fuel price contracts €m	Total €m
Balance at 1 January 2018	22.2	93.3	1.8	117.3
Additions	1.3	58.1	(57.3)	2.1
Total gains / (losses):				
- in profit or loss	(12.0)	-	-	(12.0)
- in OCI	-	(28.1)	36.6	8.5
Settlements	(1.0)	(40.5)	(25.4)	(66.9)
Balance 31 December 2018 - net	10.5	82.8	(44.3)	49.0
Balance 1 January 2019	10.5	82.8	(44.3)	49.0
Additions	2.9	30.5	(26.1)	7.3
Total gains / (losses):				
- in OCI	-	(13.5)	9.7	(3.8)
Settlements	-	(18.5)	(16.8)	(35.3)
Balance 31 December 2019 - net	13.4	81.3	(77.5)	17.2

Financial assets at fair value through profit or loss are carried at fair value. Where applicable, valuations are based on the most recent independent information available at year end, taking into account any other known and relevant factors.

Unquoted investments are valued by deriving an enterprise value using one of the following methodologies:

- the price of a recent investment;
- revenue multiple;
- cost, less any required provision;
- realised value.

As this requires the use of model based valuation techniques, with a number of unobservable inputs, all financial assets at fair value through profit or loss have been categorised as Level 3 investments in the current year.

Forward fuel price contracts and forward electricity price contracts included at Level 3 in the fair value hierarchy relate to long-term contracts whose valuations are based on a number of forward price assumptions, with some unobservable inputs, including assumed forward electricity, carbon and gas inputs for longer term periods.

Sensitivity analysis - Level 3 fair values

For the fair values of forward fuel and electricity price contracts, reasonably possible changes at the reporting date to one of the significant unobservable inputs, holding other inputs constant, would have the following effects:

GROUP	31 December 2019		31 December 2018	
	Other comprehensive income gain / (loss) €m	Profit before taxation gain / (loss) €m	Other comprehensive income gain / (loss) €m	Profit before taxation gain / (loss) €m
Gain due to 10% increase in gas prices	8.3	-	16.2	-
Loss due to 10% increase in the Wholesale Electricity Prices	(16.8)	-	(19.1)	-

NOTES TO THE FINANCIAL STATEMENTS

29. COMMITMENTS AND CONTINGENCIES

(a) Capital commitments

	2019 €m	2018 €m
Tangible assets contracted for	306.3	355.4
Intangible assets contracted for	12.4	2.7
Total contracted for	318.7	358.1

	2019 €m	2018 €m
Share of equity accounted investees commitments		
Contracted for	397.6	85.7

(b) Fuel contract commitments

There are a number of long-term gas supply arrangements in place for different periods up to 2022. These arrangements provide for pricing changes in line with changes in inbuilt energy market indicators. Where appropriate, embedded derivatives have been separated and valued in accordance with IFRS 9.

(c) Other disclosures

Following on from flooding in Cork in November 2009, Aviva as University College Cork's (UCC) insurer pursued a legal action against ESB in the High Court seeking recovery of €19 million for property damage. The High Court judgement found ESB liable for the damage caused by the flood but discounted the award to UCC by 40% to reflect UCC's contributory negligence.

ESB appealed the decision to the Court of Appeal. On 20 March 2018 the Court of Appeal delivered its judgement which held that ESB is not liable for any damage caused to UCC's property by the flood.

In October 2018 the Supreme Court granted UCC leave to appeal the judgement of the Court of Appeal. The appeal was heard by the Supreme Court in early July 2019 and the judgement of the Court was reserved. It is hoped that the judgement of the Supreme Court will be delivered by the end of Quarter 1 2020. The issue of the legal costs of the High Court and Court of Appeal cases is stayed pending the outcome of the Supreme Court appeal.

In addition to the UCC claim ESB has, since the judgement of the High Court in the UCC case, been served with 388 sets of proceedings relating to the flooding in Cork in November 2009. Details of amounts claimed in relation to these proceedings have not yet been received and therefore it is not possible to make a reliable estimate of their cost (should the Supreme Court not uphold the decision of the Court of Appeal) at this time. However, ESB does not anticipate that the total amount of damages awarded, if any, and related costs for all of the actions, including the Aviva / UCC action, would exceed its applicable insurance cover.

On the basis of the internal and external legal advice received, ESB believes that it is more probable than not that the judgement of the Court of Appeal will be upheld and accordingly, no provision has been made for such claims in the financial statements.

Other than as disclosed above, a number of other lawsuits, claims and dispute with third parties have arisen in the normal course of business. While any litigation or dispute has an element of uncertainty, the Board members believe that there were no contingent liabilities which would have a material adverse effect on the Group's financial position.

30. RELATED PARTY TRANSACTIONS

Ultimate controlling party

The Group is a state-owned company. 85.6% of the issued share capital is held by the Minister for Finance (whose shares now stand transferred to the Minister for Public Expenditure and Reform), a further 10.1% of the issued share capital is held by the Minister for Communications, Climate Actions and Environment and the ESOP retaining 4.3% of the stock (see note 19 for further details).

Related party disclosures

In accordance with Paragraph 25 of IAS 24, ESB Group is exempt from disclosing related party transactions with another entity that is a related party solely because the Irish Government has control, joint control or significant influence over both the Group and that entity.

Semi-state bodies

In the ordinary course of business, the Group purchased/sold goods and services from entities controlled by the Irish Government such as Ervia, Bord na Móna, EirGrid and Coillte Teoranta.

The Group operates a long-term agreement with Bord na Móna in relation to the purchase of peat and the utilisation of ancillary services for the running of power stations. Receipt of these services in the year ended 31 December 2019 amounted to €60.9 million (2018: €60.2 million) and amounts due to these entities at 31 December 2019 amounted to €nil (2018: €3.1 million).

An infrastructure agreement is in place between the Group and EirGrid under the auspices of the Commission for Regulation of Utilities (CRU), in relation to the role of owner of the transmission system.

Banks owned by the Irish State

In the normal course of business ESB transacts with certain Irish banks which have become wholly or partially controlled by the Irish Government. All of ESB's transactions with such banks are on normal commercial terms. ESB had no material concentration of borrowings with any such banks during the period or at 31 December 2019. A portion of the cash and cash equivalents as disclosed in note 18 was on deposit with such banks.

NOTES TO THE FINANCIAL STATEMENTS

30. RELATED PARTY TRANSACTIONS (continued)

Board members' interests

Other than agreed allocations under ESOP, Board members had no beneficial interest in ESB or its subsidiaries at any time during the year.

ESOP

During the year ended 31 December 2019, ESB paid fees of €0.1 million (2018: €0.1 million) on behalf of ESOP. Please refer to note 32 for details of ESOP repurchase.

Pensions

The Group operates a number of pension schemes for staff in the Republic of Ireland, Northern Ireland and the United Kingdom. See note 9 and note 23 for further details.

Subsidiary undertakings

During the year ended 31 December 2019, ESB Parent purchased engineering, consulting and other services, including rental services of €113.3 million (2018: €99.8 million) from its subsidiaries.

During the year, ESB Parent had sales of €350.3 million (2018: €170.6 million) to subsidiaries. These sales mainly relate to management services, as well as electricity charges including Use of System Charges and sales of electricity and gas.

During the year, ESB Parent earned interest of €55.5 million (2018: €43.5 million) from subsidiaries and paid interest of €68.4 million (2018: €55.6 million) to subsidiaries on inter-company loans.

At 31 December 2019, ESB Parent had gross amounts payable of €4,258.0 million (2018: €4,044.8 million) to its subsidiaries. These payables mainly relate to amounts held on deposit for subsidiaries and other amounts due to subsidiaries, borrowings raised by ESB Finance DAC and loaned to ESB Parent and amounts due in respect of engineering and consulting services.

At 31 December 2019, ESB Parent had balances receivable of €3,065.3 million (2018: €2,937.4 million) from its subsidiaries (net of provisions). These receivables mainly relate to management services and loans to subsidiaries as well as electricity charges including Use of System Charges. The total impairment provision in respect of amounts owed by subsidiary undertakings at 31 December 2019 was €396.5 million (2018: €365.3 million).

Equity accounted investees

GROUP	Sale of goods / services ¹		Purchase of goods / services ²		Amounts owed (to) / from as at 31 December ^{3,4}		Equity advanced during the year	
	2019 €m	2018 €m	2019 €m	2018 €m	2019 €m	2018 €m	2019 €m	2018 €m
NNG Windfarm Holdings Ltd.	-	-	-	-	-	-	242.7	-
Aldeburgh Offshore Wind Holdings Ltd.	-	-	-	-	-	28.6	-	126.6
SIRO Ltd. ⁵	9.4	8.3	-	-	106.0	107.3	-	6.5
Tilbury Green Power Holdings Ltd.	1.2	3.3	23.4	18.5	-	33.9	-	-
Raheenleagh Power DAC	0.4	0.3	9.3	7.5	0.2	2.0	-	-
Oweninny Power DAC	2.6	2.1	-	-	17.5	13.9	-	-
Emerald Bridge Fibres DAC	0.2	0.1	-	-	-	-	0.2	1.3
Terra Solar Ltd.	-	-	-	-	-	-	-	-
Kingspan ESB DAC	-	-	-	-	0.1	0.3	-	-
Total	13.8	14.1	32.7	26.0	123.8	186.0	242.9	134.4

¹ESB provided electricity sales, management and other professional services during the year to equity accounted investees as set out in the above table.

²ESB has purchased power and services in relation to telecoms and maintenance during the year from equity accounted investees as set out in the above table.

³Amounts owed (to) / from equity accounted investees include shareholders loans (shown net of any impairments), interest on these loans and trade receivable and payable balances of €1.0 million (2018: €2.6 million). Interest receivable on loans to equity accounted investees relates to Oweninny Power DAC €1.4 million (2018: €1.1 million) and Aldeburgh Offshore Wind Holdings Ltd €nil (2018: €1.6 million). For further details on the impairment charges in relation to Tilbury Green Power Holdings Ltd and Emerald Bridge Fibres DAC see note 15.

⁴Included in the bad debt provision is an amount of €1.3 million in respect of the balances owed from Tilbury Green Power Holdings Ltd. and Emerald Bridge Fibres DAC.

⁵ESB committed to provide capital funding to SIRO Ltd of €93.0 million, of which €93.0 million has been advanced as a short-term shareholder loan as disclosed above. ESB has guaranteed a 50% share of a €200.0 million loan facility held by SIRO of which €123.0 million was drawn down as at 31 December 2019 (2018: €28.0 million). Fees payable by SIRO to ESB in respect of this guarantee amounted to €1.3 million (2018: €nil).

Terms and conditions

Sales to and purchases from equity accounted investees and associates are conducted in the ordinary course of business. The outstanding balances included in receivables and payables as at the balance sheet date in respect of transactions with equity accounted investees and associates are unsecured and settlement arises in cash. No guarantees have been either requested or provided in relation to related party receivables and payables.

NOTES TO THE FINANCIAL STATEMENTS

30. RELATED PARTY TRANSACTIONS (continued)

Key management compensation	2019 €m	2018 €m
Salaries and other short-term employee benefits	3.7	3.2
Post-employment benefits	0.4	0.4
	4.1	3.6

The key management compensation amounts disclosed above represent compensation to those people having the authority and responsibility for planning, directing and controlling the activities of the Group. These include the remuneration of senior executives and board members.

31. ESTIMATES AND JUDGEMENTS

The preparation of Parent and Consolidated financial statements requires a significant number of judgemental assumptions and estimates to be made. These impact on the income and expenses contained within the income statement and the valuation of the assets and liabilities in the balance sheet. Such estimates and judgements are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances and are subject to continual re-evaluation.

It should be noted that the impact of variation in some assumptions and estimates can have a particularly material impact on the reported results. These include but are not limited to:

(a) The accounting for the ESB - pension liability requires the exercise of judgement. The Board is satisfied that the appropriate accounting treatment, determined in accordance with IAS 19 - Employee Benefits, is to reflect its existing committed obligations, as set out in the notes to the financial statements (see note 24).

(b) The employees in NIE Networks are entitled to membership of the NIE Networks Scheme which has both defined benefit and defined contribution arrangements. The estimation of and accounting for retirement benefits obligation involves judgements made in conjunction with independent actuaries. This involves estimates about uncertain future events including the life expectancy of scheme members, future salary and pension increases and inflation as well as discount rates. The assumptions used by the Group and a sensitivity analysis of a change in these assumptions are described in note 23.

(c) The value in use, in accordance with IAS 36 Impairment of Assets, of long-lived assets and associated goodwill, as described in note 14 and as described below:

For power generation assets, value in use is based on the estimated cash flows expected to be generated by the asset and is based on an external review of forecast power generation and forecast power, gas, carbon and capacity prices (where applicable) and the timing and extent of operating costs and capital expenditure. These cash flows are discounted to their present value using a pre-tax discount rate that reflects the current market assessments of the time value of money and the risks specific to the asset. The estimation of forecasted revenues and the timing of expenditure requires judgement and is dependent on the economic factors associated with these assets.

(d) As described in note 28 section (i), the valuation of certain financial instruments is based on a number of judgmental factors and assumptions which of necessity are not based on observable inputs. These have been classified as level 3 financial instruments, under the meaning of IFRS 13 Fair Value Measurement.

(e) Future costs required to settle current provisions and employee related liabilities, such as the power station closure costs and severance obligations. These liabilities are disclosed in notes 23, 24 and 27.

(f) The measurement of a number of assets, liabilities, income and costs at year end which require a high degree of estimation and judgement, including, the calculation of unbilled electricity income and trade and other receivables, the valuation of fuel stocks, the cost of fuel consumed, the useful lives of property, plant and equipment and also accruals for goods received or work carried out for which supplier invoices have not yet been received. These items are estimated in accordance with the accounting policies of the Group and current International Financial Reporting Standards.

(g) ESB provide services to around 1.4 million individuals and businesses, mainly on credit terms. It is known that certain debts due to ESB will not be paid through the default of a small number of customers. Estimates, based on historical experience are used in determining the level of debts that is believed will not be collected. These estimates include such factors as the current state of the Irish economy and particular industry issues (see note 17).

(h) Other disclosures, please refer to note 29 for further details of estimates and judgements regarding ongoing legal claims.

(i) The accounting for supply contributions area remains under active consideration within the industry and the accounting profession more broadly, and the accounting treatment ultimately adopted by the Group in this area could therefore be impacted by the outcome of these ongoing discussions.

NOTES TO THE FINANCIAL STATEMENTS

32. ESB ESOP TRUSTEE LIMITED

ESB ESOP Trustee Limited was incorporated by ESB during 2001, with a €1 investment, as Trustee to the ESB Employee Ownership Trust (ESOT) and the ESB Approved Profit Sharing Scheme (APSS). Under the terms of the creation of ESB ESOP Trustee Limited, ESB has no ability or rights to exert control over the assets or management of the Company. The Trustee Company is chaired by an independent professional Trustee with four directors representing ESB employees and two directors representing ESB. As such, severe restrictions which substantially hinder the exercise of the rights of ESB over the assets and management of the company exist. In accordance with IFRS 10 Consolidated Financial Statements, the financial statements for ESB ESOP Trustee Limited are not consolidated with the results of the ESB Group.

During the year ended 31 December 2015, ESB entered into an agreement to support the acquisition of capital stock in future ESOP internal markets. As part of the agreement ESB committed to match the acquisitions made by the ESOP Trustees up to a value of €25.0 million. An ESOP provision of €0.3 million (2018: €0.9 million) was recognised in the 2019 financial statements in relation to the capital stock repurchase by the ESOP Trustee. During 2019, ESB continued the repurchase of the ESOP capital stock and consequently a capital redemption reserve of €4.4 million (2018: €4.4 million) arose from the purchase and cancellation of the 4.4 million ESOP share capital (2018: 4.4 million) for a consideration of €4.6 million (2018: €4.9 million) and represents the nominal amount of the share capital cancelled. The repurchase reduced the ESOP repurchase provision by €4.6 million and at 31 December 2019, the ESOP repurchase provision (note 27) recognised in other provisions amounts to €7.5 million (2018: €11.8 million).

33. POST BALANCE SHEET EVENTS

Details of dividend declared since the year end are set out in note 19.

On 21 January 2020, ESB successfully raised a GBP £325 million, 1.875% fixed rate note maturing on 21 July 2035.

There are no other post balance sheet events that the directors believe require adjustment to or disclosure in the financial statements.

34. APPROVAL OF FINANCIAL STATEMENTS

The Board approved the financial statements on 27th February 2020.

NOTES TO THE FINANCIAL STATEMENTS

35. SUBSIDIARY, EQUITY ACCOUNTED INVESTEEES AND ASSOCIATE UNDERTAKINGS

Company name	Registered office	Group share %	Nature of business
Subsidiary undertakings			
Direct subsidiary			
Electric Ireland Ltd. (UK)	4	100	Dormant
ESB Energy International Ltd.	2	100	Holding company
ESB Electric Ireland Ltd. (UK)	4	100	Dormant
ESB Finance DAC.	2	100	Finance
ESB Financial Enterprises Ltd.	2	100	Holding company
ESB International Investments Ltd.	2	100	Holding company
ESB International Ltd.	2	100	Holding company
ESB Networks DAC.	8	100	Power distribution
ESBNI Ltd.	5	100	Holding company
Indirect subsidiary			
Airstream Wind Energy Ltd.	2	100	Power generation
Airvolution Energy (Car Ban Wind Farm) Ltd.	7	100	Power generation
Airvolution Energy (Shotts 2) Ltd.	7	100	Power generation
Airvolution Energy (Tarvie) Ltd.	7	100	Power generation
Airvolution Energy Ltd. (UK)	7	100	Power generation
Blarghour Wind Farm Ltd.	9	8	Power generation
Cambrian Renewable Energy Ltd.	4	100	Power generation
Capital Pensions Management Ltd.	6	100	Pension scheme administration
Cappawhite Wind Ltd.	2	100	Power generation
Carrington Power Ltd.	4	100	Power generation
Castlepook Power DAC.	2	100	Power generation
Chirmorie Wind Farm Ltd.	9	8	Power generation
Clogherhead Offshore Wind DAC.	2	100	Power generation
Coolkeeragh ESB Ltd.	5	100	Power generation
Corby Power Ltd.	3	100	Power generation
Corvoderry Wind Farm Ltd.	2	100	Power generation
Crockagarran Windfarm Ltd.	5	100	Power generation
Crockahenny Wind Farm DAC.	2	75	Power generation
Crockdun Windfarm (NI) Ltd.	5	100	Power generation
Curryfree Wind Farm Ltd.	5	100	Power generation
Dell Wind Farm Ltd.	9	8	Power generation
Devon Wind Power Ltd.	4	100	Power generation
EC02 Cambrian Ltd.	4	100	Holding company
ESB 1927 Ltd.	2	100	Property management
ESB Asset Development (UK) Ltd.	4	100	Business development
ESB Commercial Properties Ltd.	2	100	Property management
ESB Energy Ltd.	4	100	Supply company
ESB Electric Ireland Ltd.	2	100	Dormant
ESB Group (UK) Ltd.	4	100	Engineering and consultancy
ESB Independent Energy (NI) Ltd.	2	100	Electricity and gas sales
ESB Independent Energy Ltd.	2	100	Electricity and gas sales
ESB Independent Generation Trading Ltd.	2	100	Electricity and gas trading
ESB Innovation UK Ltd.	4	100	Provision of energy and electromobility services

NOTES TO THE FINANCIAL STATEMENTS

35. SUBSIDIARY, EQUITY ACCOUNTED INVESTEEES AND ASSOCIATE UNDERTAKINGS (continued)

Company name	Registered office	Group share %	Nature of business
Indirect subsidiary (continued)			
ESB Innovation ROI Ltd.	2	100	Provision of energy and electromobility services
ESB International (Malaysia) Sdn. Bhd	17	100	Engineering and consultancy
ESB Novus Modus GP Ltd.	2	100	Clean technology investment
ESB Power Generation Holding Company Ltd.	2	100	Holding company
ESB Services BV (Holland).	12	100	Operations and maintenance services
ESB Solar (IRE) Ltd.	2	100	Business and management consultancy activities
ESB Solar (NI) Ltd.	5	100	Business and management consultancy activities
ESB Telecoms Ltd.	2	100	Telecommunications
ESB Trading Ltd.	2	100	Management and operation services
ESB Wind Development Ltd.	2	100	Business development
ESBI Carbon Solutions Ltd.	2	100	Carbon emission reduction
ESBI Computing Ltd.	2	100	Computer services
ESBI Consultants Ltd.	1	100	Consultancy
ESBI Contracting Ltd.	2	100	Business development
ESBI Engineering and Facility Management (Botswana) (Proprietary) Ltd.	11	100	Engineering and consultancy
ESBI Engineering & Facility Management (Liberia) Ltd.	30	100	Engineering and consultancy
ESBI Engineering and Facility Management Ltd.	1	100	Engineering
ESBII UK Ltd.	4	100	Holding company
ESBI Luxembourg S.A.	26	100	Electricity generating assets investment
Facility Management UK Ltd.	4	100	Facility management
Garvagh Glebe Power Ltd.	2	100	Power generation
Garvary Wind Farm Ltd.	9	8	Power generation
Geothermal International Ltd.	10	91	Power generation
Geothermal International Polska Sp Zoo (Spolka Z Organizacja Odpowiedzialnoscia).	25	89	Power generation
Glendye Wind Farm Ltd.	9	8	Power generation
Gort Windfarms Ltd.	2	100	Power generation
Greengate Energy Recovery Ltd.	4	100	Power generation
Greystone Knowe Wind Farm Ltd.	9	8	Power generation
Hibernian Wind Power Ltd.	2	100	Power generation
Hunter's Hill Wind Farm Ltd.	5	100	Power generation
Kerry Wind Power Ltd.	2	100	Power generation
Kirkan Wind Farm Ltd.	9	8	Power generation
Kirk Hill Wind Farm Ltd.	9	100	Power generation
Knottingley Power Ltd.	4	100	Power generation
Mount Eagle Wind Farm Ltd.	2	100	Power generation
Mountainlodge Power DAC.	2	85.9	Power generation
NIE Finance PLC.	6	100	Finance
NIE Ltd.	6	100	Dormant
NIE Networks Services Ltd.	6	100	Non-trading
Northern Ireland Electricity Ltd.	6	100	Dormant
Northern Ireland Electricity Networks Ltd.	6	100	Power transmission and distribution
Orliven Ltd.	2	100	Power generation
Planet 9 Energy Ltd.	4	100	Supply company
REG Greenburn Ltd.	27	10	Power generation
REG Knockodhar Ltd.	27	10	Power generation
Sillahertane Energy Project Two Ltd.	2	10	Power generation

NOTES TO THE FINANCIAL STATEMENTS

35. SUBSIDIARY, EQUITY ACCOUNTED INVESTEEES AND ASSOCIATE UNDERTAKINGS (continued)

Indirect subsidiary (continued)			
Company name	Registered office	Group share %	Nature of business
Synergen Power Ltd.	14	100	Power generation
Tilbury Energy Recovery Limited	4	100	Dormant
Tilbury Energy Recovery Holding Company Limited	4	100	Dormant
Tullynahaw Power Ltd.	2	100	Power generation
Waterfern Ltd.	2	100	Power generation
West Durham Wind Farm (Holdings) 2 Ltd.	4	100	Holding company
West Durham Wind Farm (Holdings) Ltd.	4	100	Holding company
West Durham Wind Farm Ltd.	4	100	Power generation
Woodhouse Wind Farm Ltd.	2	100	Power generation
Equity accounted investees			
Aldeburgh Offshore Wind Holdings Ltd.	28	50	Holding company
Aldeburgh Offshore Wind Investments Ltd.	28	50	Holding company
Emerald Bridge Fibres DAC.	2	50	Telecommunications
Galloper Wind Farm Holding Company Ltd.	29	12.5	Power generation
Galloper Wind Farm Ltd.	29	12.5	Power generation
Kingspan ESB DAC.	2	50	Business and management consultancy activities
Nearit Na Gaoithe Wind Farm Holdings Ltd.	32	50	Power generation
Nearit Na Gaoithe Offshore Wind Ltd.	32	50	Power generation
Oweninny Power DAC.	2	50	Power generation
Oweninny Power Holdings DAC.	2	50	Holding company
Oweninny Power 2 DAC.	2	50	Power generation
Raheenleagh Power DAC.	2	50	Power generation
SIRO Ltd.	2	50	Fibre to the building
Sundew Solar DAC.	2	50	Power generation
Tilbury Green Power Holdings Ltd.	4	47	Holding company
Tilbury Green Power Ltd.	4	47	Power generation
Associate undertakings			
Terra Solar Ltd.	24	25	Power generation
Investments			
Cylon Controls Ltd.	18	36.2	Clean technology investment
Endeco Technologies Ltd.	19	17.2	Clean technology investment
Heliex Power Ltd.	20	34.3	Clean technology investment
Nualight Ltd.	21	42.3	Clean technology investment
Oriel Wind Farm Ltd.	31	5	Power generation
Pesaka Technologies.	16	30	Power generation
Rousch Pakistan Power.	13	7	Power generation
TenKsolar Inc.	23	4	Clean technology investment
VantagePoint Cleantech Partners II, L.P.	22	4.5	Clean technology investment
Other			
ESB ESOP Trustee Ltd.	15	100	Staff shareholding scheme

NOTES TO THE FINANCIAL STATEMENTS

35. SUBSIDIARY, EQUITY ACCOUNTED INVESTEEES AND ASSOCIATE UNDERTAKINGS (continued)

ESB's principal place of business is Two Gateway, East Wall Road, Dublin 3, D03 A995

Notes:

- 1 ESB International, One, Dublin Airport Central, Dublin Airport, Cloghran, Co. Dublin, K67 XF72
- 2 Two Gateway, East Wall Road, Dublin 3, D03 A995
- 3 Mitchell Road, Phoenix Parkway, Corby, Northamptonshire, MN17 1Q7
- 4 Tricor Services Europe LLP, 4th Floor, 50 Mark Lane, London, EC3R 7QR
- 5 2 Electra Road, Maydown, Derry, BT47 6 UL
- 6 120 Malone Road Belfast, BT9 5HT
- 7 Palladium House, 1-4 Argyll Street, London, W1F 7TA
- 8 Clanwilliam House, Clanwilliam Court, Dublin 2, D02 CV61
- 9 22-24 King Street, Maidenhead, SL6 IEF
- 10 Shellingwood House, Westwood Way, Westwood Business Park, Coventry, CV48J2
- 11 Deloitte House, First Floor, Plot, 64518, Fairgrounds Office Park, Gaborne, Botswana
- 12 22nd Floor, Menara, EON Bank, Lala Raja Laut, 50350, Kuala Lumpur, Malaysia
- 13 94-W, 3rd Floor, AAMIR Plaza, Jinnah Avenue, Blue Area, Islamabad, Pakistan
- 14 ESB Dublin Bay, Pigeon House Road, Ringsend, Dublin 4, D04 Y5N2
- 15 43 Merrion Square, Dublin 2, D02 R997
- 16 Level 1, Menara Yavasan, Tun Razak, Zoo, Jalan Bukit Bintang, 55100 Kuala Lumpur, Malaysia
- 17 10th Floor, Wisma Havela, Thakardos, No 1 Jalan Raja Laut, 50350 Kuala Lumpur, Malaysia
- 18 Clonshaugh Business and Technology Park, Clonshaugh, Dublin 17, D17 A662
- 19 3015, Lake Drive, Citywest Business Park, Dublin 24, D24 DKP4
- 20 Kelvin Building Bramah Avenue, East Kilbride, Glasgow, G75 0RD
- 21 Cork Business and Technology Park, Model Farm Road, Cork, T12 PW29
- 22 C/O Codan Trust Company (Cayman) Limited, Cricket Square, Hutchins Drive, P.O Box 2681, Grand Cayman, KY1-1111, Cayman Islands
- 23 9231 Penn Avenue South, Minneapolis, Minnesota, 55431
- 24 57 Hollybank Avenue Lower, Ranelagh, Dublin 6, D06 V8N4
- 25 Geothermal International Polska, Parkova 21 lok 7, 00-759 Warszawa, Poland
- 26 6, Rue Eugene Ruppert, L-2453, Luxembourg
- 27 2nd Floor Edgeborough House, Edgeborough Road, Guildford, Surrey, GU1 2BJ
- 28 St. Swithin's Lane, 4th Floor, London, England, EC4N 8AD
- 29 Windmill Hill Business Park, Whitehall Way, Swindon SN5 6PB, United Kingdom
- 30 25 Benson Street, East Corner of Benson & McDonald Streets Monrovia, Liberia
- 31 33 Fitzwilliam Square, Dublin 2
- 32 Atria One, 144 Morrison Street, Edinburgh, United Kingdom EH3 8EX

Report of Board Members on Compliance with the Prompt Payment of Accounts Act, 1997 and European Communities (Late Payments in Commercial Transactions) Regulations, 2012 (S.I. No. 580 of 2012) as amended by European Communities (Late Payment in Commercial Transactions) (Amendment) Regulations 2016 (S.I. No. 281 of 2016)

Introduction

Payments terms during 2019 were governed by:

- The Prompt Payment of Accounts Act, 1997.
- European Communities (Late Payments in Commercial Transactions) Regulations, 2012 (S.I. No. 580 of 2012) as amended by European Communities (Late Payment in Commercial Transactions) (Amendment) Regulations 2016 (S.I. No. 281 of 2016) to combat late payments in commercial transactions. These Regulations apply to contracts for goods and services supplied to ESB.
- Construction Contracts Act 2013. This Act applies to construction contracts over €10,000.

Statement of payment practices

ESB is committed to paying all undisputed supplier invoices within their agreed terms of payment.

Procedures and controls in place

Appropriate internal financial controls have been implemented including clearly defined roles and responsibilities. These procedures provide assurance against material non-compliance with the legislation.

Prompt Payment Code of Conduct

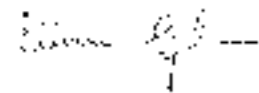
In 2015 the Government launched the Prompt Payment Code of Conduct, which can be found at www.promptpayment.ie. ESB is a signatory to this Code and undertakes to pay suppliers on time; give clear guidance to suppliers on payment procedures; and encourage the adoption of the Code by suppliers within their own supply chains.

Construction Contracts Act 2013

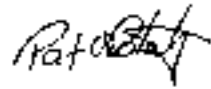
This Act came into effect on 25 July 2016. ESB has reviewed its responsibilities under this Act and has communicated these responsibilities to relevant staff.

Details of late payment interest in respect of 2019

When ESB validates a late payment request from a supplier, it is ESB's policy to pay interest due on such late payments. No such payments were made in respect of late payments during the year 2019 (2018: Nil).



Ellvena Graham OBE,
Chairman



Pat O'Doherty
Chief Executive

27th February 2020

GLOSSARY

1. Balancing Market/Balancing Mechanism

The Balancing Market or Balancing Mechanism (BM) allows the TSO to balance electricity supply and demand close to real time.

2. British Electricity Trading and Transmission Arrangements (BETTA)

British Electricity Trading and Transmission Arrangements (BETTA) is the wholesale electricity market operating in Great Britain (GB).

3. Brexit

Brexit is the departure of the United Kingdom from the European Union.

4. Commission for Regulation of Utilities

The Commission for Regulation of Utilities, (CRU) is the independent regulator of water and energy in the Republic of Ireland.

5. Contracts for Difference (CfDs)

A contract for difference (CfD) is a contract between two parties, a buyer and a seller, stipulating that the buyer will pay to the seller the difference between the current value of an asset and its value at contract time. If the difference is negative, the seller pays instead of the buyer.

6. DAM

The Day-Ahead Market allows market participants to buy or sell wholesale electricity one day before the operating day. It is the largest market for trading power and the biggest component of the wholesale electricity price.

7. Dark Spread

The difference between the price of a unit of electricity and the cost of the coal used to generate it.

8. EBITDA

Earnings before interest, taxation, depreciation, impairments (including non-trading net impairment losses on financial assets), amortisation and revenue from supply contributions.

9. Electricity Market Reform (EMR)

Electricity Market Reform (EMR) is a UK Government policy to incentivise investment in secure, low-carbon electricity, improve the security of Great Britain's electricity supply, and improve affordability for consumers.

10. Energy for Generations Fund

In November 2013, ESB launched the Energy for Generations Fund, a corporate responsibility investment which will see over €1 million per year disbursed across a range of community and issues-based initiatives.

11. Environmental Protection Agency (EPA)

The Environmental Protection Agency is an independent public body established under the Environmental Protection Agency Act, 1992. It is at the front line of environmental protection and policing.

12. Gigabit (Gb/s)

Gigabit (Gb/s) is a unit of data transfer rate equal to: 1,000 megabits per second

13. Gigawatt (GW)

Gigawatt, being the amount of power equal to 1 billion watts.

14. Gigawatt Hours (GWh)

Gigawatt hours, being the amount of energy equivalent to delivering 1 billion watts of power for a period of one hour.

15. Great Britain (GB)

England, Wales and Scotland.

16. Impairment

An impairment charge is determined when the carrying value (book value) of assets exceeds its recoverable amount.

17. Integrated Single Electricity Market (I-SEM)

This European Target Model is a development flowing from the Third Energy Package and is an umbrella term for a detailed list of new common EU guidelines, procedures and codes to be put in place to enable a single EU-wide wholesale electricity market. The implementation of these common EU guidelines, procedures and codes across the EU will allow electricity and gas to be traded freely across the Union

18. Joint Venture (JV)

A company or other entity which is controlled jointly with other parties.

19. Liquefied Natural Gas (LNG)

Liquefied natural gas, a clear, colourless, non-toxic liquid that forms when natural gas is cooled to -162°C (-260°F).

20. Lost Time Injuries (LTIs)

A work related injury causing an absence for one or more working days, counting from the day after the injury, before the person returns to normal or restricted work.

21. Megawatt (MW)

Megawatt, being the amount of power equal to 1 million watts.

22. Megawatt Hours (MWh)

Megawatt hours, being the amount of energy equivalent to delivering 1 million watts of power for a period of one hour.

23. Novusmodus Fund

The Novusmodus Fund is a venture capital fund in which seed capital is invested into emerging technologies.

24. OHSAS 18001

OHSAS 18001 Occupational, Health and Safety Management Certification is an international standard which provides a framework to identify, control and decrease the risks associated with health and safety within companies.

25. Over the Counter Trading Platform

Financial instruments (specifically electricity price contracts) which enable participants in the SEM to reduce their risk (and therefore electricity price volatility for their customers) by trading these products directly (over the counter) with each other, rather than via an intermediary or through an exchange, in order to hedge their exposure to movements in the wholesale price of electricity.

26. P1 Incidents

Incidents which have a high probability of causing high consequence injuries such as fatality, amputation, loss of eye, multiple injuries, major fracture, 2nd/ 3rd degree burns, being unconscious (major / serious), Road Traffic Collision reportable injuries, fatalities, excessive material damage.

27. Pay As You Go

Pay As You Go products allows users to control electricity usage and track usage from a monitor to enable them to know how much they are spending on electricity at all times.

28. Price Review 4 (PR4)

Regulatory periods are of 5 years' duration and the Price Control Review (PR4) covers the period 2016 to 2020 and sets out the total regulated

GLOSSARY (Continued)

allowed revenues over that period as determined by the Commission for Regulation of Utilities, (CRU).

29. Regulatory Period 5 (RP5)

Regulatory Period 5 (RP5), is a regulatory period of 5 years' duration for price control, covering the period 1 April 2012 to 31 March 2017, determined by the Utility Regulator in Northern Ireland.

30. Regulatory Period 6 (RP6)

Regulatory Period 6 (RP6), is a regulatory period for price control, covering the period 1 October 2017 to 31 March 2024, determined by the Utility Regulator in Northern Ireland.

31. Return on Capital Employed (ROCE)

The return on capital employed shows the overall return on capital provided by both debt and equity.

32. Safe and Sound

An ESB culture change program that will serve to build a world-class safety culture and environment that is sustainable over time.

33. Single Electricity Market (SEM)

The Single Electricity Market is a wholesale pool-based electricity market operating north and south of the Irish Border.

34. Single Electricity Market Operator (SEMO)

The SEM is operated by SEMO, a joint venture between EirGrid and SONI, the transmission system operators in Ireland and Northern Ireland respectively.

35. SIRO

A joint venture with Vodafone, which will bring 1 gigabit per second (Gb/s) broadband to 500,000 customers in fifty towns across Ireland using the existing distribution network.

36. Smart Energy Services

Smart Energy Services is a complete energy management solution that brings all of the skills and experience of a global energy innovator to businesses.

37. Smart Grid

A transformed electricity transmission and distribution network or Grid that uses robust two-way communications, advanced sensors and distributed computers to improve the efficiency, reliability and safety of power delivery and use.

38. Smart Meter Programme

The smart meter programme is the next generation of energy meter. They will replace the traditional electricity and gas meters removing the need for a home visit to read the meter and will eliminate the need to use estimates whenever a meter cannot be read.

39. Safety Leadership Strategy

A framework that shows a clear and simple way of articulating the safety responsibilities, obligations and expectations that everyone in ESB has in order to maintain a safe environment.

40. Spark Spread

The difference between the price of a unit of electricity and the cost of the gas used to generate it.

41. Sustainable Energy Authority of Ireland (SEAI)

The Sustainable Energy Authority of Ireland was established as Ireland's national energy authority under the Sustainable Energy Act 2002.

42. System Operator for Northern Ireland (SONI)

The System Operator for Northern Ireland ensures the safe, secure and economic operation of the high voltage electricity grid in Northern Ireland and in co-operation with EirGrid colleagues is also responsible for running the all-island wholesale market for electricity.

43. System Marginal Price (SMP)

The wholesale price of electricity for each half hour period.

44. The way we work at ESB

The Way We Work at ESB brings together ESB's purpose, strategy and values. In ESB, the purpose statement tells the world why ESB exists – the reason for being, beyond profit. It's who ESB is, and it's lived through its values.

Values are how ESB puts the purpose into action. It encapsulates and aligns the culture and informs behaviours.

45. United Kingdom (UK)

England, Wales, Scotland and Northern Ireland.

46. Utility Regulator (UR)

The independent non-ministerial government department set-up to ensure the effective regulation of the electricity, gas and water and sewerage industries in Northern Ireland.

47. Vertically Integrated Utility

The Vertically Integrated Utility (VIU) refers to presence within and ownership of, assets across all of the elements of the electricity value chain including the generation, trading, transmission, distribution and supply of power to customers.