Annual Report and Accounts 2019/20

Bring Energy to Life

nationalgrid

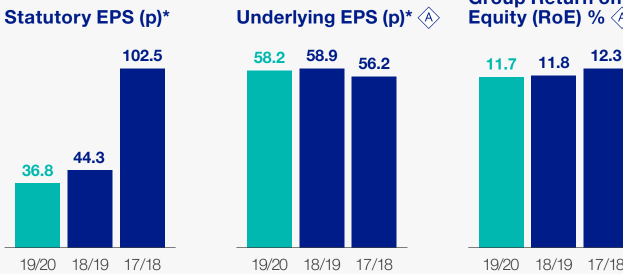
Bring Energy to Life

National Grid operates at the heart of the energy system, connecting millions of people safely, reliably and efficiently to the energy they use every day.

Highlights

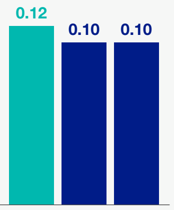
We have continued to make strategic and operational progress while maintaining excellent safety levels across all our networks. We have retained a focus on our environmental sustainability record and employee engagement.

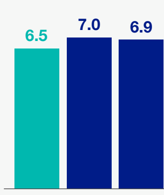
Group financial highlights

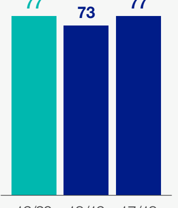


* From continuing operations

Group operational highlights







Scan here to view the story

The job that can't wait

We believe that people are the key to unlocking a clean energy future, and we ran a recruitment campaign in the UK to attract talent to 'the job that can't wait'. We were delighted with the response to the campaign, which saw a sevenfold increase in applications to our Advanced Apprenticeship scheme and started a national conversation about the importance of STEM at all stages of education.

Further reading

Online report

The PDF of our Annual Report and Accounts 2019/20 includes a full search facility. You can find the document by visiting the 'About us' section at www.nationalgrid.com/about-us/annual-report-and-accounts.

QR codes

Throughout the report there are QR codes that you can scan to easily view content online. Simply open your camera app on your smartphone device to scan the code.

More detail

Throughout this report you can find links to further detail within this document.

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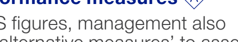
Reporting currency

Our financial results are reported in sterling. We convert our US business results at the weighted average exchange rate during the year, which for 2019/20 was \$1.29 to £1 (2018/19: \$1.31 to £1).



Alternative performance measures

In addition to IFRS figures, management also use a number of 'alternative measures' to assess performance. Definitions and reconciliations to statutory financial information can be found on pages 240 – 249. These measures are highlighted with the symbol above.

Business model
What we do

National Grid plc is one of the world's largest investor-owned energy utilities, committed to delivering electricity and gas safely, reliably and efficiently to the customers and communities we serve.

Our core regulated businesses
National Grid owns a range of high-quality, long-term assets. All our assets share low commercial risk profiles and are typically supported by long-term contracts or stable regulatory arrangements. Our core regulated businesses in the UK and US generated over 90% of our operating profits this year.

Our other energy businesses
Supporting the core regulated businesses, we also own a diverse and growing portfolio of commercial energy businesses also operating across the UK and US. These include our Grain LNG terminal and electricity interconnectors between the UK and continental Europe, which generate revenue by selling capacity to store or transmit energy. Our UK metering business generates revenue primarily through meter rentals. We also own a commercial property business which develops and sells surplus land.

Our business is organised into segments, based upon activity and location

Key:
- ◆ UK Electricity Transmission
- ◆ UK Gas Transmission
- ◆ US Regulated
- ◆ National Grid Ventures and other activities

Statutory operating profit (%)

- ◆ 47%
- ◆ 12%
- ◆ 32%
- ◆ 9%

Underlying operating profit (%) Ⓐ

- ◆ 34%
- ◆ 12%
- ◆ 47%
- ◆ 7%

RAV, rate base and other assets (%) Ⓐ

- ◆ 31%
- ◆ 14%
- ◆ 46%
- ◆ 9%

Core regulated

◆ UK Electricity

Electricity
Our UK electricity business comprises both the electricity transmission network (ET) and a separate Electricity System Operator (ESO).

We own the high-voltage transmission network in England and Wales. We are responsible for ensuring electricity is transported safely and efficiently from where it is produced; reaching homes and businesses safely, reliably and efficiently. We also facilitate the connection of assets to the transmission system.

4,481
miles (7,212 kilometres) of overhead lines (2018/19: 4,481 miles; 7,212 kilometres)

1,391
miles (2,239 kilometres) of underground cable (2018/19: 1,437 miles; 2,312 kilometres)

Our role as ESO
The ESO now operates as a separate company within National Grid effective from 1 April 2019. We are responsible for making sure supply and demand of electricity is balanced in real time across Great Britain (GB). While we operate as the ESO across GB, we do not own the transmission assets in Scotland.

Although the ESO is legally separate from ET, its results are still presented to the Board as part of the UK segment, and therefore no change has been made to our reportable operating segments.

◆ UK Gas Transmission
Our UK Gas Transmission (GT) business comprises both the gas transmission assets and an integrated gas system operator.

We also own and operate the high-pressure gas transmission network in Great Britain. We are responsible for making sure GB's gas is transported safely and efficiently from where it is produced to where it is consumed.

As the Gas System Operator we are responsible for ensuring that supply and demand are balanced in real time on a day-to-day basis.

4,740
miles (7,630 kilometres) of high-pressure pipe (2018/19: 4,760 miles; 7,660 kilometres)

◆ US Regulated

Electricity
We own and operate transmission facilities across upstate New York, Massachusetts, New Hampshire, Rhode Island and Vermont.

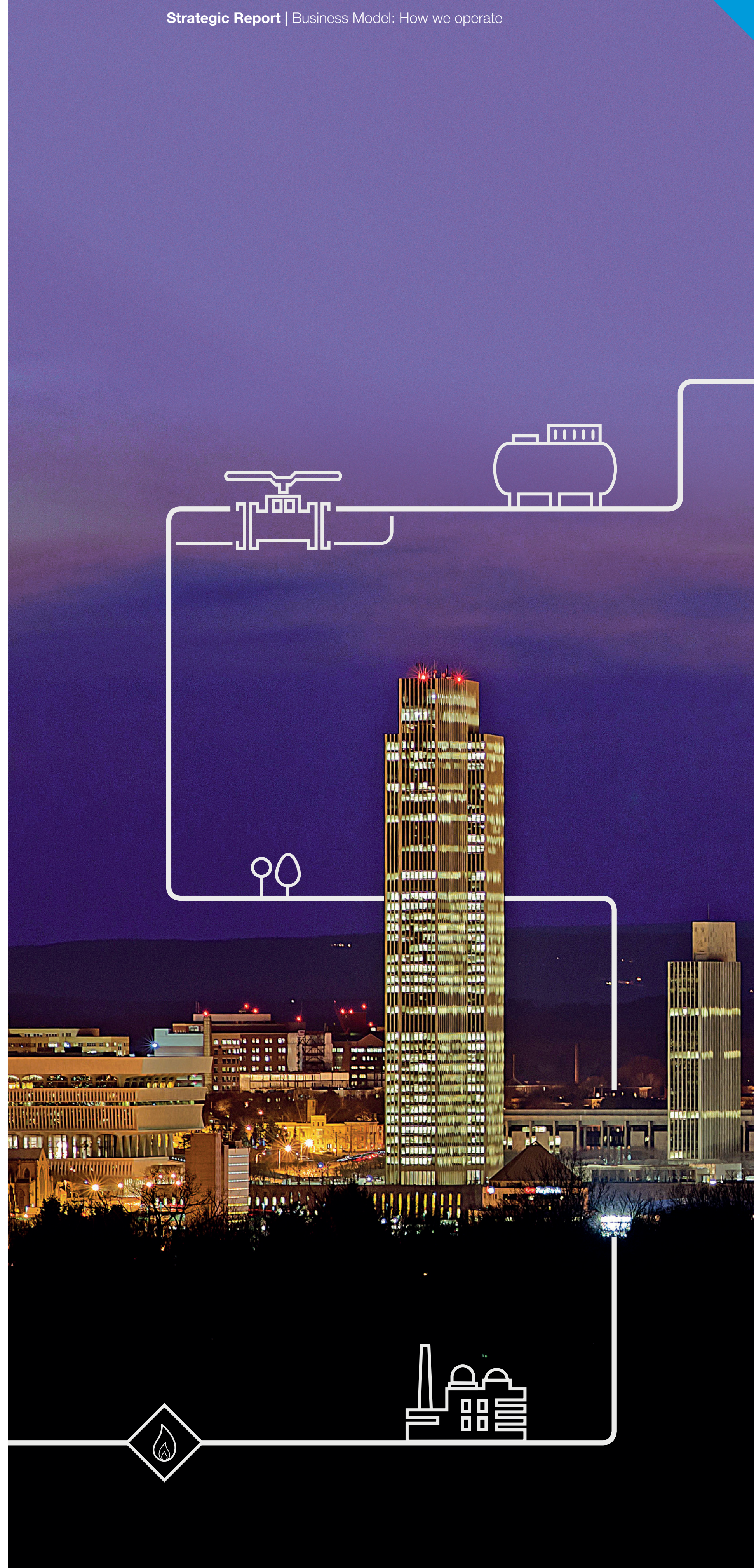
Our electric locations by state:
- New York;
- Massachusetts; and
- Rhode Island.

9,109
miles (14,659 kilometres) of overhead lines (2018/19: 8,881 miles; 14,293 kilometres)

Gas
We own and operate gas distribution networks across the northeastern US and are responsible for connecting millions of customers to the energy they use.

Our gas locations by state:
- New York;
- Massachusetts; and
- Rhode Island.

35,682
miles (57,425 kilometres) of gas pipelines (2018/19: 35,560 miles; 57,228 kilometres)



◆ National Grid Ventures and other activities

National Grid Ventures (NGV) manages our diverse portfolio of energy businesses that are similar to our core regulated operations. This operating segment represents our main strategic growth area outside our regulated core business, in competitive markets across the US and the UK. The business comprises commercial operations in energy metering, electricity interconnectors, renewables development and the storage of liquefied natural gas (LNG) in the UK.

In July 2019, we completed the acquisition of Geronimo, a leading wind and solar developer in North America. In December, we announced the start of commercial operations at the 200 MW Crocker Wind Farm in Clark County, South Dakota.

Our other activities that do not form part of any of the segments over the page or NGV, primarily relate to our UK property business together with insurance and corporate activities in the UK and US, and the Group's investments in technology and innovation companies through National Grid Partners (NGP).

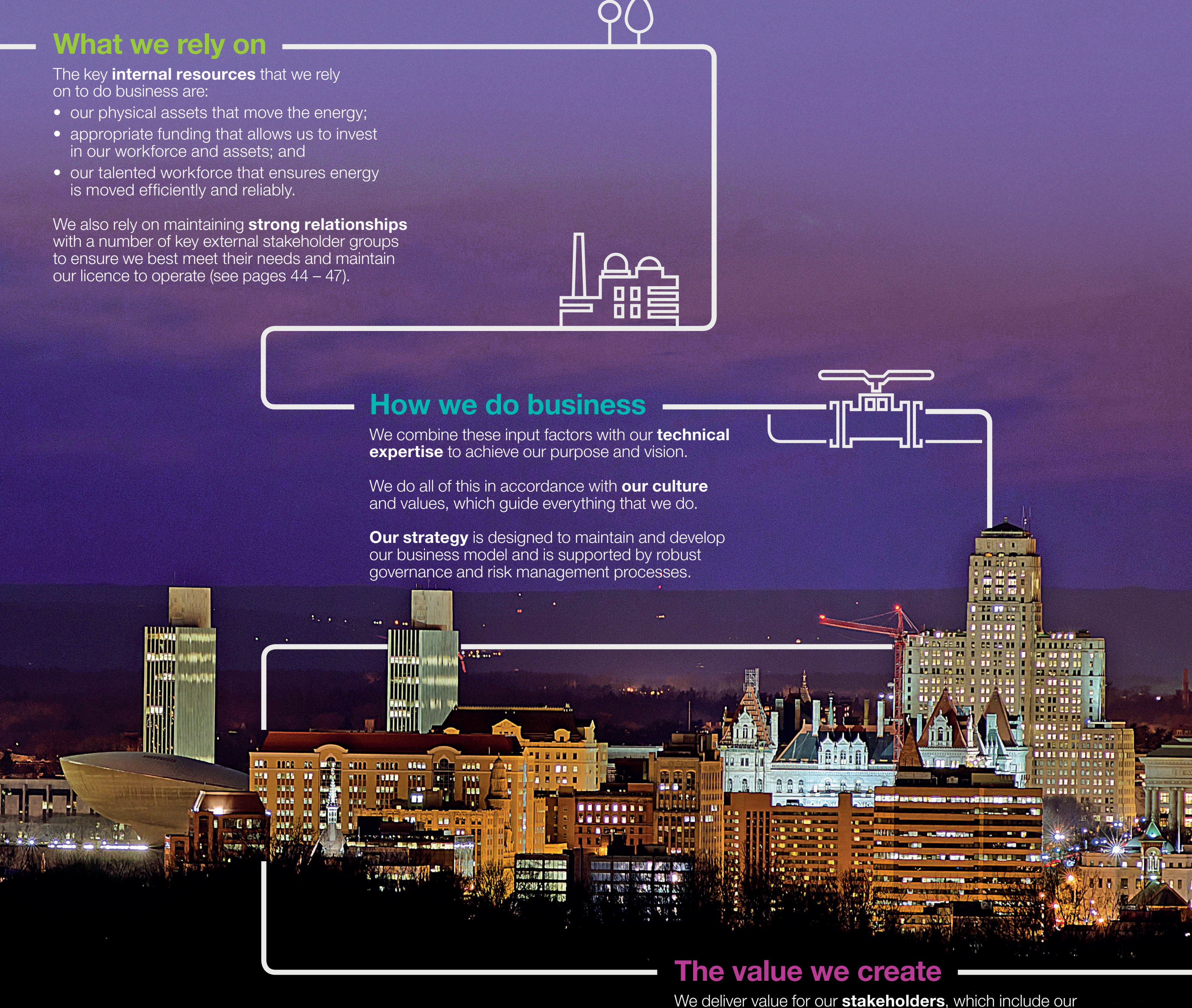
8.8 million
metering: gas meters (2018/19: 9.9 million)

1,000,000 m^3
liquefied natural gas tank space (2018/19: 1,000,000 m^3)

7.8 GW
GW capacity of interconnectors in operation or under construction (2018/19: 7.8 GW)

Business model
How we operate

Our operating model creates a stable, reliable and sustainable business that benefits our



What we rely on

The key **internal resources** that we rely on to do business are:

- our physical assets that move the energy;
- appropriate funding that allows us to invest in our workforce and assets; and
- our talented workforce that ensures energy is moved efficiently and reliably.

We also rely on maintaining **strong relationships** with a number of key external stakeholder groups to ensure we best meet their needs and maintain our licence to operate (see pages 44 – 47).

How we do business

We combine these input factors with our **technical expertise** to achieve our purpose and vision.

We do all of this in accordance with **our culture** and values, which guide everything that we do.

Our strategy is designed to maintain and develop our business model and is supported by robust governance and risk management processes.

The value we create

We deliver value for our **stakeholders**, which include our customers, as well as **financial value** for shareholders, by:

- operating within our regulatory frameworks thereby being efficient and compliant;
- performing well against our regulatory incentives, delivering customer benefits and good returns;
- managing our cash flow requirements and securing low-cost funding; and
- maintaining a disciplined approach to investment in our networks.

What we rely on

Internal resources

Physical assets
We own electricity and gas networks that transmit energy over long distances from where it is produced. In the US, we also distribute it locally to where it is consumed. These networks are built to last for many decades. Such networks account for the vast majority of our asset base. We also own three subsea electricity interconnectors, with three further subsea cables under construction as well as LNG importation facilities.

c.£4.8bn p.a. Ⓐ
average investment in our assets over the past three years (on a constant currency basis)

Funding
We fund our business through a combination of shareholder equity and long and short-term debt. We maintain an appropriate mix of the two and manage financial risks prudently.

63% Ⓐ
regulatory gearing (net debt as a proportion of the value of regulatory assets and other invested capital)

Employees
Our highly skilled, dedicated employees have a strong public service ethos. They manage and maintain the physical energy infrastructure, and assist and develop the many stakeholder relationships that are crucial to the Company's success.

As we support the changes needed to build a net zero energy system, we are providing employment opportunities and supporting our workforce to build the skills necessary to support these changes. By attracting and retaining the people capable of supporting the journey to net zero in the energy sector we can help the places we operate reach their emissions targets.

23,069
employees worldwide

Strong relationships

Customers
In the UK we do not own the energy that flows through our electricity cables and gas pipes. This energy is owned by our customers, such as electricity generators and gas shippers. These industrial customers, together with domestic consumers through a small portion of their energy bills, pay to use our networks. In the US, we have nearly seven million residential and commercial accounts.

Contractors and suppliers
We work in partnership with our supply chain, which has complementary experience, skillsets and resources. We agree mutually beneficial contractual arrangements and, wherever possible, leverage economies of scale and use sustainable and global sourcing opportunities.

Communities and governments
The societal impact of our activities means that a range of stakeholders have a legitimate interest in and influence on the work we do. These include national and regional governments, local communities, our supply chain, and business and domestic consumers of the energy we transport.

Economic, health, safety and environmental regulators
We are subject to economic regulation by bodies that are entirely independent of the Company. These economic regulators set the prices we can charge for providing an economic, efficient and non-discriminatory service. Our regulated revenue therefore covers day-to-day running costs, financing capital expenditures to renew and extend our networks, and incentives or penalties relative to performance targets. It also affords our shareholders a fair return on their investment.

The energy we transport and the activities we undertake are intrinsically hazardous; therefore our operations have to comply with laws and regulations set by government agencies responsible for health, safety and environmental standards.

Business model
How we operate continued

How we do business

Our technical expertise

Over the many decades in which we have played a vital role connecting people to the energy they use, National Grid has built safe and reliable networks. We continue in our efforts to develop a well-respected and trusted reputation for engineering excellence.

We combine our extensive skills, knowledge and capabilities with innovation to ensure our core competencies continuously create value for shareholders and wider stakeholders alike.

We are recognised for our excellence in:

Asset management

We invest in and maintain our assets across their life as cost-effectively as possible.

Our focus ensures efficient management of our assets across their lifetime.

9.0%

Asset growth 2019/20

Engineering

The skills of our engineers are vital in delivering safe, efficient, reliable and sustainable performance for all our businesses. Our workforce strives to:

- find practical and innovative solutions to complex problems;
- employ risk-based decision-making; and
- adopt common approaches and continuous improvements.

Our engineering expertise supports the delivery of a reliable network.

Capital delivery

We add value for our stakeholders by ensuring safe and effective delivery of large and complex infrastructure projects, ranging from large portfolios of smaller works to stand-alone mega projects.

£5.4bn

Capital investment in 2019/20

Innovation

Our innovation activities are focused on future-proofing the business for our customers as the energy landscape changes. Collaboration is crucial as we search for new technologies and techniques that will support this transformation. We are therefore investing in technologies through our venture capital and innovation arm, NGP, while continuing to partner with industry, academia, and policymakers.

£134m

Fair value of NGP portfolio at 31 March 2020

Our culture

National Grid's culture is the values, beliefs and behaviours that characterise our Company and guide our practices.

We are working hard to progress as an inclusive employer that values diversity. The knowledge and expertise of our employees is fundamental to our business success. To enable our employees to reach their full potential, we are investing in building the skills and capabilities of our workforce.

We maintain high standards of ethical business. We also promote the right behaviours that are aligned with our values and culture by recognising our employees through a company-wide reward system that supports both what they achieve and how they have delivered their achievements.

Strategy and risk management

Our strategy places the customer at the heart of our decision-making and consists of three long-term priorities:

- optimising our operational performance;
- growing our core business; and
- evolving for the future.

As the energy industry continues its transition to a cleaner future, we have evolved our strategy so that it clearly articulates our priorities, while positioning our business to continue to deliver long-term economic benefits in the regions in which we operate.

The evolved strategy is founded on four strategic pillars which are to:

- enable the energy transition for all;
- deliver for our customers efficiently;
- grow our organisational capability; and
- empower our people for great performance.

We have well-established governance structures that include comprehensive risk management, strong controls and financial discipline.

Further reading

About our strategy on pages 16 – 17 and how it is evolving on page 12.
Internal control and risk management on pages 22 – 25.
Our commitment to being a responsible business on pages 48 – 56.

The value we create

For stakeholders and wider society

Society

We provide the energy systems that help economies grow in a sustainable, affordable and reliable way. We continue to work with partners and customers on the technologies required to make net zero a reality.

70%
Current reduction in greenhouse emissions

Investors

We aim to be a low-risk investment proposition, focused on generating shareholder value through dividends, supported by asset growth from investing in essential assets under primarily regulated market conditions, to servicing long-term sustainable consumer-led demands.

11.7% Ⓐ
Group Return on Equity 2019/20

Our employees

We seek to create an environment in which our workforce can make a positive contribution, develop their careers and reach their full potential.

77%
Employee engagement score 2019/20

Customers

By delivering the energy they need and dealing with them in a transparent and responsive manner, we seek to build trusted relationships with our customers as we deliver services to them.

Economic, health, safety and environmental regulators

Through constructive, transparent engagement and consistent, reliable delivery of our commitments, we build trust with our regulators.

0.12 LTIs
(per 100,000 hours worked in a 12-month period)
Group safety performance 2019/20

Contractors and suppliers

We maintain responsible and efficient supply chains in which our interests and those of our suppliers are aligned with the interests of customers.

£6.0bn
Group supply chain spend 2019/20

Communities and governments

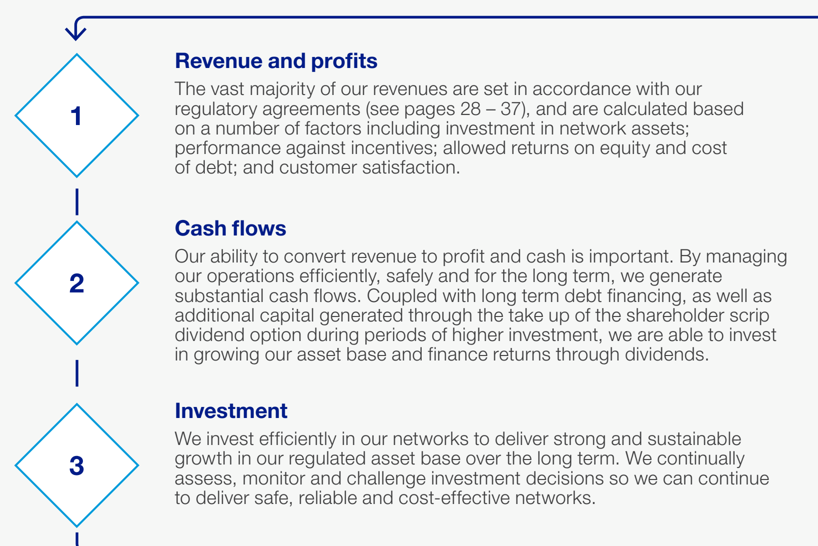
We help national and regional governments formulate and deliver their energy policies and commitments. The taxes we pay help fund essential public services. We have an important role to play in sustainability, enabling the transition to a low-carbon future.

£47m
Contribution to communities 2019/20

Further reading
Our Key Performance Indicators (KPIs) on pages 18 – 20
Our stakeholders on pages 44-47
Our commitment to being a responsible business on pages 48 – 56

Financial value

The chart below describes how our businesses create financial value. Further detail can be found in our financial review on pages 28 – 37.



Chairman's Statement

Sir Peter Gershon
Chairman

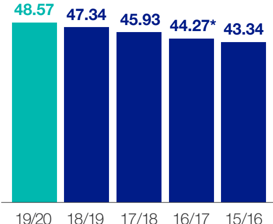
"National Grid evolved its vision to reflect our belief that a responsible business needs to stand for something beyond profit."

Final dividend of

32.00

p per share proposed to be paid on 19 August 2020

Full year dividend (pence per share)



*excludes a special dividend of 84.375p.

The Annual General Meeting will be held on 27 July 2020. This year, it will be held behind closed doors as a result of the COVID-19 pandemic. More details on how to watch a presentation following the AGM can be found on our website: www.nationalgrid.com.

As we all continue to face the unprecedented challenge of COVID-19 around the world, National Grid remains committed to doing the right thing for our employees, our customers, our communities and our suppliers.

Our priority throughout this period continues to be keeping our key workers safe. We have well-developed procedures in place to manage the effect of a pandemic, and we swiftly and successfully implemented our business continuity plans which allowed us to maintain safe working environments for our workforce. That ensured they could play their part in this time of global crisis by keeping our networks running and the energy flowing to hospitals, care homes, businesses and homes. I would like to thank them for their dedication and resilience.

In mid-April, after our financial year end, the extraordinary resilience of our US employees also enabled power to be quickly restored to over 200,000 customers across New York, Rhode Island and Massachusetts following extensive storm damage, despite the additional constraints arising from COVID-19.

Some short-term delay to our capital programmes was inevitable given the lockdown measures put in place by governments to control the spread of COVID-19. However, work on our capital programmes has now resumed. In the US, the suspension of debt collection and customer termination activities across our jurisdictions resulted in lower customer collections and additional provisioning for bad and doubtful debts.

We are now working diligently to prepare for the future, in which the safety of our employees and customers will remain of paramount importance.

The Board's ongoing priorities are our societal responsibilities, the balance sheet and liquidity. In support of these and in recognition of the uncertainty surrounding the evolution of the pandemic, we are keeping a number of scenarios under regular review. Our current base case assumes a scenario of continued gradual easing of restrictions in all our operating territories, to keep the spread of the pandemic under control.

Against that backdrop, I am pleased that we are able to use our extensive resources to help support the communities we serve to get through and recover from the pandemic. Although the Company has implemented a number of measures to limit discretionary external spending, it has not implemented pay reductions, furlough or compulsory redundancy schemes.

Nationalisation

The Board spent a lot of time in 2019 considering our response to the Labour Party's proposal to nationalise nearly all of National Grid's UK assets. We implemented some measures which would have strengthened our ability to secure a fair price for these assets, should the Labour Party have won the General Election. Although the Conservative Party secured a majority at this election, we note that the new Labour leader pledged his support for common ownership in a range of sectors, including energy, in his leadership campaign.

The path to net zero

Our focus for the future is to lead the way in the delivery of a clean energy transition. During the year, National Grid committed to reduce its own emissions to net zero by 2050, and we also saw significant legislative action towards a net zero ambition.

The UK and States of New York and Massachusetts each established legally-binding targets to achieve net zero emissions by 2050, while Rhode Island maintained its legally-binding target of 80% emission reductions by 2050. We welcome this progress as it is clear that decarbonisation and the pathway to reach net zero will remain one of the major long-term issues facing our economies.

While the pathway to decarbonisation of electricity has been identified, there is no obvious solution for the decarbonisation of heat. We continue to work with governments and others in the industry to identify solutions, but it is clear that the right regulatory and policy frameworks will be critical to enable a fair and affordable transition to a clean energy future.

Reviews

Although the power outage in Great Britain on 9 August 2019 caused significant disruption, the Board is pleased that the subsequent internal and external reviews confirmed our systems operated correctly and identified the failure of certain generators and railway assets as the cause. The external reviews highlighted a number of recommendations which we hope are implemented to improve the resilience of the overall GB infrastructure in future. The Board believes it is important that the current external review of the structure of the ESO results in a stable outcome which best enables the UK to meet its 2050 net zero commitment.

The Board was deeply concerned that the actions taken to implement a moratorium on new gas connections in downstate New York resulted in strong public criticism of the Company by Governor Cuomo, significant reputational damage, difficulties for customers, and a settlement with the New York Public Services Commission. The Board commissioned two external reviews which have provided valuable insights into how our US business got into this situation and a number of recommendations, which are being implemented at pace by our new President of the US business. As we continue working with the Public Services Commission to find a long-term solution, we will ensure our approach to meeting increasing demand for energy in New York State takes account of all key stakeholders.

Financial reporting

The International Financial Reporting Standard (IFRS) technical requirements make reporting some of the performance measures that we use as a regulated business challenging. We provide additional information, on page 32, about both our significant assets and liabilities that do not form part of our audited accounts, to help our investors gain a fair, balanced and understandable view of our business. Where practicable we reconcile these with our statutory measures in 'Other unaudited financial information' on pages 240 – 249.

How we generate and preserve value

Our dividend policy aims to grow the ordinary dividend per share at least in line with the rate of RPI inflation each year for the foreseeable future. As is usual practice, the Board reviews this policy regularly, taking into account a range of factors including expected business performance and regulatory developments. Following stress testing of the finances of the Company against a number of potential COVID-19 scenarios, the Board has decided to recommend a final dividend in line with this policy. Accordingly, the Board has recommended an increase in the final dividend to 32.00p per ordinary share ($2.0126 per American Depository Share). If approved, this will be paid on 19 August 2020 bringing the full year dividend to 48.57p per share ($3.0799 per American Depository Share), an increase of 2.60% over the 47.34p per share for the financial year ended 31 March 2019.

We completed the sale of our remaining stake in Cadent in June 2019 for £1,965 million, and the proceeds were reinvested in the business to support the significant capital investment programme and asset growth across the Group over the medium term.

Regulatory issues

We continue an open dialogue with our regulators. In the UK, we submitted our final business plans for RIIO-2 in December 2019.

We are resuming settlement negotiations in the KEDNY/KEDLI rate cases in the interest of agreeing on a multi-year rate plan that mitigates bill impacts for our customers while allowing us to maintain safe and reliable service, advance our clean energy goals, and earn a reasonable return. If we are unable to reach a negotiated settlement, the rate cases will continue to a litigated outcome at which time we would then plan to file a new multi-year rate case proposal.

In light of the financial hardships that our customers have experienced from the COVID-19 pandemic, Niagara Mohawk Power Corporation (NMPC) delayed the implementation of certain previously approved rate increases. NMPC also delayed the filing of a rate case this spring and are exploring options including an extension of the current rate plan or a rate case filing later this summer.

Appointments and Board changes

US Executive Director Dean Seavers stood down from the Board for personal reasons in November 2019. The Board appointed Badar Khan, who was already a member of the Executive Committee, as interim President of the US business. Following a thorough process to identify a permanent successor, which included both internal and external candidates, I'm pleased that Badar was confirmed as President of the US business in April 2020.

The Board was pleased to welcome two new Non-executive Directors during the year – Jonathan Silver, who has a strong background in finance and US government policy, and Liz Hewitt, who brings extensive business, financial and investment experience from international companies across a range of sectors.

You can read more details of all our Board members' experience and the Committees they support in the Corporate Governance review on pages 63 – 107.

Culture and Responsible Business

The recent tragic death of George Floyd and the subsequent widespread expressions of public support for the Black Lives Matter movement have reinforced the right of everyone to equal opportunities, to have their voice heard, and to feel safe as they go about their daily life. These recent events highlight that companies have a vital role to play in addressing inequality and injustice wherever we see it, encouraging our employees to speak up, challenge and act where something does not feel right. We will not condone intolerance of any kind at National Grid.

The Board hosted several meetings throughout the year with a cross-section of employees to ensure the voice of the employee was heard by the Board, and was pleased with the effectiveness of these sessions.

During the year, National Grid evolved its vision to reflect our belief that a responsible business needs to stand for something beyond profit. We have a responsibility to demonstrate our commitment to society more broadly, and that's why our vision is to be at the heart of a clean, fair and affordable energy future.

Our purpose and values are key to our Company's DNA. In particular, they have enabled all our employees to respond with huge commitment, agility and flexibility to the challenges of COVID-19. I am immensely grateful to them.

Sir Peter Gershon
Chairman

Chief Executive's review

John Pettigrew
Chief Executive

We've made strong progress against our strategic priorities despite a challenging year.

The far-reaching and devastating global consequences of COVID-19 cannot be underestimated and we all owe a debt of gratitude to those who have been on the frontline fighting this virus across the world.

At National Grid, our role throughout this crisis has been to play our part in keeping the lights on and the gas flowing. Keeping the networks running, keeping our customers connected to the power they rely on and expect, and protecting the communities where we live and serve has never been more important.

I'm immensely proud of the way all our workforce have responded to this pandemic, and particularly those who go out to work every day in the field and in our control rooms to ensure we continue to power hospitals, homes and society during such a challenging period.

We took immediate action to lessen any financial hardship our customers may have faced, suspending debt collection and customer termination activities across our US jurisdictions, and delaying planned bill increases in New York State. We have also strengthened customer support activities to help lower-income customers manage their energy bills during the crisis and beyond.

We donated a total of £600,000 to the National Emergencies Trust, the Trussell Trust and University Hospitals Birmingham Charity in the UK, and $1 million to community-based charities across our US jurisdictions to provide help and support to the people that needed it most. We also introduced a programme of practical help, encouraging our thousands of UK employees to volunteer for half a day per week with charities working on the COVID-19 response.

We are planning additional support activities for the communities we serve for the post COVID-19 environment, including employability skills support and helping small and local businesses in our supply chain. We recognise that the impact of COVID-19 will be felt over the long term, and we are committed to applying our Responsible Business principles for our workforce, our communities and the economy in our response.

While the end of the financial year was dominated by responding to the COVID-19 pandemic, 2019 saw uncertainties particularly in the UK where the external environment was dominated by Brexit and a General Election.

Leading the clean energy transition

It's been a year of significant progress in the clean energy transition with climate change rising up the agenda for the public and politicians alike. We've seen climate change protests across the world, and an increased commitment from governments to take action, including in the geographies in which we operate. The UK legislated for net zero emissions by 2050, and New York and Massachusetts each set an economy-wide limit of net zero carbon emissions by 2050, with New York additionally legislating the target of 100% carbon-free electricity

> "National Grid has a leading role to play in ensuring a cleaner energy future in all our regions."

by 2040. Rhode Island maintained a legally binding target to reduce carbon emissions by 80% by 2050 and the Governor signed an executive order targeting 100% renewable electricity by 2030.

At National Grid, we have evolved our strategy and vision to reflect our belief that we have a responsibility to ensure that the energy future we help to shape is one where everyone shares the benefits and where we enable the communities we serve to deliver a clean transition. That's why our vision is **to be at the heart of a clean, fair and affordable energy future**. You can read more about our new strategy on page 12. Throughout this report, we have reported our performance against the strategy that was effective until 31 March 2020, and which is set out on pages 16 – 17.

During the year, we committed to reducing our own emissions to net zero by 2050 and to continue to facilitate the industry-wide transition to a low-carbon future.

We worked with the UK government to accelerate the transition to electric vehicles to cut carbon emissions and improve air quality for communities the length and breadth of the country. We were pleased to see a £500 million commitment in the 2020 Budget to support the rollout of new rapid-charging hubs so drivers are never more than 30 miles from a charging point.

We are developing the world's first zero-carbon industrial cluster in the UK's Humber region in partnership with Drax and Equinor. The Zero Carbon Humber consortium will use carbon capture and storage to create a zero-carbon region by 2040.

We are developing hydrogen trials and investing to understand the impact of hydrogen on our existing gas assets to address the decarbonisation of heat. While gas clearly has a role to play for many years to come, we understand the urgency of finding a solution to decarbonise heat in a way that is fair, affordable and not overly disruptive to consumers.

We've started construction work on our Viking Link interconnector, connecting Great Britain and Denmark, and continue construction on IFA2 and North Sea Link. Our interconnectors have a key role to play in a decarbonised energy sector, enabling the most efficient use of renewable energy across Europe.

Delivering for investors

During the year, we spent more than £5 billion growing and enhancing our US and UK energy networks, through a combination of organic growth, reinvesting the proceeds from the Cadent sale and innovative financing methods such as our green bond. We achieved this strong performance while also delivering a high level of asset growth of 9%. The proposed final dividend of 32.00p, which is still subject to shareholder approval, brings our full year dividend to 48.57p, an increase of 2.60% and in line with our policy. This is covered 1.2 times by our underlying earnings per share of 58.2p.

Safety

In the UK and NGV businesses, we've seen a strong safety performance this year. We continue to focus our efforts on developing a generative safety culture, and in the UK we've seen our lowest ever number of lost time injuries.

In the US, we're focused on improving safety and ensuring it is front of mind for all our workforce after seeing a deterioration in performance over the last 12 months. Tragically, we also had a fatality in the US where one of our colleagues was struck by a vehicle which had driven into a clearly marked out area where he was working.

Delivering for our customers

Customer performance remains a key metric and I'm pleased we've seen a steady increase in our customer satisfaction scores for GT and ET. However, our scores were below target in the US, our metering business and the ESO. We have identified areas of improvement and action has already started to address some of these.

Optimising performance

We set out our ambition last year to increase efficiency in our UK and US regulated businesses, becoming more responsive to customers' needs, while also delivering sustainable cost savings. This year we reduced our costs in both regions by significantly more than our £50 million UK target and the $30 million US target through a variety of measures including careful contract management and negotiation and improving workforce productivity. Removing these costs from our business will help to minimise future increases to customer bills.

In the UK Transmission businesses, the weighted average Return on Equity of 12.4% was maintained and within the 200 to 300 basis points outperformance that we committed to under RIIO-T1. In the US, Return on Equity of 9.3% represented 99% of our allowed return, benefiting from revenues from rate case increases in addition to control of our costs and was up 50 basis points on last year. Our Group Return on Equity was marginally lower at 11.7%, down 10 basis points from last year, partly due to lower income from our other businesses.

National Grid has continued to deliver world-class reliability and responded well to storms in the US. We were recognised with the EEI's Emergency Assistance Award and the Emergency Recovery Award for our fast and effective response to storms in 2019. In the UK, we regret the disruption caused by the power outage on 9 August 2019 but welcomed the Ofgem and government reports into the incident which confirmed that the outage was not caused by National Grid infrastructure. We were pleased that they agreed with our view that, given an increasingly complex and challenging energy network, it is appropriate to carry out a review of the Security and Quality of Supply Standards.

We were pleased with the stakeholder group support we received for the RIIO-2 business plans we submitted in December 2019. The Open Hearings expected in April 2020 were delayed due to COVID-19, but we continue to work with Ofgem and all our stakeholders to find the most appropriate framework to balance the needs of our customers and investors. You can read more about the composition of the stakeholder group on pages 45 – 47.

We welcomed Ofgem's decision to apply the Strategic Wider Works model as part of the RIIO-T1 framework to the Hinkley Seabank Connection Project, which we believe is in the best interests of consumers.

In the US, we secured our Massachusetts Electric rate order with a five-year performance-based mechanism and an allowed Return on Equity of 9.6%.

In New York, we enforced a temporary gas moratorium in May 2019, which led to a very challenging period for all our stakeholders. We found operational solutions to resolve the issue for the short term and have now submitted our report into long-term solutions to the State of New York Public Services Commission (NYPSC). We are listening to our stakeholders' concerns and will continue to work with the NYPSC as we try to resolve the issue in the coming months.

Growing our assets

We completed the sale of our remaining stake in Cadent for £1,965 million and reinvested the proceeds in our capital investment programme.

In the US, we invested £3.2 billion in the year on projects including the completion of the Gardenville substation upgrade in West Seneca, New York, which will supply an affordable and reliable source of renewable power for decades to come. We delivered asset growth in the US of 12.2%, up 300 basis points on the prior year.

In the UK, we awarded the £400 million tunnelling contract for our London Power Tunnels 2 project in December 2019. This 20.85-mile (33.5-kilometre), £1 billion link will provide resilience across South London from Wimbledon to Crayford and is due to complete in 2028. Another highlight has been the completion of the tunnelling for our Feeder 9 project under the Humber, which has been a critical investment in our gas infrastructure. These are just two of the projects which contributed to capital investment during the year of £1.3 billion and asset growth of 4%.

Our interconnector portfolio continues to grow with new subsea power links to France, Norway and Denmark planned over the next four years. IFA2, the 149-mile (240-kilometre) subsea cable between Great Britain and France is on track to become operational later this year, and work also continues on our North Sea Link to Norway which is expected to be operational in 2021/22. Construction is now underway on Viking Link, the 472-mile (760-kilometre) subsea cable between Great Britain and Denmark.

Evolving to a low-carbon future

In our role at the heart of the clean energy transition, we have continued to take action to enable decarbonisation across our business.

We completed our acquisition of Geronimo, a leading wind and solar developer in North America, in July 2019. Since the acquisition, Geronimo has announced the commercial operation of its 200 MW Crocker Wind Farm in South Dakota, along with the signing of a power purchase agreement with Basin Electric Power Cooperative for its 128 MW Wild Springs solar project, also in South Dakota.

The ESO is also preparing to enable a green energy future and by 2025, aims to have transformed the operation of Great Britain's electricity system so it can operate with zero carbon.

I was pleased to note that 2019 was the cleanest year on record for the UK as, for the first time, the amount of zero carbon electricity used by the UK's homes and businesses outstripped that from fossil fuels for a full 12 months.

As the UK energy industry continues to evolve, we are working closely with the government and regulator to review the most appropriate structure for the ESO following legal separation last year.

Unlocking future potential

I was pleased that our focus on diversity was recognised with Forbes naming us one of the Best Employers for Diversity 2020, and the US Human Rights Company Foundation awarding us Best Place to Work LGBTQ Equality. Our environmental commitments were also recognised with a place for the fourth consecutive year on the CDP A list, which names the world's most pioneering companies leading on environmental transparency and performance.

National Grid continues to focus on being a responsible business and increasing our positive impact on society. The unprecedented global challenge of COVID-19 demonstrated more than ever the importance of being a responsible business, and we concentrated our efforts on how best to support our workforce and our communities through this difficult time.

In addition to the immediate volunteering programme we set up to support those who needed it most during the COVID-19 pandemic, we partner with charity organisations to encourage and enable our employees to volunteer with them. In early 2020, we launched a community investment strategy which will provide access to skills development for 45,000 people across the US and the UK, as we help to equip future generations to be part of the clean energy transition.

We invest millions every year in training to ensure our workforce have the skills to meet the changing needs of a net zero economy, as well as supporting STEM-related activities for tens of thousands of schoolchildren around our key infrastructure projects.

Looking ahead

I'd like to end by expressing my gratitude to all our workforce who have worked tirelessly to achieve the performance we have delivered this year, and to ensure the networks keep running as efficiently and safely as ever through unprecedented times.

John Pettigrew
Chief Executive

Scan here to view our video

Evolving our strategy for the future

We have evolved our strategy in order to better reflect our purpose and in response to our business environment.

The evolved strategy reflects a belief that we have a responsibility to ensure that the energy future we help to shape is one where everyone shares its benefits. We will continue to connect people to the energy they need for the lives they lead, safely, reliably and securely.

Our purpose

Our purpose remains to **Bring Energy to Life**, providing the heat, light and power people and businesses rely on and supporting local communities to prosper.

Vision
To be at the heart of a clean, fair and affordable energy future

Values
Every day we…do the right thing, find a better way and make it happen

Bring Energy to Life

Strategy
National Grid builds, owns and operates large-scale, long-life energy assets primarily in networks and renewables that deliver fair returns and high societal value. The Company's portfolio of largely regulated assets in stable geographies is underpinned by a strong and efficient balance sheet.

Priorities
Enable the energy transition for all

Deliver for customers efficiently

Grow organisational capability

Empower colleagues for great performance

Our vision

National Grid stands for more than profit. The Company is committed to making a positive contribution to society, whether that's helping the young people of today to become the energy problem-solvers of tomorrow, supporting customers to use energy more efficiently, or tackling climate change.

That's why the Company's vision is to be at the heart of a **clean, fair and affordable** energy future, ensuring everyone benefits from the energy transition, that bills are not a burden for individuals or families, and that no one gets left behind.

Our strategy

National Grid's strategy is to build, own and operate large-scale, long-life energy assets primarily in networks and renewables that deliver fair returns and high societal value. The Company's portfolio of high-quality, low-risk assets in stable geographies is underpinned by a strong and efficient balance sheet.

This strategy sets the bounds of National Grid's business and will ensure it is set up to play a leading role in the energy future. It will be delivered through four priorities.

Our priorities

We have four strategic priorities to make our purpose possible and achieve our vision.

Enable the energy transition for all
Fully decarbonising the electricity grid through modernisation, increased flexibility and by connecting renewables quickly and efficiently. Leading the way in the decarbonisation of gas, investing in a range of solutions like renewable natural gas, blending hydrogen in networks and carbon offsetting. Decarbonising transport by building electricity network flexibility and supporting charging infrastructure.

Deliver for customers efficiently
Providing safe, reliable and affordable energy for customers around the clock, ensuring operational excellence and fiscal discipline in everything National Grid does, building productive partnerships with regulators and policymakers, and unlocking real value for customers and the communities they live and work in.

Grow organisational capability
Anticipating and adapting to changes in the energy sector in faster and smarter ways, remaining at the cutting edge of engineering and asset management, and innovating more sustainable energy solutions.

Empower colleagues for great performance
Building diverse and inclusive teams that reflect the communities the Company serves, attracting the best talent, prioritising learning and developing the skills needed now and in the future to accelerate the energy transition.

Our values

As a purpose-led, responsible business, how National Grid delivers for its customers and communities is as important as what is delivered. Colleagues right across the Company, in the United Kingdom and the United States, are committed to:

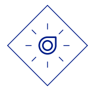
Doing the right thing, keeping customers, communities and the wider public safe.

Finding a better way, delivering excellent performance at best value and innovating new energy solutions.

Making it happen, with a strong focus on excellence, efficiency and results.

Our business environment

As well as managing through the COVID-19 pandemic, our societal ambition remains to achieve net zero, with emphasis on fairness and affordability, digitalisation and decentralisation during the transition.



Net zero

2019 was a turning point for climate action, from protests on the street to legislative action. Governments around the globe are considering and acting on ambitious carbon reduction targets.

70%

National Grid's reduction in carbon emissions since 1990.

Net zero

by 2050

Our net zero commitment is to reduce our own greenhouse gas emissions to net zero by 2050.

The future of heat

In the absence of both clear technology roadmaps and public policy frameworks that underpin the decarbonisation of heat by 2050, we currently continue to believe that our gas assets will have useful purposes beyond 2050. In common with the Committee on Climate Change's Net Zero report in May 2019, we believe that the future of heat is one reliant on multiple technologies and fuels, with an enduring role for natural gas. However, the scale and purpose for which the networks will be used is dependent on technological developments and, crucially, policy choices of governments and regulators.

The future of heat is uncertain, and its decarbonisation is reliant on relatively nascent technologies, such as hydrogen and carbon capture usage and storage, as well as biogas and heat pumps. These new and evolving technologies will need to be used in new contexts and on a scale that has not yet been demonstrated. We do not believe that any of these technologies can, in the next 30 years, reach sufficient scale to represent an existential threat to our gas businesses.

2019/20 developments

Climate risk continues to rise up the corporate agenda, against the rapidly evolving societal attitudes to climate change and the role of energy companies in leading and meeting net zero commitments.

At least 9 countries have legislated or are in the process of legislating, and at least 112 countries are discussing legislating, net zero targets by 2050 or sooner.

UK

The UK became the first major economy to commit to a legally binding target of net zero emissions by 2050.

2019 was the cleanest year on record for the UK as, for the first time, the amount of zero carbon electricity used by the UK's homes and businesses outstripped that from fossil fuels for a full 12 months.

US

The states of New York and Massachusetts each set an economy-wide limit of net zero carbon emissions by 2050, with at least 85% of reductions from their states' own energy and industrial emissions (and the remainder possible via carbon offsets). New York additionally legislated the target of 100% carbon-free electricity by 2040.

Rhode Island maintained a legally binding target to reduce carbon emissions by 80% below 1990 levels by 2050, and Governor Raimondo signed an executive order targeting 100% renewable electricity by 2030.

Across the wider US, one in three Americans – more than 110 million people – live in a community which has committed to or achieved a 100% clean electricity target.

Our response

- In both the UK and US, we are taking important steps to address the future of heat, engaging across the industry and with government and regulatory bodies. In the US, we collaborated with industry partners to develop interconnection guidelines for renewable natural gas (RNG) in New York State that seek to facilitate growth of this clean energy resource. In the UK, we have conducted three feasibility studies on the potential role of hydrogen and how our networks could facilitate its uptake.
- For our UK regulated business, the single biggest contributor towards our net zero target to reduce is Sulphur Hexaflouoride (SF_6), and we will be leaders here. In the US, through our gas pipeline replacement programme, we replaced 460 miles (740 kilometres) of pipe in 2019/20, reducing greenhouse gas emissions from the unintended release of natural gas.
- The ESO has agreed contracts with five parties, worth £328 million over a six-year period, in a world-first approach to managing the stability of the electricity system. This aids our ambition to be able to operate GB's electricity system carbon free by 2025.
- The world's largest offshore wind farm, the 1.2 GW Hornsea Project One wind farm, is connected to our electricity transmission network and first generated power in 2019.
- In January 2020, we announced the launch of our first ever green bond. Raising approximately €500 million, the bond's proceeds will finance or refinance UK electricity transmission projects with environmental benefits.
- We have partnered with Drax Group and Equinor to explore how large-scale carbon capture usage and storage and hydrogen could convert the UK's Humber region into the world's first net zero carbon industrial cluster.
- New York Transco, a joint venture in which NGV is a partner, was selected to develop the New York Energy Solution transmission project, unlocking renewable energy upstate for customers downstate.
- NGV completed its acquisition of Geronimo, a leading US onshore wind and solar developer, to establish a foundation on which to grow a large-scale renewables business, such as the 200 MW Crocker Wind Farm in South Dakota. The £209 million deal also secured a controlling share of a 379 MW solar and wind generation joint venture, Emerald Energy Venture LLC ('Emerald'), with Washington State Investment Board.
- Interconnectors played an important role in helping the UK use more zero carbon electricity than that from fossil fuels, and we are currently constructing three additional interconnectors: IFA2 to France, North Sea Link to Norway and Viking Link to Denmark.
- We believe our gas businesses can facilitate the transition to a decarbonised gas system and are investing in solutions such as renewable natural gas and blending hydrogen in our network.
- We have committed to meeting the Task Force on Climate-related Financial Disclosures (TCFD) recommendations in full (see pages 57 – 62).

Our business environment
continued

Fairness and Affordability

National Grid delivers energy safely, reliably and affordably to the communities we serve. As well as affordability, we will play our role in ensuring that no one is left behind in the short term during the COVID-19 crisis, or in the longer-term transition to clean energy.

#1

The US national ranking of our Massachusetts Electric utility energy efficiency programme by the American Council for an Energy-Efficient Economy (ACEEE).

3%

UK transmission network costs per average household dual fuel bill.

2019/20 developments

UK

Cost of energy remains a key priority, evidenced by 2019's implementation of the energy price cap, and two of Ofgem's key priorities: to 'drive down prices' and 'decarbonise to deliver a net zero economy at the lowest cost to consumers'.

With the government's recent commitment to net zero, industry participants and advisors, such as the Committee on Climate Change, have stressed the importance that net zero is delivered in a fair way as a 'just transition' across society, with vulnerable consumers protected.

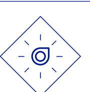
US

Energy costs remain a priority for consumers and regulators, and fairness is high on the agenda in the discussion about decarbonisation pathways and their associated costs.

State regulators continue to explore innovative regulatory frameworks that reward utilities for managing customer bill impacts, while delivering desired regulatory and policy outcomes. This includes adjustments to the cost-of-service model that are more forward-looking, and which establish new shareholder incentives for cost efficiency.

Our response

- Our US and UK regulated businesses are pushing for greater affordability and innovative ways to minimise the total cost of energy to consumers.
- In the UK, we have generated £603 million of savings for consumers in the first seven years of the RIIO arrangements, excluding any share from Cadent.
- Our £150 million Warm Homes Fund has helped over 42,000 households suffering from fuel poverty access heating systems and become more energy efficient. This is the largest private sector investment in energy efficiency ever made in the UK.
- Our utility energy efficiency programmes continued to deliver excellent results for US customers, achieving annual electricity savings equal to 3.7% of sales in Massachusetts and 1.1% in New York. All three states that we serve rank in the top five in energy efficiency performance nationally according to the ACEEE.
- In response to the COVID-19 crisis, we have expanded customer support, paused late payment collections activities, and placed a freeze on related service cutoffs.
- In our Massachusetts Electric Company rate order, we gained approval for our proposed five-year forward-looking ratemaking mechanism that includes a consumer dividend and earnings sharing mechanism that rewards efficient company performance.
- In upstate New York, we delivered an estimated $200 million in net societal benefits in our second year of performance incentives. Such benefits increase the affordability of energy and were achieved by reducing electric system peak to mitigate supply costs, increasing adoption of energy efficiency and facilitating uptake of heat pumps for beneficial electrification, among other initiatives.
- In Albany, New York, we worked with the public transit authority to launch four electric buses to test customer experience with the technology and enable expansion to other fleets across our territory. This is an example of our efforts to make electric transport options more widely accessible to all.



Decentralisation

The energy system continues its transition from high to low carbon. This change coincides with a shift to more decentralised generation, including renewables and battery storage. As the volume of this intermittent and distributed generation increases, a more resilient and flexible system will be required; one that makes best use of available energy resources to meet consumers' needs in a balanced, efficient and economical way.

6 MW
48 MWh

The largest battery storage facility in northeastern US was installed by National Grid on the island of Nantucket in 2019 as a flexible and reliable alternative to undersea cables.

2019/20 developments

UK

Last year 29% of generation was connected at the distribution network level or behind-the-meter. The July 2019 Future Energy Scenarios (FES) document suggested that by 2050 this could rise to 58%. This is driven by new technology and business models enabling solutions such as solar panels, electric vehicles and battery storage to be more accessible to all consumers.

US

Distributed energy resource investments and installations continue to grow across the US. This includes not only small-scale solar photovoltaics, but also electric vehicles, distributed storage and demand-side resources. Utilities across the country are exploring how to integrate these resources into the grid, ensuring their utilisation is effective, safe and reliable.

Our response

- We are supporting growth in distributed energy resources (DERs) in our US service territories, where our US regulated business connected 314 MW of generation in calendar year 2019. We also made investments in the grid to enable future growth, including to increase distribution system capacity and to deploy advanced communications, monitoring and controls technologies essential to enhanced DER integration.
- We continued our partnership with leading home solar panel and battery storage company, Sunrun, securing new contracts for grid services from rooftop solar and storage across the US, with nearly 40 MW capacity and ancillary services in calendar year 2019.
- Our 'bring-your-own' device demand response programme expanded in Massachusetts and Rhode Island and received the Energy Storage North America (ESNA) Innovation Award and the Peak Load Management Alliance (PLMA) Program Pacesetter Award. It enables residential customers to receive a financial incentive for enrolling their devices to be managed by us to create grid flexibility.
- Since the start of financial year 2019/20, ET continues to process or has processed 207 connection applications, of which 20% have been made for transmission connected batteries, and a further 14% have been made up of a new customer type, where the customer mixes their generation make-up, for example solar with batteries.
- The ESO is working on a £10.3 million innovation project to explore how DERs can be used to restore power in the highly unlikely event of a total or partial blackout of the UK electricity transmission network.

Digitalisation

Businesses and lives are being transformed by innovations such as artificial intelligence and virtual reality. The energy landscape has seen many changes as companies look to create new business models and reduce energy prices through digital technologies. Technology commercialisation, consumer demand and regulatory stimulus will continue to drive these trends.

>80%

The reduction in the US call centre volume during major storms, after implementing proactive two-way outage texting to improve communications with customers about service outages and restoration.

2019/20 developments

In 2019, the application of digital technologies across the energy industry continued at pace globally. Bloomberg New Energy Finance tracked 379 applications, projects, partnerships and product developments for industrial digitalisation. This is 78% more than in 2018, and they expect a further increase in activity in 2020, as positive results of digitalisation drive its increased use.

Utility networks in all geographies are identifying significant potential for their businesses through digital transformations. Advances in technologies to operate systems, manage assets and engage with customers will be a key facet of our business going forward.

Our response

- For our digital transformation, we are adopting a Group-wide centralised hub model supported by regional delivery. Strategy for the transformation is formed centrally with regional autonomy.
- We expanded a personalisation platform to serve more than two million customers in Massachusetts and Rhode Island. Advanced data and analytics proactively identify eligible customers and present the next best offer to individuals, increasing offer enrolment and reducing bad debt.
- ConnectNow, our ET network connections project, will improve the customer experience of connecting to the network. Focusing on small scale connections such as solar, storage, electric vehicle charging and data centres, this digital platform assists customers through the application process, providing transparency and facilitating communication.
- We are harnessing advances in digital technology and innovation to improve business performance. For example, the ESO in collaboration with the Alan Turing Institute has used data science and machine learning to deliver a 33% improvement in solar forecasting. This will help the ESO run the system more efficiently, and enable more solar capacity to be connected and utilised.
- In 2020, the ESO launched a free Carbon Intensity application, aimed at empowering people to make conscious decisions about how they consume energy by showing them the greenest times of day to use electricity.
- NGP invested in Dragos, a leading cybersecurity provider of industrial control systems and operational technology. Our cybersecurity team conducted a pilot of Dragos' asset identification, threat detection and response software platform to help secure National Grid's critical infrastructure in the UK and US.
- Dragos was among eight new investments and six follow-on investments made by NGP, whose portfolio at the close of the fiscal year comprised 21 investments at a fair value of £134 million ($167 million).

Our response to COVID-19

COVID-19 is affecting countries, communities, supply chains and markets, including the UK and our service territory in the US. Since the World Health Organisation declared the outbreak as a pandemic on 11 March 2020, National Grid has applied UK and US Federal and State government advice and guidance on dealing with the potential and actual spread and impact on our business and our customers.

The Company has successfully activated its crisis management framework which includes identifying the areas that are deemed critical and the corresponding level of reliability and service continuity needed to deliver normal services during the pandemic. Our plans include continued safe and reliable service during large numbers of workforce absence due to illness. Under government guidelines in both the UK and the US, utility workers are identified as key/essential workers and have been subject to specific guidance and permissions on family arrangements and movements. We have moved to working from home arrangements, where possible, and have also identified critical areas including control rooms, call centres, dispatch and key sites including generation and LNG facilities, terminals, substations and compressor stations. For all these activities plans are in place to maintain critical safety and maintenance activities, which includes sequestering some employees.

Some of our work, especially in the US, requires contact with members of the public. To safeguard our employees and the public we are following government requirements and recommendations for social distancing. This includes our collections, meter installations and shut-off arrangements while continuing to provide a safe and reliable network. We have also made arrangements to ensure that those customers with financial difficulties who cannot make payments do not have services cut off.

Finally, we are also working with our supply chains so that our systems and networks have the necessary materials and parts. Our regular engagement with government agencies and our regulators, as well as following all advisory services regarding management of the spread of COVID-19, is expected to continue for the foreseeable future.

Case study – NGV
Our response to COVID-19 in our communities

NGV has helped the University Hospitals Birmingham (UHB) Charity to launch a special appeal, to raise £1 million to support patients and staff through the COVID-19 pandemic.

The donation has been used to purchase almost 400 tablet computers that will be used by patients to help them speak to their loved ones while they are in isolation. The tablets will be distributed across the UHB Charity's five hospitals, including the Nightingale Hospital, which has recently been established at the National Exhibition Centre in Birmingham, UK.

Scan here for the full story.

Delivering against our strategy

Our strategy in 2019/20 focused on three strategic priorities for our business, delivering for customers safely and efficiently today while setting a growth pathway for the future.

Customer first

We have a vital role to play in enabling customers to benefit from the changes in our industry. The clean energy transition and associated technological advancements mean we can provide our customers with a more cost-effective service, while leaving no-one behind. We measure customer satisfaction as a KPI within each of our business segments.

Our three strategic priorities

1. Optimise performance

Our customers want us to be more efficient to make their energy more affordable, so we must find ways to improve how we run our business.

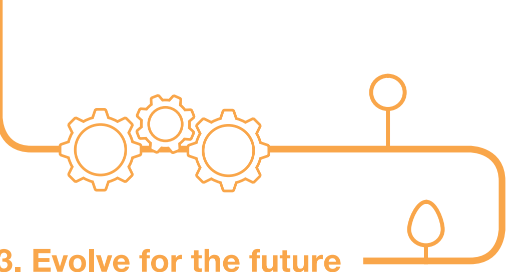
We need to enhance the customer experience and our productivity through more efficient and customer-focused processes. Given the scale of our core business in the UK and US, even small improvements will have a huge impact on our overall performance. Finding new ways of optimising operations will be an important factor in our ability to compete and grow.

2. Grow core business

Delivering strong operational performance provides a foundation from which we can invest in our core business and pursue other opportunities.

In the US and UK, we continue to look for business development opportunities that are close to our core business.

In NGV, we will build on our successful efforts to pursue opportunities in interconnectors and large-scale renewables.



3. Evolve for the future

We need to future-proof our business against the effects of a changing energy landscape. Our networks are already managing changes to the generation mix, while the needs and expectations of our customers are evolving.

Our preparations for the future are underway. For example, at NGV this collaboration brings together our non-network businesses to focus on targeted investment in the energy sector outside of our core business.

We are also looking to develop new capabilities that are essential for long-term success. For example, NGP is increasing our capability in new and disruptive energy technologies to meet the changing needs of our customers and communities.

Examples of progress in 2019/20

1. Optimise performance

- Continued the transition begun through our UK and US programmes to leaner and more efficient operating models in the UK and US core businesses;
- Submitted price controls for the UK electricity, gas and system operator business as part of RIIO-2;
- Received authorisation of a new five-year rate plan for our electric distribution companies in Massachusetts; and
- Continued embedding our Business Management System (BMS) across the Group by publishing BMS standards through the employee handbook, the National Grid Book, in order to increase standardisation across business activities.

2. Grow core business

- Grew our UK and US regulated businesses capex to £5.4 billion (A);
- In January 2020 we celebrated the completion of the new, three-mile (five-kilometre) Humber Tunnel that will house a key gas pipeline between Yorkshire and North Lincolnshire;
- Interconnectors IFA2, Viking Link and North Sea Link are under construction and are on track to be delivered to plan; and
- Delivered the largest battery storage facility in the northeastern US on Nantucket as a flexible alternative to undersea cables.

3. Evolve for the future

- Following legal separation on 1 April 2019, this is the first year the ESO operated as a separate entity from the UK electricity transmission company, evolving for its customers and stakeholders;
- We are expanding a software platform using advanced data and analytics to proactively identify and present offers to customers in Massachusetts and Rhode Island;
- NGP, launched in 2018, growing with a portfolio fair value of £134m at 31 March 2020; and
- NGV completed the acquisition of Geronimo, a developer of wind and solar generation.

Further reading
See more on these in the Principal Operations sections on pages 38 – 43

Progress against our strategy

The Board uses a range of metrics, reported periodically, against which we measure Group performance. These metrics are aligned to our strategic priorities.

Performance reported in this section is based on the strategy that is outlined on pages 16 – 17. We report our performance measures as follows:

KPIs

- Principal measures that track individual progress against each of our three strategic priorities. See below.
- Non-financial measures that underpin delivery of all three strategic priorities. See below.

Other performance indicators

- Financial measures that result from the delivery of our strategic priorities are set out in our financial review, on pages 28 – 37.
- Business-unit-level measures that are specific to our three strategic priorities. These are set out within our Principal Operations review, on pages 38 – 43.

Link to strategy

Optimise performance

Grow core business

Evolve for the future

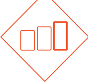
Indicates an alternative performance measure

Link to remuneration

Remuneration of our Executive Directors, and our employees, is aligned to successful delivery of our strategy. We use a number of our KPIs as specific measures in determining the Annual Performance Plan (APP) and Long Term Performance Plan (LTPP) outcomes for Executive Directors. While not explicitly linked to APP and LTPP performance outcomes, the remaining KPIs and wider business performance are considered. For further detail, please see our Directors' Remuneration Report, on pages 88 – 107.

Principal measures

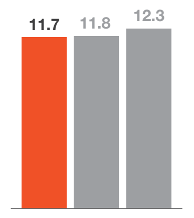
Strategy link	KPI and performance	Progress in 2019/20



Group Return on Equity (RoE, %)

We measure our performance in generating value for shareholders by dividing our annual return by our equity base. This calculation provides a measure of whole Group performance compared with the amounts invested in assets attributable to equity shareholders.

Target: 11–12.5% each year



The UK regulated businesses delivered a weighted average RoE of 12.4%, consistent with the return achieved in the prior year. US RoE increased to 9.3% (2018/19: 8.8%), with increased revenues from new rates driving improved US regulatory performance. Group RoE of 11.7% was marginally lower than 2018/19 (11.8%), with benefits arising in the prior year from the Fulham property sale and US legal settlements.

Customer satisfaction

We measure customer and stakeholder satisfaction, while also maintaining engagement with these groups and improving service levels.

	2019/20	2018/19	2017/18	Target
UK Electricity Transmission (/10)	8.2	7.9	7.7	6.9
UK Electricity System Operator (/10)	7.6	–	–	8.1
UK Gas Transmission (/10)	8.0	7.8	7.6	6.9
US Residential – Customer Trust Advice survey (%)	59.8	58.7	56.6	61.6
Metering NPS score (index)	+40	+44	+39	–

Our UK customer satisfaction (CSAT) KPI comprises Ofgem's electricity and gas transmission customer satisfaction scores. Figures represent our baseline targets set by Ofgem for reward or penalty under RIIO (maximum score is 10). We have seen a steady increase in CSAT for GT, through our efforts to understand the impact that our actions have with a particular focus on responding to their queries. In the first year post separation from ESO, we have also focused on building direct relationships with our ET customers, to understand the experience they need us to deliver and redesigning our service accordingly. Due to legal separation in April 2019, the scores also reflect the independent ESO result. The ESO CSAT score was below target for the year 2019/20 and we have identified query response times and tailoring communications as improvement areas for the next 12 months. Action has already begun to take place within the value streams to address these areas and they will form part of new insight plans for the ESO in 2020/21.

The US metric measures customers' sentiment with National Grid by asking customers their level of trust in our advice to make good energy decisions. The metric, which is tied to the value customers feel they receive from National Grid, has improved over the past few years yet was below target in 2019/20.

NPS scores reported represent the Metering business. Although the score has dropped since 2018/19, we have identified areas of improvement, for example, making sure metering queries raised by our customers are progressed more efficiently.

Principal measures continued

Strategy link	KPI and performance	Progress in 2019/20

Network reliability

We aim to deliver reliability by planning our capital investments to meet challenging demand and supply patterns, designing and building robust networks, having risk-based maintenance and replacement programmes, and detailed and tested incident response plans. We measure network reliability separately for each of our business areas. The table below represents our performance across all our networks in terms of availability. For both our UK and US networks we continued to maintain excellent reliability.

%	2019/20	2018/19	2017/18
UK Electricity Transmission	99.999974	99.999984	99.999984
UK Gas Transmission	99.999589	99.989632	99.996151
US Electricity Transmission	99.955	99.952	99.953
US Electricity Distribution	99.994	99.995	99.995
IFA interconnector	91.4	93.9	92.6
BritNed interconnector	98.6	98.2	97.8
NEMO Link interconnector	96.1	–	–

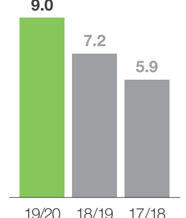
In both the UK and US, we continued to maintain high levels of reliability on all our networks.

IFA interconnector availability was lower in 2019/20 as this was the first year of a major refurbishment project at IFA, where we are rebuilding the site to remain operational for the next 30 years.

Total regulated asset growth (%)

Maintaining efficient growth in our regulated assets ensures we are well positioned to provide consistently high levels of service to our customers and increases our future revenue allowances.

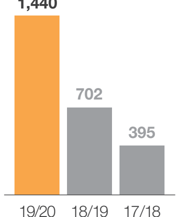
Target: 5–7% growth each year



Asset growth during the year was 9.0% (2018/19: 7.2%). This was primarily driven by the accelerated US rate base growth of 12.2% (2018/19: 9.2%) and higher levels of investment in other assets, such as in NGP. This is combined with increased UK RAV growth of 3.8% (2018/19: 3.6%).

Cumulative investment in delivering new low-carbon energy sources (£m)

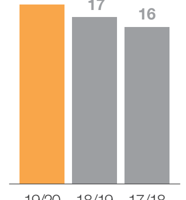
We invest in new low-carbon energy sources primarily through our interconnector businesses (North Sea Link, IFA2 and Viking Link), investments in companies delivering low-carbon energy sources (for example, our investment in Sunrun) and investments into large-scale renewables (for example, our new investment in Geronimo).



Investment in delivering new low-carbon energy sources increased in the year by £738 million (105%). Principally from increased investment in our interconnector projects under construction, with IFA2 nearing completion, further progress made on North Sea Link and the commencement of construction on Viking Link. In addition, the acquisition of Geronimo was made in July 2019, a leading wind and solar developer in North America.

Cumulative low-carbon generation connected to our UK network (GW)

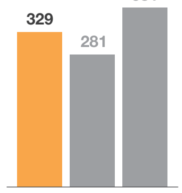
Low-carbon generation supported by our network to date.



A total of 18.3 GW of low-carbon generation is currently connected to our network, following additional offshore wind capacity connecting at Hornsea 1 (+800 MW) and East Anglia 1 (+680 MW). The government's offshore wind sector deal and continued cost reductions observed in the latest Contracts for Difference (CfD) allocation round, indicates further increases in capacity over the coming years.

Connections of renewable schemes to US electric distribution network (MW)

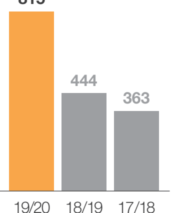
The table represents the amount of customer-owned renewable energy capacity installed on our distribution network across our US footprint. Given the variability and unpredictability of customer-driven projects, the Company does not presently have a MW target. Current targets primarily focus on regulatory compliance and customer need date attainment.



There has been a 17% increase in the installed capacity compared to the previous year. Rhode Island installed a record amount of capacity (100 MW) while the installed capacity in Massachusetts was on par with 2018/19. Although New York experienced a decline in customer-ready projects to interconnect, it received a record amount of capacity (3,000 MW). The Company continues to make progress in Massachusetts and Rhode Island to enable greater renewable energy integration by completing area-wide transmission and distribution studies. While non-residential systems have represented less than 7% of connected applications, they have accounted for 78% of the installed capacity over the last three years.

NGV capital investment (£m)

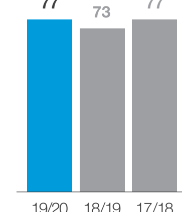
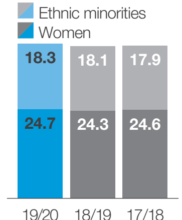
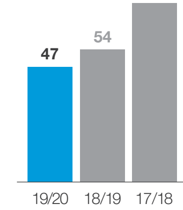
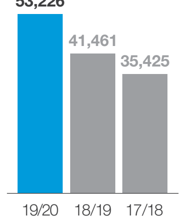
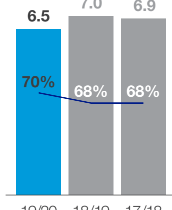
NGV is focused on investment in a broad range of energy businesses across the UK and US, including our interconnector business, large-scale renewable generation, LNG storage and regasification, and energy metering.



Excluding NGP, NGV capital investment has increased in the year by £371 million (84%). There has been increased investment in our interconnector projects under construction, with IFA2 nearing completion, further progress made on North Sea Link and the commencement of construction on Viking Link. In addition, an acquisition of Geronimo was made in July 2019, a leading wind and solar developer in North America.

Progress against our strategy
continued

Non-financial measures

KPI	Performance	Progress in 2019/20
Group lost time injury frequency rate (LTIs per 100,000 hours worked) This is the number of worker lost time injuries per 100,000 hours worked in a 12-month period (including fatalities) and includes our employee and contractor population. **Target:** < 0.1 LTIs	0.12 0.10 0.10 19/20 18/19 17/18	As at 31 March 2020, our Group lost time injury frequency rate (LTIFR) was 0.12, which is higher than the Group target of 0.10. This is a combined employee and contractor LTI rate, which reflects our continued focus on encouraging good safety behaviours across the entire workforce. The majority of lost time injuries are a result of individual issues such as slips, trips and falls, and soft tissue injuries from inappropriate tooling, lifting and carrying. We continue to address these and other incidents by implementing best practice injury prevention techniques that mitigate potential for harm factors. Although this fiscal year saw injury challenges in our US business, where, tragically, we lost a colleague in a road traffic accident, we will continue to focus on improving our generative safety culture.
Employee engagement index (%) This is a measure of how engaged our employees feel, based on the percentage of favourable responses to questions repeated annually in our employee engagement survey. Our target is to increase engagement compared with the previous year.		We measure employee engagement through our employee engagement survey (EES). The results of our 2019/20 survey, which was completed by 82% of our employees, have helped us identify specific areas where we are performing well and those areas we need to improve. At Group level, the overall results of the 2019/20 EES showed a positive trend from the 2018/19 survey, with 26 questions significantly improving and just seven questions showing a significant decline. Our engagement score was 77%, which is four points ahead of the 2018/19 results.
Workforce diversity We measure the percentage of women and ethnic minorities in our workforce. We aim to develop and operate a business that has an inclusive and diverse culture (see page 53).		During 2019/20, the representation of our female and ethnic minority groups has increased as we continue to build our diverse talent pipeline.
Contribution of our corporate responsibility work (£m) Working with communities is important for creating shared value.		We use the London Benchmarking Group measurement framework to provide an overall community investment figure which includes education (but excludes investment in university research projects). While we have no specific target, our overall aim is to ensure we add value to society to enable communities to thrive. In the UK, the overall contribution of our activities was valued at nearly £39 million. In the US, our contribution was just over £7.5 million. This gives us a combined Group-wide contribution of nearly £47 million. This was lower than prior years because some events were cancelled due to COVID-19.
Education, skills and capabilities We support the development of young people's skills and capabilities through skills-sharing employee volunteering. In particular, we focus on STEM subjects as these support our future talent recruitment and our desire to see young people gain meaningful employment.		We measure quality (>1 hour) interactions with young people on STEM subjects. In the UK, in 2019/20, we have had 1,707 quality interactions with young people on STEM subjects. We had 51,519 interactions in the US. Overall we have seen a total of 53,226 interactions with young people on STEM, an increase of 11,765.
Climate change - Scope 1 and 2 emissions This is a measure of our reduction of Scope 1 and Scope 2 emissions of the six primary Kyoto greenhouse gases. Our target is to reduce our greenhouse gas emissions by 80% by 2030, 90% by 2040 and net zero by 2050, compared with our 1990 emissions of 21.6 million tonnes. The percentages in the adjacent chart reflect a reduction in our emissions from a 1990 baseline. We seek to continuously improve our environmental performance, in instances going beyond regulatory requirements, through implementation of our ISO 14001-certified Environmental Management System and Environmental Sustainability Standard.		Our Scope 1 greenhouse gas emissions for 2019/20 equate to 3.9 million tonnes of carbon dioxide equivalent (2018/19: 4.5 million tonnes) and our Scope 2 emissions (including electricity line losses) equate to 2.6 million tonnes (2018/19: 2.5 million tonnes). This is a total of 6.5 million tonnes of carbon dioxide equivalent for Scope 1 and 2 emissions. These figures include line losses and are equivalent to an intensity of around 447 tonnes per £1 million of revenue (2018/19: 469 tonnes). Our Scope 3 emissions for 2019/20 were 29.8 million tonnes (2018/19: 32.3 million tonnes). Our global underlying energy use is 28,223 GWh where the UK and US are responsible for 8,112 GWh and 20,111 GWh respectively. This includes gas and electricity network losses and fuel used for US power generation. We measure and report in accordance with the World Resources Institute and World Business Council on Sustainable Development Greenhouse Gas Protocol. 100% of our Scope 1, 2 and 3 emissions, are independently assured against ISO 14065 Greenhouse Gas assurance protocol. This data complies with the UK government's Streamlined Energy and Carbon Reporting (SECR) requirements and is our first disclosure to comply with SECR.

Further reading
You can read more about the Task Force on Climate-related Financial Disclosures and our wider sustainability activities and performance on pages 57 – 62.

Innovation

Our innovation activities are focused on future-proofing the business for our customers as the energy landscape changes. Collaboration is a key part of our approach to innovation.

Innovation in our UK principal operations

Our commitment to net zero continues to shape our innovation strategy. Our innovation portfolio enables us to identify and target carbon savings for our own operations and we are also developing innovation projects to ensure we are prepared and play a pivotal role in the decarbonisation of energy for power and heat, transport and industry. We also search for new technologies and techniques to improve the way we work.

We place a high value on collaboration to inform, generate ideas and solve the challenges we see ahead of us. We work in collaboration with technical organisations, academia and suppliers in the energy sector that align with our goals and objectives.

The ESO has been innovating to ensure we continue to provide secure, affordable and sustainable supplies of energy in a fast-changing world. Our innovation programme is used to learn and then accelerate market development. The year ahead will see even more projects generated by the ESO, including the world's first Black Start from Distributed Energy Resources (DERs). This is a £10 million Network Innovation Competition (NIC) project with SP Energy Networks. It will develop and demonstrate coordination of DERs to provide a safe and effective Black Start service and lower cost to consumers.

The UK electricity transmission network is continuing with innovation investments. We are focused on reducing our carbon footprint from our construction activities and seeking ways to reduce the greenhouse gas impact from gas-insulated assets. We have engaged extensively with regional stakeholders in our Zero 2050 South Wales project to better understand the changes in decarbonising society and our role as a transmission business as our energy landscape evolves. We have made progress in the construction of our transmission accelerator at Deeside, recognising the need to test and adopt new technologies faster, and we continue to research technologies to enhance our cyber security and further digitise our grid infrastructure.

Similarly, our UK gas transmission business has led our research to better understand the role of transitioning to a hydrogen future. Our Hydrogen Portfolio of projects aims to identify the opportunities and potential challenges to hydrogen injection into the National Transmission System (NTS). Working in collaboration with industry we aim to fill the gaps in the vision for a national hydrogen deployment. The portfolio includes safety and integrity reviews, demonstrating how existing networks can transition from gas to hydrogen.

Additionally in the UK, NGV has been active in establishing consortia to better integrate offshore renewables, and to commercially deploy hydrogen and Carbon Capture and Storage technologies targeting industrial decarbonisation in the Humber and London regions.

Innovation in our US principal operations

Similar to the UK, our US innovation approach is designed to enable our networks and customer services to adapt to a low-carbon, distributed and digitised future. We focus innovation and Research and Development (R&D) on the advancement of products, systems and work methods that prepare the way for more efficient and safer networks that further proliferate the integration of renewables.

In Massachusetts, we continue to explore how best to integrate solar energy, storage and electric vehicle charging into the distribution network. Our Solar Phase III programme comprises an additional 14 MW of photovoltaics (PV) and 5.8 MW of energy storage. The aim is to analyse the impact of future high levels of distributed renewables on distribution systems and in this stage the programme will also test the economic and technical benefits of localised balancing from energy storage. Several New York Reforming the Energy Vision (REV) pilots are also underway, testing market solutions in support of Distribution System Operation (DSO) developments, smart city opportunities and renewable heating technologies. These projects are providing the knowledge and experience to evolve our systems for the grid of the future.

In our US gas businesses, our innovation continues to prioritise increasing public safety, protecting our workforce, reducing the cost of the work we perform and reducing our impact on the environment. For example, we are testing robotics to enhance existing pipelines and reduce gas emissions and have several programmes exploring the introduction of renewable natural gas and alternative low-carbon heating solutions for our customers.

National Grid Partners

NGP, our dedicated corporate innovation and investment function, has had a strong second year of operation delivering value to the Group. In 2019, we established and built our central disruptive innovation capability while continuing to make strategic investments in our incubation and corporate venture capital portfolios. NGP also expanded its programming to include culture and entrepreneurial programming and founded a global utility council branded as the 'Next Grid Alliance' to encourage collaboration within our peer group on solutions for the industry. This forum of peers allows National Grid to tap into the wealth of innovation and investment learnings from across the industry and share our own best practices.

Our investment portfolio includes direct investments in seventeen start-up companies and four venture funds to date with a fair value of £134m at 31 March 2020. The venture fund investments are focused on expanding access to start-ups in key innovation regions including Israel and the United Kingdom. We also successfully exited our positions in Pixeom and Aporeto during 2019, providing financial returns from those investments.

NGP's investments provide valuable insights, collaborations and deployment opportunities that strengthen and future-proof our core business activities. For example, we have deployed cyber detection and response solutions from Dragos, asset management decision software from Copperleaf, and demand response management services from Autogrid. Several portfolio companies are in pilot on areas such as gas infrastructure risk prevention and manhole explosion prevention.

In April 2019, we created a central innovation team, targeting disruptive innovations and introduced design thinking, agile delivery, and lean start-up methods to our organisation. While in its infancy the team has explored innovation opportunities in collaboration with our core businesses with several projects progressing into prototype stages during 2020. This organisation is also tasked with creating centralised innovation reporting to allow National Grid to track the value created through its sustaining innovation efforts across the Group.

NGP has launched a series of initiatives designed to provide our employees with the types of experiences to further foster an entrepreneurial culture and skill set. These activities include an apprenticeship programme, entrepreneur-led speaker series, employee immersions and sprints in Silicon Valley, and secondments and advisory board positions within NGP's portfolio. These initiatives aim to provide strong training and retention programmes to develop the next generation of entrepreneurial leaders within the Group.

NGP has delivered strategic and financial value to the core businesses and looks forward to delivering on our mandate to invest in valuable start-ups, to tackle innovation and business development projects that can improve our business, and to act as a catalyst for change across the broader Group.

More details can be found at www.ngpartners.com including details of each of our portfolio investments.

Further reading
Further details about our R&D and innovation activities can be found in Additional Information on pages 237 – 239.

Internal control and risk management

The Board is committed to protecting and enhancing our reputation and assets, while safeguarding the interests of our shareholders.

Managing our risks

National Grid is exposed to a variety of uncertainties that could have a material adverse effect on the Group's financial condition, our operational results, our reputation and the value of our shares.

The Board oversees the Company's risk management and internal control systems. As part of this role, the Board sets and monitors the amount of risk the Company is prepared to seek or accept in pursuing our strategic objectives – our risk appetite. The Board assesses the Company's principal risks and monitors the risk management process through risk review and challenge sessions twice a year.

Risk management process

Overall risk strategy, policy and process are set at Group level with implementation owned by the business. Our enterprise risk management process provides a framework through which we can consistently identify, assess, prioritise, manage, monitor and report risks. The process is designed to support the delivery of our vision, strategy and business model as described on pages 2 – 7.

Our corporate risk profile contains the principal risks that the Board considers to be the main uncertainties currently facing the Group as we endeavour to achieve our strategic objectives. These top risks are agreed through discussions about the Group's risk profile with the Executive Committee and the Board. The risks are reported and debated with the Executive Committee and the Board every six months.

When determining what our principal risks should be, a broad range of factors are considered. We test principal risks annually to establish their impact on the Group's ability to continue operating and to meet its liabilities over the assessment period. We test the impact of these risks on a reasonable worst-case basis, alone and in clusters, over a five-year assessment period. This work informs our viability statement (see pages 26 – 27). The five-year period was carefully considered in light of the current COVID-19 pandemic. The Board considered, with appropriate assumptions, that this period remained appropriate for our stable regulated business model. The Board, Executive Committee and other leadership teams discuss the results of the annual principal risk testing at the end of the year.

Top-down, bottom-up assessment

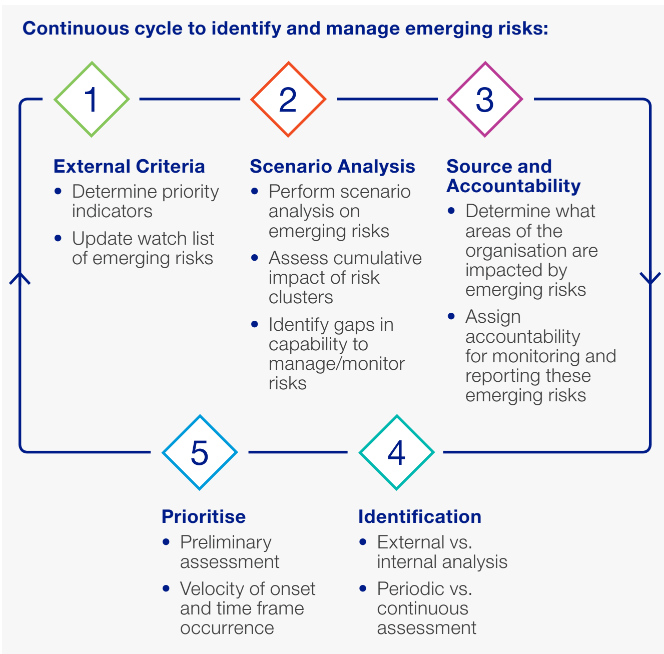
Risk management activities take place through all levels of our organisation. Through a 'top-down, bottom-up' approach, all business areas identify the main risks to our business model and our business objectives. Each risk is assessed by considering the financial, operational and reputational impacts, and how likely the risk is to materialise. The business area identifies and implements actions to manage and monitor the risks. These are collated and reported at functional and regional levels on a regular cadence. The most significant risks for the UK, US and NGV businesses are highlighted in regional risk profiles and reported to the Executive Committee and the Board through a formal process twice a year. Additionally, the Executive Committee and the Board may also identify and assess other principal risks. These risks and any associated management actions are cascaded through the organisation as appropriate.

Emerging risks

We have an established process to identify and monitor emerging risks, which is designed to provide sufficient warning of concerns which may impact the business. The process is designed to ensure adequate steps are taken to prevent the occurrence or manage the impact of surprises.

The Enterprise Risk Management (ERM) process monitors management information from a wide variety of sources to take into account consideration of emerging risks. This includes:

- Top-down analysis which is performed through the annual risk management process of broad thinking to consider the biggest impacts for the Company.
- Facilitation of risk discussions across our various businesses. Most importantly, we review various sources of management information, internal and external factors to identify potential emerging risks.
- Monitoring the external market to consider other emerging risks within the regions we operate in. The following diagram shows our approach and inputs used to analyse the emerging risks.



Changes during the year

The Company's risk profile has been developed drawing upon the most significant risks across our business profiles. With the addition of principal risks addressing climate change and our response to the COVID-19 pandemic, 10 principal risks are now carried at Executive Committee and Board level as detailed below. All of our principal risks were reviewed at least twice across the year, including Key Risk Indicators (KRIs), developed last year to help embed the risk appetite framework in the business and enhance the monitoring and mitigation of risks.

Principal risks

In 2019/20, we reviewed our assessment of the potential threats, opportunities and impacts from climate change. This included the impact of both our operations on climate change and of climate change on our operations, as well as the transitional risk during the journey to a net zero economy in developing a new climate change principal risk (see case study on page 23).

Since the onset of the COVID-19 pandemic, we have continually assessed its impact on our workforce, finances and all aspects of our operations, including the impact on the Electricity System Operator on managing the rapid decrease in energy demand across all UK networks, with regular reports provided to the Board. The Board has agreed that a new principal risk is included (see page 25). A negative outcome from RIIO-2 and the continuing possibility of a hard Brexit remain our most important emerging threats in the UK business. However, the Board considers, after testing with management, that these events do not need to be classified as principal risks as they are well covered below this level of risk and are regularly reviewed by the Directors.

More recently, political escalations have been considered as a threat against the Company's ability to operate in New York. Following the failure to obtain necessary permits to build a new pipeline, and the Company's associated decision to enact a moratorium, various actions have been taken to address the threat of loss of licence in New York. During November 2019, a settlement was agreed to immediately resume connecting gas services in Brooklyn, Queens and Long Island for applications that had been put on hold. A total of $36 million in customer assistance, gas conservation measures and clean energy investments has been committed by the Company along with the appointment of an external monitor and the requirement to deliver a plan to address service to customers through winter 2020/21. The settlement agreement also provides a framework for identifying longer-term solutions to address the supply constraints in downstate New York. In considering this emerging threat, we have supported the Company's other jurisdictions to take into consideration the possibility of New York governmental decisions influencing other states in the area. Both our Rhode Island and Massachusetts businesses have been working to lay solid foundations regarding clean energy strategies, investments and close monitoring of pipeline operations to help address these issues.

Case study on climate change moving from an emerging risk to a principal risk

Our risk registers typically include risks likely to manifest within the short to medium, rather than longer term. In the case of climate change, weather-related event risks previously featured, as did transition risks associated with the decarbonisation of heat and electricity and these were included as a threat in several of our existing principal risks (e.g. energy interruption, disruptive forces).

Over the last 12 to 18 months, facilitated workshops were held with each of the core businesses to ensure completeness of risk capture specifically relating to climate change and our net zero commitment, considering both physical and transitional risks.

Consideration was given to whether the individual or combined risks arising from increased variability in temperature, and/or greater wear and tear on assets under more extreme weather conditions such as flooding and higher temperatures, should feature more prominently. This was especially pertinent in the light of updates in climate science, observations of the changing weather such as increased intensity and frequency of storms on the US east coast, and wildfire ferocity in locations such as South America, California and Australia. We also understand the growing urgency to find a solution to decarbonise heat and the future of gas in a way that is fair, affordable and not overly disruptive to consumers.

As a result, a recommendation to develop a bespoke climate change risk was considered by the Executive Committee and Board, and discussed with US, UK and NGV executives and subject matter experts. The addition of a bespoke climate change principal risk was finalised in autumn 2019.

Our principal risks and uncertainties

Accepting that it is not possible to identify, anticipate or eliminate every risk that may arise, and that risk is an inherent part of doing business, our risk management process aims to provide reasonable assurance that we understand, monitor and manage the main uncertainties that we face in delivering our objectives. This aim includes considering inherent risks, which in turn exist because of the nature of day-to-day operations in our industry, and financial risks, which exist because of our financing activities. Our principal risks, and a summary of actions taken by management, are provided in the table below. We have provided an overview of the key inherent risks we face on pages 227 – 230, as well as our key financial risks, which are incorporated within note 32 to our consolidated financial statements on pages 182 – 194. Risk trends reported below take into account controls, any additional mitigation actions and may be influenced by internal or external developments.

People risks

It is through the high-quality work of our employees that we will achieve our vision, respond to the changing needs of our stakeholders and create a competitive advantage. Building and fostering an engaged and talented team that has the knowledge, training, skills and experience to deliver our strategic objectives is vital to our success. We must attract, integrate and retain the talent we need at all levels of the business.

Risks	Actions taken by management
Failure to build sufficient capability and leadership capacity (including effective succession planning) required to deliver our vision and strategy. ***Risk trend: Neutral (18/19 Neutral)** *Risk trends are assessed to include any external factors outside our control as well as the strength and effectiveness of our controls and additional mitigations as reviewed by management up to 31 March 2020.	We have embedded strategic workforce planning in our US and UK organisations. This process helps to effectively inform financial and business planning, as well as human resourcing needs. Our entry-level talent development schemes (graduate training and apprenticeships) are a potential source of competitive advantage in the market place. We are involved in a number of initiatives to help secure the future engineering talent we require, including the UK annual residential work experience week and the US Pipeline and Graduate Development Programmes. We also continue to develop the rigour of our succession planning and development planning process, particularly at senior levels. It is now being applied deeper into the organisation as well as continued attention in relation to the ethnic diversity of both our management and field force population. There are multiple activities underway to drive this agenda, including 'neutral' talent and selection processes, development interventions and a global review of our inclusion and diversity strategy and resources. During the year, in the UK, a three-year labour agreement was reached with our trade unions, introducing revised terms and conditions.

Financial risks

While all risks have a financial liability, financial risks are those which relate to financial controls and performance. Financial risk management is a critical process used to make investment decisions and aims to maximise investment returns and earnings for a given level of risk.

Our key financial risks are described in note 32 to our financial statements on pages 182 – 194.

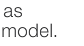
Internal control and risk management
continued

Strategic and regulatory risks

Strategic risk is the risk of failing to achieve the Company's overall strategic business plans and objectives, as well as failing to have the 'right' strategic plan. We voluntarily accept some risk so we can generate the desired returns from our strategy.

Management of strategic risks focuses on reducing the probability that the assumed risk would materialise, while improving the Company's ability to effectively respond to the risk should it occur. The risk owners, executive leaders, and their teams develop and monitor actions to control the risks. These risks link to our strategic priorities of 'Grow our core business' and 'Evolve for the future'. The political climate and policy decisions of our regulators in 2019/20 were key considerations in assessing our risks.

As referred to above, the new climate change related risk is classed as a strategic and regulatory risk but is also an operational risk, in particular as regards weather-related events in the northeastern US (where storm planning and preparation are key to what we do), flood defence in both the UK (where flood resilience works are being developed) and the US (where flood contingency plans are in place) and the investigation of the impact of rising temperatures and widening temperature ranges on the performance and operation of our networks.

Risks	Actions taken by management
Failure to identify and/or deliver upon actions necessary to ensure our business model, strategy, asset management and operations respond to the physical and transitional impacts of climate change and demonstrate our leadership of climate change within the energy sector. ***Risk trend: Increasing (New Principal Risk)** *Risk trends are assessed to include any external factors outside our control as well as the strength and effectiveness of our controls and additional mitigations as reviewed by management up to 31 March 2020.	Putting in place measures to develop: • evolution of our environmental sustainability metrics to better reflect our strategy, measure our impact and track our progress; • organisational design changes appropriate to meet this challenge with a single point of contact for all climate change actions and activities; • approval of a revised environmental sustainability strategy, including our strategy for heating and gas, with granular actions identified to achieve net zero; and • working with regulators and industry parties in the UK and the US on the future of heat and the role of gas in the long term. Note that a number of the above measures also address the physical impacts of climate change on our operations. We have committed to full compliance with the Task Force on Climate-related Financial Disclosures (TCFD) requirements including physical and transitional scenario analysis (see pages 57 – 62). Ongoing work to address transition risks and opportunities includes: • ensuring our electricity network is reliable and able to actively support and contribute to a future where renewables and intermittency of supply are increasing; • supporting the charging infrastructure required for increased use of electric vehicles; • promoting energy efficiency programmes for customers in the US; • facilitating decarbonisation in the US and UK including zero carbon operation of the GB electricity system through ESO in the UK; and • continuing work on programmes to develop skills in our current and future workforce.
Failure to influence future energy policy and secure satisfactory regulatory agreements. **Risk trend: Increasing due to energy regulatory environment (18/19 Increasing Risk)**	In both the UK and the US, we strive to maintain a good understanding of the regulatory agenda and emerging issues, so that robust, public interest aligned responses can be selected and developed in good time. Our reputation as a competent operator of important national infrastructure is critical to our ability to do this. We have plans and governance structures in place to address specific issues such as RIIO-2 and US rate case filings. Ongoing work to support our regulatory relationships includes: • our internal teams focused on messaging around gas capacity, large-scale renewables, utilities of the future and electric vehicles; • establishment of US and UK Regulatory Steering Committees; and • increased focus on understanding the needs and expectations of all our stakeholders through regulatory relationship surveys, investor surveys and review of media sentiment.
Failure to respond to shifts in societal and political expectations and perceptions leads to threats to the Company's licence to operate and ability to achieve its objectives. **Risk trend: Increasing due to current political environment (18/19 Increasing Risk)**	Processes and resources are in place to review, monitor and influence perceptions of our business and our reputation by: • enhancing and consolidating our digital roadmap and social channels; • developing an internal forum to increase management of stakeholder and media reputational issues; • delivering on our commitment to be a responsible business (see pages 48 – 56); • implementing campaigns to recruit for the future – e.g. 'the job that can't wait', (see page 1); and • promoting partnerships and discussions of decarbonisation across the jurisdictions where we operate. These processes, along with twice-yearly Board strategy discussions, are reviewed regularly to ensure they continue to support our short- and long-term strategy. We regularly monitor and analyse market conditions, competitors and their potential.
Failure to adequately anticipate and minimise the adverse impact from disruptive forces such as technology and innovation on our business model.  **Risk trend: Neutral (18/19 Neutral)**	NGP, our central innovation function, is developing our strategy with regards to new technology and monitoring disruptive technology and business model trends, acting as a bridge for emerging technology into the core regulated businesses and business development teams. In addition, NGP is investing in emerging start-up companies and in venture funds and the NGV function will further the focus on new strategies, business development and technology and innovation.

Operational risks

Operational risks relate to the losses resulting from inadequate or failed internal processes, people and systems, or due to external events. These risks normally fall within our low-risk appetite level as there is no strategic benefit from accepting the risk, as it will not be in line with our vision and values.

Our operational principal risks have a low likelihood of occurring. However, should an event occur, without effective prevention or mitigation controls, it would be likely to have a high level of impact. The risk owners, executive leaders, and their teams develop and monitor actions to control the risks. Operational risks are managed through policy, standards, procedure-based controls, active prevention and monitoring. The operational risks link to our strategic priority to 'Optimise Performance'. Principal risk assessment includes reasonable worst-case scenario testing i.e. gas transmission pipeline failure, loss of licence to operate, cyber security attack – and the financial and reputational impact should a single risk or multiple risks materialise.

Risks	Actions taken by management
Failure to prepare and respond to significant disruptive factors caused by the COVID-19 pandemic because of poor development and execution of our response plans resulting in an impact on our ability to maintain our networks, provide service, support our people and meet our liquidity/financial targets, as well as reputational and regulatory obligations. ***Risk trend: Increasing (New Principal Risk)** *Risk trend for COVID-19 was assessed outside our standard assessment period due to the risk being added as a principal risk after 31 March 2020.	The COVID-19 pandemic impacts multiple areas of our business, therefore our response to this risk involves a comprehensive plan, to support the safety of our workforce and customers, that is frequently revised and adjusted due to the dynamic profile of this risk. This includes: • people: monitoring of absence and wellbeing, and monitoring of current working practices; employee 360 degree communications planning; • operations: prioritisation of critical processes, sequestering of essential staff and redeployment of workforce, assessment of our supply chain resilience and analysis of network availability and reliability; • stakeholders: frequent engagement with internal and external stakeholders, including customers, shareholders and regulators; • safety procedures: customer and workforce engagement for essential repairs, monitoring of agreed regulatory deviations; and • finance: monitoring of cash flow levels, review and where necessary suspension of customer collection arrangements; access to short and long-term debt facilities.
Catastrophic cyber security incident caused by the abuse of digital systems leading to the loss of confidentiality, availability and integrity. **Risk trend: Increasing due to the dynamic nature of the cyber security threat (18/19 Increasing Risk)**	We continue to commit significant resources and financial investment to maintain the integrity and security of our systems and our data by continually investing in strategies that are commensurate with the changing nature of the security landscape. This includes: • collaborative working with UK and US government agencies including the Department for Business, Energy and Industrial Strategy (BEIS), the Centre for Protection of National Infrastructure (CPNI) and the Department for Homeland Security on key cyber risks; • development of an enhanced critical national infrastructure security strategy; • our involvement in the US with developing the National Institute of Standards and Technology Cyberspace Security Framework; • awareness, training and self-assessments; and • cyber response incident procedures and contingency planning.
Catastrophic asset failure results in a significant safety and/or environmental event. **Risk trend: Neutral (18/19 Neutral)**	This year, we continued to focus on risk mitigation actions designed to reduce the risk and help meet our business objectives. We incorporated monitoring action status into various business processes and senior leadership including: • putting a Group-wide process safety management system in place to make sure a robust and consistent framework of risk management exists across our higher hazard asset portfolio, with safety-critical assets clearly identified on the asset register; • implementing asset management and data management standards with supporting guidelines to provide clarity around what is expected, with a strong focus on what we need in place to keep us safe, secure and legally compliant; and • in support of this, we developed a capability framework to make sure our workforce have the appropriate skills and expertise to meet the performance requirements in these standards.
Failure to predict and respond to a significant disruption of energy that adversely affects our customers and/or the public. **Risk trend: Increasing (18/19 Neutral)**	We continue to apply a holistic approach encompassing preventative and mitigating actions including pre-emptive measures to maintain network reliability such as: • flood contingency plans for substations; • system operator supply and demand forecasting; • our UK GT Winter Preparedness Plan; • US gas mains replacement programmes; • US storm hardening programme; and • diversity of suppliers in our US gas procurement. Should energy flow disruptions occur: • business continuity and emergency plans are in place and practised, including Black Start testing; and • critical spares are maintained to ensure we can quickly and effectively respond to a variety of incidents – storms, physical and cyber-related attacks, environmental incidents and asset failures. The ESO considered the significant impact on the UK power networks on responding to the unprecedented decrease in energy consumption and demand during the COVID-19 restrictions.
Failure to adequately identify, collect, use and keep private the physical and digital data required to support the Company's operations and future growth. **Risk trend: Decreasing (18/19 Decreasing Risk)**	Controls for our IT processes have been redefined and are aligned to the National Institute of Standards and Technology (US) and the Network Information and System Regulations (UK). We continue to progress and improve our data management processes including: • implementation of our data and other related business management standards; • data governance councils for UK and US regions; and • increased levels of data leadership and capability with the recruitment of a Chief Data Officer and establishment of an associated function.

Viability statement

The Board's consideration of the longer-term viability of the Company is an extension of our business planning process. The process includes financial forecasting, a robust risk management assessment, regular budget reviews as well as scenario planning incorporating industry trends, considering any emerging issues and economic conditions. Our business strategy aims to enhance our long-term prospects by making sure our operations and finances are sustainable.

Utilising our established top-down/bottom-up risk management process, the principal risks facing the Company as described on pages 23 – 25 are identified, monitored and challenged. Over the course of the year, the Board has considered the principal risks shown in the table below in detail. The Board considered the preventative and mitigating controls and risk management actions in place and discussed the potential financial and reputational impact of the principal risks against our ability to deliver the Company's business plan. These factors were also carefully reassessed in light of the COVID-19 factors.

The assessment of the potential impact of our principal risks on the longer-term viability of the Company tests the significant solvency and liquidity risks involved in delivering our business objectives and priorities. After careful consideration of the uncertain and dynamic COVID-19 events, including reviewing the fast-changing external factors and their cumulative impact in the medium and long term, and other considerations including: our long-term business model, high-quality, long-term assets and stable regulatory arrangements; the Board's stewardship responsibilities; and the Company's ability to model a range of severe but plausible reasonable worst-case scenarios, the Board concluded that it remains appropriate to consider a five-year timeframe over which we should assess the long-term viability of the Company.

Operational impacts

Scenario 1 – A significant cyber-attack.

Scenario 2 – Significant supply disruption event occurring in the US leading to loss of licence.

Scenario 3 – A catastrophic gas pipeline failure in the US.

Scenario 4 – Emerging technology leads to significant numbers of people going 'off grid'.

Scenario 5 – Significant physical damage due to climate change events in the US and the UK along with reputational damage through failure to adjust our business model to meet customer expectations.

Performance impacts

Scenario 6 – The breach of personal data information.

Scenario 7 – The result of a 'Hard Brexit' in the UK.

Scenario 8 – A poor outcome to RIIO-2 negotiations.

Cluster impacts

Scenario 9 – A significant supply disruption event in the US leading to loss of licence coupled with a 'Hard Brexit' and challenging RIIO-2 results in the UK.

Scenario 10 – Failure to adequately respond to the COVID-19 pandemic including triggering a gas pipeline failure and supply disruption in the US leading to loss of licence coupled with challenging RIIO-2 results in the UK.

The following factors have been taken into account in making this decision:

- we have reasonable clarity over a five-year period, allowing an appropriate assessment of our principal risks to be made;
- in order to test the five-year period, the Board considered whether there are specific, foreseeable risk events relating to the principal risks that are likely to materialise within a five to ten-year period, and which might be substantial enough to affect the Company's viability and therefore should be taken into account when setting the assessment period; and
- each principal risk was considered for inclusion within the testing and, where appropriate, a reasonable worst-case scenario was identified and assessed for impacts on operations and/or financial performance over the five-year assessment time period as detailed below.

In addition to testing individual principal risks, the impact of a cluster of the principal risks materialising over the assessment period was also considered. COVID-19 and our management of the issues the business faces during the pandemic, was also noted as an emerging risk that resulted in the addition of a new principal risk. Recent external developments such as the Northeast Supply Enhancement (NESE) Pipeline and events in the downstate NY gas business regarding National Grid's licence and the ability to provide continuing supply to our customers were also considered along with the ongoing regulatory environment in our operating jurisdictions. We also carefully considered the impact of our response to COVID-19 on our business plans and financial models. In the opinion of the Board, the reasonable worst-case scenarios represent the estimated cumulative impact with principal risk clusters.

The reputational and financial impacts for each scenario were considered (to the nearest £500 million). The principal risk relating to leadership capacity was not tested as the Board did not feel this would threaten the viability of the Company within the five-year assessment period. Further, considering the breadth of ramifications COVID-19 may have across different areas of the Company and its consequential power to exacerbate the negative consequences of other principal risks, any potential undesired outcome of COVID-19 was considered in aggregation with other principal risks in the scenarios.

The Board assessed our reputational and financial headroom and reviewed principal risk testing results against that headroom. The testing of risk groups and clusters also included an assessment of the impact upon the business plan, as adjusted for expected impacts of COVID-19. No principal risk or cluster of principal risks was found to have an impact on the viability of the Company over the five-year assessment period. Preventative and mitigating controls in place to minimise the likelihood of occurrence and/or financial and reputational impact are contained within our assurance system.

In assessing the impact of the principal risks on the Company, including our two new principal risks of Climate Change and Response to COVID-19, the Board has considered the fact that we operate in stable markets and the robust financial position of the Group, including the ability to sell assets, raise capital and suspend or reduce the payment of dividends. It has also considered Ofgem's legal duty to have regard to the need to fund the licensed activities of National Grid Gas plc, National Grid Electricity System Operator Limited and National Grid Electricity Transmission plc.

Each Director was satisfied that they had sufficient information to judge the viability of the Company. Based on the assessment described above and on pages 22 – 25 the Directors have a reasonable expectation that the Company will be able to continue operating and meet its liabilities over the period to May 2025.

Principal risk	Viability scenario	Matters considered by the Board
Major cyber security breach of business, operational technology and/or CNI systems/data.	**Scenario 1** – A significant cyber attack.	**The Board received updates on cyber security in:** • March 2019; • July 2019; • December 2019; and • March 2020.
Failure to predict and respond to a significant disruption of energy that adversely affects our customers and/or the public.	**Scenario 2** – An extended outage in the US. Included in the cluster testing of **Scenario 9 and 10**.	**Two Board Strategy sessions held during the year:** • bi-annual overviews; • review of the gas business strategies; • external reviews of operational issues within the US gas business; and • review of the sequence of events on Friday 9 August.
Catastrophic asset failure resulting in a significant safety and/or environmental event.	**Scenario 3** – A gas transmission pipeline failure in the US. Included in the cluster testing of **Scenario 10**.	• the Board reviews the current safety performance of the Company at each meeting; • safety is a fundamental priority and is looked at in detail by the Safety, Environment and Health Committee (SEH Committee) who have delegated authority from the Board; and • our Electricity and Gas Engineering Reports to the SEH Committee also provide progress updates on our asset management improvements.
Failure to adequately identify, collect, use and keep private the physical and digital data required to support Company operations and future growth.	**Scenario 5** – The breach of personal data information.	• annual updates on the Company's information systems.
Failure to build sufficient leadership capability and capacity (including succession planning) required to deliver our vision and strategy.	N/A	• bi-annual updates on people matters; • considered capabilities to support the delivery of strategic priorities; and • Nominations Committee: considers the structure, size and composition of the Board and committees and succession planning. It identifies and proposes individuals to be Directors and establishes the criteria for any new position.
Failure to deliver any customer, investor and wider stakeholder propositions due to increased political and economic uncertainty.	**Scenario 6** – The state ownership of the energy sector in the UK.	**The Board received updates and reviews of:** • the impact of Hard Brexit and access to the Internal Energy Market; • proposed response to the Labour Party's proposal to nationalise UK's assets; • implementation of measures to strengthen ability to obtain fair price for UK assets if potential threat of state ownership materialised; and • UK and US regulatory strategies.
Failure to influence future energy policy and secure satisfactory regulatory agreements.	**Scenario 7** – A poor outcome of RIIO-2 negotiations. Included in the cluster testing of **Scenario 9 and 10**.	**The Board received updates and reviews of:** • US regulatory strategy; • UK regulatory strategy; • UK ESO regulatory strategy; • key regulatory policy issues for 2019/20; and • RIIO-2.
Failure to respond to the asset failure resulting in a significant safety and/or environmental event.	**Scenario 4** – Emerging technology leading to significant numbers of people going 'off grid'.	• bi-annual updates from National Grid Partners; and • during the year, Board strategy sessions considered digital strategy as well as technology and innovation.
Failure to respond to disruptive factors caused by the COVID-19 pandemic resulting in an impact on our networks, our people and our financial targets.	Included in the cluster testing of **Scenario 9 and 10**.	• Board briefings including a weekly update from the CEO and CFO on our crisis management response; • COVID-19 updates on operational issues, people absences and wellbeing to the Board; and Finance Committee consideration of liquidity; • review of our Business Continuity Planning response and effectiveness of the Crisis Management controls to the SEH Committee; and • briefings from the CFO and finance team on possible financial impacts including a range of scenario modelling and planning.
Failure to respond to physical and transitional impacts of climate change and demonstrate our leadership within the energy sector.	N/A	• Board briefings reviewing our sustainability metrics to reflect and track our impact and progress; and • disclosures with the TCFD including physical and transitional scenario analysis.

Financial review

Summary of Group financial performance

Performance management framework

In managing the business, we focus on various non-IFRS measures which provide meaningful comparisons of performance between years, monitor the strength of the Group's balance sheet as well as profitability and reflect the Group's regulatory economic arrangements. Such alternative and regulatory performance measures are supplementary to, and should not be regarded as a substitute for, IFRS measures, which we refer to as statutory results. We explain the basis of these measures and, where practicable, reconcile these to statutory results in 'Other unaudited financial information' on pages 240 – 249.

Specifically, we measure the financial performance of the Group from different perspectives:

- Capital investment and asset growth: Currently we expect to invest c. £5 billion per year.
- Accounting profit: In addition to statutory IFRS measures we distinguish between adjusted results, which exclude exceptional items and remeasurements, and underlying results, which further take account of: (i) volumetric and other revenue timing differences arising from our regulatory contracts, and (ii) major storm costs, which are recoverable in future periods, neither of which give rise to economic gains or losses. In doing so, we intend to make the impact of such items clear to users of the financial information in this Annual Report.
- Economic profit: Measures such as Return on Equity and Value Added take account of the regulated value of our assets and of our regulatory economic arrangements to illustrate the returns generated on shareholder equity.
- Balance sheet strength: Maintaining a strong investment grade credit rating allows us to finance our growth ambitions at a competitive rate. Hence, we monitor credit metrics used by the major rating agencies to ensure we are generating sufficient cash flow to service our debts.

This balanced range of measures of financial well-being informs our dividend policy, which is to grow the dividend per share at least in line with UK Retail Price Index inflation for the foreseeable future.

Initial assessment of the potential impact of the COVID-19 pandemic on the Group's position and results

The COVID-19 pandemic has affected our reported results in the year. To date, we have experienced a more significant impact in our US businesses than in our UK businesses, mainly due to our large US customer base. The most significant impact on our results for 2019/20 is the increase in the bad debt charge, which rose from £181 million last year to £234 million this year for the Group as a whole, and increased in the US from £146 million last year to £231 million this year. The increase in the US charge reflects the impact of moratoriums in response to regulatory instructions as requested by regulatory authorities in the US states in which we operate, which restrict our ability to collect debts due. However, we remain committed to continuing to supply our customers and termination of customer connections has been cancelled.

Additionally, in the US, lower gas volumes (reduced customer demand) increased timing outflows in March 2020, with warm weather also a factor in this increase. In our UK Transmission businesses, the disruption has resulted in a pause to some capex work and although some adaptations to the new environment have been required, there has been no significant cost increase in 2019/20. COVID-19 has not caused a significant disruption to our NGV businesses. In total, other than the US bad debt charge, there has been a relatively small impact on our underlying results for 2019/20 and incremental operating costs of around £10 million have been incurred as a direct consequence of the disruption caused by the pandemic.

For 2020/21, we expect some continuing impact, driven largely by our US operations where we are expecting (i) higher levels of bad debt, (ii) additional direct COVID-19 costs, and (iii) deferral of rate increases. However, given regulatory mechanisms and precedents, we expect to recover a large part of this. In the UK, we do expect to see some limited cost impact from COVID-19. We are also currently working with regulators on support mechanisms for our customers, which may lead to cash flow impacts in 2020/21, but we would ultimately expect to be recoverable. Therefore whilst COVID-19 will impact earnings and cash flow in the short term, we currently anticipate limited economic impact longer term. However, there could be a range of impacts on cash flows and earnings, which could be different from our current assessment.

Summary of Group financial performance for the year ended 31 March 2020

Financial summary for continuing operations

£m	2019/20	2018/19	Change
Statutory results:			
Operating profit	**2,780**	2,870	(3)%
Profit after tax	**1,274**	1,502	(15)%
Earnings per share (pence)	**36.8p**	44.3p	(17)%
Dividend per share (pence), including proposed final dividend	**48.57p**	47.34p	3%
Capital expenditure	**5,079**	4,321	18%
Alternative performance measures:			
Underlying operating profit	**3,454**	3,427	1%
Underlying profit after tax	**2,015**	1,998	1%
Adjusted earnings per share (pence)	**55.2p**	59.0p	(6)%
Underlying earnings per share (pence)	**58.2p**	58.9p	(1)%
Underlying dividend cover	**1.2**	1.2	–
Capital investment	**5,405**	4,506	20%
Retained cash flow/adjusted net debt	**9.2%**	9.4%	20bps
Regulatory performance measures:			
Asset growth	**9.0%**	7.2%	180bps
Group Return on Equity	**11.7%**	11.8%	(10)bps
Value Added	**2,040**	2,071	(1)%
Regulatory gearing	**63%**	66%	(300)bps

We explain the basis of these alternative performance measures and regulatory performance measures and, where practicable, reconcile them to statutory results on pages 240 – 249.

The Group's statutory results for the year were adversely impacted by exceptional charges. The impact on statutory EPS as a result of these charges is presented after each item. These included additional environmental provisions and a reduction in the discount rate applied to certain provisions across the Group (8.6p)and a deferred tax charge due to the reversal of the expected reduction in the UK corporation tax rate originally enacted by the Finance Act 2016 (5.6p). Last year's statutory results were adversely impacted by exceptional charges incurred in respect of the Massachusetts Gas labour dispute (6.2p), our UK and US cost efficiency and restructuring programme (4.7p) and the impairment of development costs in respect of the termination of the NuGen and Horizon nuclear connection projects (3.3p).

Statutory operating profit was also adversely impacted by commodity remeasurement losses of £125 million in 2019/20 (2018/19: £52 million gains) from mark-to-market movements on derivatives which are used to hedge the cost of buying wholesale gas and electricity on behalf of our US customers.

Underlying operating profit was up 1% as higher rate case revenues in our US Regulated businesses and lower operating costs more than offset higher deferrable storm costs, higher bad debts costs, increased depreciation, the non-recurrence of favourable US legal settlements and sale of our Fulham property site in 2018/19. The combination of these factors was partly offset by higher net financing costs, driven by the implementation of IFRS 16 and higher average net debt. Underlying profit after tax increased by 1% and, combined with a higher share count, resulted in a 1% decrease in underlying EPS to 58.2p.

Capital investment of £5.4 billion increased our asset growth to 9%. We delivered Value Added (our measure of economic profit) of £2.0 billion in 2019/20, slightly lower than in 2018/19. Group RoE of 11.7% was comparable to 11.8% in 2018/19, reflecting the higher new rate allowances in our US businesses, while 2018/19 benefited from the Fulham sale and legal settlements. RCF/net debt at 9.2% remained consistent with the Company's strong investment grade credit rating. The recommended full-year dividend per share of 48.57p is in line with policy and is covered 1.2 times by underlying EPS.

The adoption of IFRS 16 'Leases' during the year increased our net debt by £474 million, with a corresponding increase in right-of-use assets recorded on the balance sheet. This standard has resulted in lower operating costs within our businesses, offset by a higher depreciation charge and a higher interest cost.

Profitability and earnings

The table below reconciles our statutory profit measures for continuing operations, at actual exchange rates, to adjusted and underlying versions.

Reconciliation of profit and earnings from continuing operations

	Operating profit			Profit after tax			Earnings per share		
£m	2019/20	2018/19	Change	2019/20	2018/19	Change	2019/20	2018/19	Change
Statutory results	**2,780**	2,870	(3)%	**1,274**	1,502	(15)%	**36.8p**	44.3p	(17)%
Exceptional items	**402**	624		**491**	480		**14.2p**	14.2p	
Remeasurements	**125**	(52)		**148**	19		**4.2p**	0.5p	
Adjusted results	**3,307**	3,442	(4)%	**1,913**	2,001	(4)%	**55.2p**	59.0p	(6)%
Timing	**147**	(108)		**102**	(72)		**3.0p**	(2.1)p	
Major storm costs	**–**	93		**–**	69		**–p**	2.0p	
Underlying results	**3,454**	3,427	1%	**2,015**	1,998	1%	**58.2p**	58.9p	(1)%

Exceptional income/(expense) from continuing operations

	Impact on operating profit		Impact on profit after tax		Impact on EPS	
£m	2019/20	2018/19	2019/20	2018/19	2019/20	2018/19
Changes in environmental provision	**(402)**	–	**(299)**	–	**(8.6)p**	–
Massachusetts Gas labour dispute	**–**	(283)	**–**	(209)	**–**	(6.2)p
UK and US cost efficiency and restructuring programme	**–**	(204)	**–**	(160)	**–**	(4.7)p
Impairment of nuclear connections development costs	**–**	(137)	**–**	(111)	**–**	(3.3)p
Deferred tax arising on the reversal of the reduction in UK corporation tax rate	**–**	–	**(192)**	–	**(5.6)p**	–
Total	**(402)**	(624)	**(491)**	(480)	**(14.2)p**	(14.2)p

This year we have classified the following items as exceptional:

- **Changes in environmental provisions:** a £326 million net increase in the provision for estimated costs and cost sharing allocations borne by the Company associated with environmental clean-up related to former manufacturing gas plant facilities, formerly owned or operated by the Group or its predecessor companies and additionally, £76 million for the impact of a reduction of 0.5% in the real discount rate applied to the environmental provisions across the Group; and
- **Deferred tax arising on the reversal of the reduction in UK corporation tax rate:** The Finance Act 2016 reduced the UK corporation tax rate to 17% with effect from April 2020. A £192 million deferred tax charge has been made, following the reversal of this legislation, which retains the UK corporation tax rate at 19%, resulting in an increase in deferred tax liabilities.

In the prior year we classified the £283 million cost arising as a result of the Massachusetts Gas labour dispute as exceptional, along with the £204 million charge relating to the UK and US cost efficiency and restructuring programme and the £137 million impairment charge relating to nuclear connection development costs.

We also exclude certain unrealised gains and losses on mark-to-market financial instruments from adjusted profit; see notes 5 and 6 to the financial statements for further information. Net remeasurement losses of £125 million on commodity contract derivatives were incurred in addition to net remeasurement losses of £64 million on financing-related instruments and a further £1 million of remeasurement losses related to our share of post-tax results of joint ventures.

Financial review
continued

Timing over/(under-recoveries)

In calculating underlying profit, we exclude regulatory revenue timing over- and under-recoveries and major storm costs. Under the Group's regulatory frameworks, most of the revenues we are allowed to collect each year are governed by regulatory price controls in the UK and rate plans in the US. If more than this allowed level of revenue is collected, the balance must be returned to customers in subsequent years; likewise, if less than this level of revenue is collected, the balance will be recovered from customers in subsequent years. We also collect revenues from customers and pass these on to third parties (e.g. NYSERDA). These variances between allowed and collected revenues and timing of revenue collections for pass-through costs give rise to over- and under-recoveries.

The following table summarises management's estimates of such amounts for the two years ended 31 March 2020. All amounts are shown on a pre-tax basis and, where appropriate, opening balances are restated for exchange adjustments and to correspond with subsequent regulatory filings and calculations. All amounts are translated at the current year average exchange rate of $1.29:£1.

£m	2019/20	2018/19
Balance at start of year (restated)	403	301
In-year (under)/over-recovery	(147)	111
Balance at end of year	256	412

Timing over-recoveries of £146 million in UK Electricity Transmission were more than offset by timing under-recoveries of £54 million in UK Gas Transmission and timing under-recoveries of £239 million in US Regulated in 2019/20. In calculating the post-tax effect of these timing recoveries, we impute a tax rate, based on the regional marginal tax rates, consistent with the relative mix of UK and US balances. For the year ended 31 March 2020 this tax rate was 31%.

Major storm costs

We also take account of the impact of major storm costs in the US where the aggregate amount is sufficiently material in any given year. Such costs (net of certain deductibles) are recoverable under our rate plans but are expensed as incurred under IFRS. Accordingly, where the total incurred cost (after deductibles) exceeds $100 million in any given year, we exclude the net costs from underlying earnings. In 2019/20, although we experienced a number of storms, the $98 million of deferrable storm costs we incurred (in aggregate) fell just below this threshold. During 2018/19 we experienced bad weather events across the year, with storms unusually occurring during April and May as well as in the winter months. In that year the total net costs exceeded the $100 million threshold and were excluded from our underlying results.

Segmental operating profit

The tables below set out operating profit on adjusted and underlying bases.

Adjusted operating profit

£m	2019/20	2018/19	Change
UK Electricity Transmission	1,320	1,015	30%
UK Gas Transmission	348	303	15%
US Regulated	1,397	1,724	(19)%
NGV and Other activities	242	400	(40)%
Total	3,307	3,442	(4)%

Underlying operating profit

£m	2019/20	2018/19	Change
UK Electricity Transmission	1,174	1,092	8%
UK Gas Transmission	402	341	18%
US Regulated	1,636	1,594	3%
NGV and Other activities	242	400	(40)%
Total	3,454	3,427	1%

The statutory operating profit for all three reportable segments fell in the year primarily as a result of the £402 million exceptional charges referred to earlier. The reasons for the movements in underlying operating profit are described in the segmental commentaries below. Unless otherwise stated, the discussion of performance in the remainder of this financial review focuses on underlying results.

UK Electricity Transmission

£m	2019/20	2018/19	Change
Revenue	3,702	3,351	10%
Operating costs	(2,386)	(2,573)	(7)%
Statutory operating profit	1,316	778	69%
Exceptional items	4	237	(98)%
Adjusted operating profit	1,320	1,015	30%
Timing	(146)	77	(290)%
Underlying operating profit	1,174	1,092	8%
Analysed as follows:			
Net revenue	2,174	1,954	11%
Regulated controllable costs	(306)	(332)	(8)%
Post-retirement benefits	(48)	(49)	(2)%
Other operating costs	(31)	(65)	(52)%
Depreciation and amortisation	(469)	(493)	(5)%
Adjusted operating profit	1,320	1,015	30%
Timing	(146)	77	(290)%
Underlying operating profit	1,174	1,092	8%

Although we legally separated our NG ESO plc business from NGET plc during the year, we continue to report these two businesses in aggregate, within our UK Electricity Transmission segment.

UK Electricity Transmission statutory operating profit increased by £538 million in the year. In 2018/19, there were £137 million of exceptional costs related to the cancellation of nuclear connections (net of termination income) and £100 million in relation to our cost-efficiency and restructuring programme. Timing over-recoveries of £146 million in 2019/20 compared to under-recoveries of £77 million in the prior year primarily due to the collection of prior year balances.

Adjusted operating profit increased by £305 million (30%), driven by £223 million favourable year-on-year timing over-recoveries. Underlying operating profit increased by 8%. Net revenues (excluding timing) were relatively flat, with higher re-opener allowances for cyber and data centres, funding for ESO legal separation and the RPI uplift, being fully offset by output and allowances true-up in the annual iteration, along with lower ESO incentive income. Regulated controllable costs were lower, with efficiency savings and lower Electricity System Operator separation costs, partly offset by higher IT costs and inflation. Post-retirement benefit costs were little changed year-on-year. Other costs were lower, mainly relating to 2018/19's provisions against income recognised on early termination of connections.

The decrease in depreciation and amortisation charges reflects a benefit from the release of provisions related to prior years.

UK Gas Transmission

£m	2019/20	2018/19	Change
Revenue	927	896	3%
Operating costs	(580)	(629)	(8)%
Statutory operating profit	347	267	30%
Exceptional items	1	36	(97)%
Adjusted operating profit	348	303	15%
Timing	54	38	42%
Underlying operating profit	402	341	18%
Analysed as follows:			
Net revenue	685	669	2%
Regulated controllable costs	(127)	(144)	(12)%
Post-retirement benefits	(19)	(27)	(30)%
Other operating costs	(20)	(14)	43%
Depreciation and amortisation	(171)	(181)	(6)%
Adjusted operating profit	348	303	15%
Timing	54	38	42%
Underlying operating profit	402	341	18%

UK Gas Transmission statutory operating profit increased £80 million in the year. In 2018/19, £36 million of costs in relation to our efficiency and restructuring programme were treated as exceptional. Timing under-recoveries of £54 million in 2019/20 compared to £38 million in the prior year reflecting lower than expected volumes and higher shrinkage costs.

Adjusted operating profit increased by £45 million (15%), including £16 million year-on-year adverse timing under-recoveries. Underlying operating profit increased by 18%. Net revenue (excluding timing) was higher, reflecting the re-opener allowances for cyber and data centres, the RPI uplift and the impact of 2018/19's Avonmouth pipeline project revenue allowance clawback. Regulated controllable costs were £17 million lower, driven by efficiency savings. Post-retirement costs were lower, mainly related to the 2018/19 Guaranteed Minimum Pension (GMP) ruling. Other costs were higher principally due to the non-recurrence of provision releases in 2018/19.

The depreciation charge was lower than in 2018/19 as a result of an additional charge in the prior period following a detailed review of asset lives.

US Regulated

£m	2019/20	2018/19	Change
Revenue	9,205	9,846	(7)%
Operating costs	(8,325)	(8,421)	(1)%
Statutory operating profit	**880**	1,425	(38)%
Exceptional items	392	351	12%
Remeasurements	125	(52)	(340)%
Adjusted operating profit	**1,397**	1,724	(19)%
Timing	239	(223)	(207)%
Major storm costs	–	93	(100)%
Underlying operating profit	**1,636**	1,594	3%
Analysed as follows:			
Net revenue	5,745	5,868	(2)%
Regulated controllable costs	(1,871)	(1,895)	(1)%
Post-retirement benefits	(95)	(94)	1%
Bad debt expense	(231)	(146)	58%
Other operating costs	(1,296)	(1,309)	(1)%
Depreciation and amortisation	(855)	(700)	22%
Adjusted operating profit	**1,397**	1,724	(19)%
Timing	239	(223)	(207)%
Major storm costs	–	93	(100)%
Underlying operating profit	**1,636**	1,594	3%

US Regulated statutory operating profit fell partly as a result of the £177 million year-on-year adverse swing in commodity contract remeasurements. Exceptional charges also increased reflecting £392 million environmental costs detailed above. In 2018/19, £283 million of exceptional costs were incurred for the Massachusetts Gas labour dispute in addition to £68 million of restructuring costs. Timing under-recoveries of £239 million in 2019/20 compared to timing over-recoveries of £223 million in 2018/19, driven by revenue decoupling, commodity recoveries and lower net energy efficiency collections contributed to a reduction in statutory and adjusted operating profit.

Adjusted operating profit decreased by £327 million (19%), including £462 million year-on-year adverse timing under-recoveries, partly offset by £93 million of deferrable storm costs qualifying as major (in aggregate) in 2018/19. Underlying operating profit increased by 3%. Net revenues (excluding timing) increased by £257 million as the benefits of rate case increments (including KEDNY, KEDLI and Niagara Mohawk) and £82 million from foreign exchange movements. A stronger US dollar increased underlying operating profit by £23 million in the year. US Regulated controllable costs decreased as a result of cost efficiencies (principally from benefit of restructurings and contract management), partly offset by workload increases and inflation. Bad debt related costs increased by £85 million, driven by £117 million additional provision for receivables related to the impact of COVID-19. Depreciation and amortisation increased due to the growth in assets. Other costs were higher due to increased property taxes and higher storm costs partly offset by lower cost of removal. Deferrable storm costs were removed from underlying results last year.

NGV and Other activities

£m	2019/20	2018/19	Change
Statutory operating profit	**237**	400	(41)%
Exceptional items	5	–	n/a
Adjusted operating profit	**242**	400	(40)%
Timing	–	–	n/a
Underlying operating profit	**242**	400	(40)%
Analysed as follows:			
NGV	269	263	2%
Property	63	181	(65)%
Corporate and Other activities	(90)	(44)	105%
Underlying operating profit	**242**	400	(40)%

National Grid Ventures' statutory operating profits were broadly in line with 2018/19, with higher use of our LNG import terminal at Grain and lower business development costs, offset by lower revenues from our declining meter population and costs related to the Geronimo business.

In 'other' activities, we incurred net costs of £27 million, compared to a net profit of £137 million in 2019/20. The performance of the Property business was lower than prior year reflecting the sale of the Fulham site to the St William joint venture in 2018/19. Corporate and other activities did not include last year's benefit of £95 million of legal settlements to recover costs associated with a US systems implementation. The National Grid Partners operating loss of £11 million was £3 million higher than in 2018/19.

Financing costs and taxation

Net finance costs

Net finance costs (excluding remeasurements) for the year were 6% higher than last year at £1,049 million, with the £56 million increase mostly driven by the impact of IFRS 16, lower capitalised interest and adverse foreign exchange movements, partly offset by interest on tax settlements. The effective interest rate of 4.1% on net debt was 20bps lower than the prior year rate of 4.3%.

Joint ventures and associates

The Group's share of net profits from joint ventures and associates increased as a result of St William's first year of profits. Our Minnesota-based joint venture, Emerald Energy Ventures LLC, which we acquired in July also contributed £1 million of post-tax earnings in 2019/20.

Tax

The underlying effective tax rate of 19.9% was 30bps higher than last year. The tax charge for the year benefited from the release of reserves following settlement of tax audits relating to earlier years and gains on chargeable disposals which are offset by previously unrecognised capital losses. In the prior year, significantly higher gains on property disposals that were offset by previously unrecognised capital losses resulted in a lower underlying effective tax rate. The Group's tax strategy is detailed later in this review.

Discontinued operations

We completed the sale of our remaining 39% interest in Quadgas HoldCo Limited, the holding company for the Cadent gas networks, in June 2019 for approximately £2 billion. As described further in note 10 to the financial statements, we have treated all items of income and expense relating to the disposal of Quadgas HoldCo Limited within discontinued operations.

Financial review
continued

Capital investment, asset growth and value added

Value added is a measure that reflects the value to shareholders of our dividend and the growth in National Grid's regulated and non-regulated assets (as measured in our regulated asset base, for regulated entities), net of the growth in overall debt. It is a key metric used to measure our performance and underpins our approach to sustainable decision-making and long-term management incentive arrangements.

A key part of our investor proposition is growth in our regulated asset base. The regulated asset base is a regulatory construct, representing the invested capital on which we are authorised to earn a cash return. By investing efficiently in our networks, we add to our regulatory asset base over the long-term and this in turn contributes to delivering shareholder value. Our regulated asset base comprises our regulatory asset value in the UK, plus our rate base in the US. We also invest in related activities that are not subject to network regulation and this further contributes to asset growth.

Capital investment

Capital investment comprises capital expenditure in critical energy infrastructure, equity investments, funding contributions and loans to joint ventures and associates, the acquisition of Geronimo during 2019/20 and, in the case of National Grid Partners, investments in financial assets.

	At actual exchange rates			At constant currency		
£m	**2019/20**	2018/19	Change	**2019/20**	2018/19	Change
UK Electricity Transmission	**1,043**	925	13%	**1,043**	925	13%
UK Gas Transmission	**249**	308	(19)%	**249**	308	(19)%
US Regulated	**3,228**	2,650	22%	**3,228**	2,688	20%
NGV and Other activities	**885**	623	42%	**885**	626	41%
Total	**5,405**	4,506	20%	**5,405**	4,547	19%

Investment in UK Electricity Transmission increased primarily due to Hinkley-Seabank and London Power Tunnels 2 spend. In UK Gas Transmission, investment reduced due to completion of the Feeder 9 gas pipeline replacement project and lower asset health spend. In the US, investment was up 20% on a constant currency basis, reflecting increased capital expenditure in New York (gas pipe replacement and mandated gas works) and higher spend in Massachusetts due to 2018/19's disruption to capex spend caused by the labour dispute. Investment in National Grid Ventures continued to increase with ongoing construction on three new subsea interconnectors, IFA 2 (France), North Sea Link (Norway) and Viking Link (Denmark) and the acquisition of Geronimo, a renewable energy business based in Minneapolis, Minnesota in July 2019 for total consideration of £209 million. In addition, a total amount of £61 million (including joint ventures) was invested by National Grid Partners in the year.

Asset growth and value added

To help readers' assessment of the financial position of the Group, the table below shows an aggregated position for the Group, as viewed from a regulatory perspective. The measures included in the table below are calculated in part from financial information used to derive measures sent to and used by our regulators in the UK and US, and accordingly inform certain of the Group's regulatory performance measures, but are not derived from, and cannot be reconciled to, IFRS.

There are certain significant assets and liabilities included in our IFRS balance sheet, which are treated differently in the analysis below, and to which we draw readers' attention. These include the £1.5 billion reduction in IFRS deferred tax liabilities we recognised in relation to US tax reform in 2017/18, which, from a regulatory perspective, remains as a future obligation. The UK RAV is higher than the IFRS value of property, plant and equipment and intangibles, principally because of the annual indexation (inflationary uplift) adjustment applied to RAV, compared to the IFRS value of these assets (held at amortised cost). In addition, under IFRS we recognise liabilities in respect of US environmental remediation costs, and pension and OPEB costs. For regulatory purposes, these are not shown as obligations because we are entitled to full recovery of costs through our existing rate plans. In our Value Added calculation, we have recognised an asset to reflect expected future recovery of the £117 million COVID-19 related provision for bad and doubtful debts that we have included in 2019/20. Regulatory IOUs which reflect refunds due to customers in future periods are treated within this table as obligations but do not qualify for recognition as liabilities under IFRS. Adjusted net debt movements exclude proceeds from the Cadent disposal and, in 2019/20, exclude movements on derivatives which are designated in cash flow hedging arrangements and for which there is no corresponding movement in total assets and other balances.

	2019/20			2018/19		
£m	**31 March 2020**	31 March 2019	Change	31 March 2019	31 March 2018	Change
UK RAV	**20,431**	19,692	4%	19,692	19,005	4%
US rate base	**20,644**	18,407	12%	17,565	16,087	9%
Total RAV and rate base	**41,075**	38,099	8%	37,257	35,092	6%
NGV and Other	**4,105**	3,351	23%	2,815	2,300	22%
Total assets	**45,180**	41,450	9%	40,072	37,392	7%
UK other regulated balances[1]	**(357)**	(302)		(278)	(474)	
US other regulated balances[2]	**1,791**	1,987		1,898	1,920	
Other balances	**(514)**	(679)		(158)	(343)	
Total assets and other balances	**46,100**	42,456	3,644	41,534	38,495	3,039
Increase in goodwill			81			–
Cash dividends			892			1,160
Adjusted net debt movement			(2,577)			(2,128)
Value added			2,040			2,071

1. Includes totex-related regulatory IOUs of £411 million (2019: £519 million), over-recovered timing balances of £24 million (2019: £68 million under-recovered) and under-recovered legacy balances related to previous price controls of £78 million (2019: £149 million).
2. Includes assets for construction work-in-progress of £1,510 million (2019: £1,813 million), other regulatory assets related to timing and other cost deferrals of £642 million (2019: £189 million) and net working capital liabilities of £361 million (2019: £15 million).

Figures relating to prior periods have, where appropriate, been re-presented at constant currency, for opening balance adjustments following the completion of the UK regulatory reporting pack process in 2019, finalisation of US balances, to reflect the impact of IFRS 16 and to remove the investment in Cadent.

During 2019/20, our combined regulated asset base and NGV and Other businesses' assets grew by £3.7 billion or 9% on a constant currency basis compared to an increase of 7.2% in the prior year. UK RAV growth was 3.8% including RPI indexation of 2.6% while US rate base grew strongly by 12%.

Value added, which reflects the key components of value delivery to shareholders (i.e. dividend and growth in the economic value of the Group's assets, net of growth in net debt) was £2.0 billion in 2019/20. This was slightly lower than last year's £2.1 billion, with improved US returns and the impact of asset growth, offset by the loss of interest and dividend income from Cadent and higher cash tax. Of the £2.0 billion value added, £0.9 billion was paid to shareholders as cash dividends and £1.1 billion was retained in the business. This measure excludes any benefit arising from the sale of our 39% interest in Quadgas Holdco Limited. Value added per share was 58.9p compared with 61.2p in 2018/19.

Cash flow, net debt and funding

Net debt is the aggregate of cash and cash equivalents, borrowings, current financial and other investments and derivatives (excluding commodity contract derivatives) as disclosed in note 29 to the financial statements. 'Adjusted net debt' used for the RCF/adjusted net debt calculation is principally adjusted for pension deficits and hybrid debt instruments. For a full reconciliation see page 245.

The following table summarises the Group's cash flow for the year, reconciling this to the change in net debt.

Summary cash flow statement

£m	2019/20	2018/19	Change
Cash generated from continuing operations	**4,914**	4,464	10%
Cash capital expenditure and acquisition of investments	**(5,098)**	(4,148)	23%
Dividends from joint ventures and associates	**75**	68	10%
Business net cash flow from continuing operations	**(109)**	384	(128)%
Net interest paid	**(884)**	(846)	4%
Net tax (paid)/received	**(199)**	(75)	165%
Ordinary dividends	**(892)**	(1,160)	(23)%
Other cash movements	**10**	15	(33)%
Net cash flow from continuing operations	**(2,074)**	(1,682)	23%
Quadgas sale proceeds	**1,965**	–	n/a
Discontinued operations	**(91)**	85	(207)%
Non-cash movements	**(1,387)**	(1,930)	(28)%
Increase in net debt	**(1,587)**	(3,527)	(55)%
Net debt at start of year	**(26,529)**	(23,002)	15%
Impact of adoption of IFRS 16	**(474)**	–	n/a
Net debt at end of year	**(28,590)**	(26,529)	7.8%

Cash flow generated from continuing operations was £4.9 billion, £450 million higher than last year, principally due to exceptional items in 2018/19 and favourable working capital (mainly higher inflows from collection of prior year winter receivables), partly offset by adverse timing on revenues and provisions. Cash expended on investment activities increased for the reasons described above. Net interest paid increased due to the growth in net debt and also higher interest income received in 2018/19. The Group made net tax payments of £199 million during 2019/20. A 46% scrip take-up in the year reduced the cash dividend to £892 million, £268 million lower than in 2018/19, when the scrip take-up was 26%. Proceeds of £1,965 million (plus £6 million of interest) from the Quadgas HoldCo Limited disposal, were partly offset by outflows for residual provisions and accruals classified within discontinued operations. In 2018/19, discontinued operations included dividend and interest income of £156 million from our investment in Quadgas. Non-cash movements primarily reflect changes in the sterling-dollar exchange rate, the impact of adopting IFRS 16 'Leases', accretions on index-linked debt, finance lease additions and other derivative fair value movements.

Overall, the increase in net debt was driven by continuing high levels of capital investment and the impact of a stronger US dollar on the translation of US dollar-denominated debt. As at 31 March 2020 the Group reduced its total financial liabilities denominated in US dollars from $21 billion at the start of the year to $20 billion at 31 March 2020, as a hedge of foreign exchange movements in the value of its US businesses.

During the year we raised over £2.9 billion of new long-term senior debt including 13 bond issues, and £1.1 billion of hybrid debt refinancing. The Board has considered the Group's ability to finance normal operations at the same time as funding a significant capital programme, in light of the potential impacts of COVID-19. This includes stress-testing of the Group's finances under a 'reasonable worst case' scenario and consideration of levers available to ensure our businesses are adequately financed. As a result, the Board has concluded that the Group will have adequate resources to do so. In April, we issued £0.9 billion of debt through 2 bonds, evidencing our ability to raise new finance. In addition, as at 17 June 2020, we have £5.8 billion of undrawn committed facilities, all of which have expiry dates beyond June 2021. The three major credit rating agencies – Moody's, Standard & Poor's (S&P) and Fitch – have all maintained their strong investment grade ratings of National Grid plc on stable outlook.

Financial position

The following table sets out a condensed version of the Group's IFRS balance sheet.

Summary balance sheet

£m	31 March 2020	31 March 2019	Change
Goodwill and intangibles	**7,528**	6,953	8%
Property, plant and equipment	**48,770**	43,913	11%
Assets held for sale	**–**	1,956	n/a
Other (liabilities)/assets	**(349)**	(507)	(31)%
Tax balances	**(4,168)**	(4,000)	4%
Pension liabilities	**(953)**	(218)	338%
Provisions	**(2,654)**	(2,199)	21%
Net debt	**(28,590)**	(26,529)	7.8%
Net assets	**19,584**	19,369	1%

Financial review
continued

Property, plant and equipment increased as a result of the continuing capital investment programme, foreign exchange gains and the impact of adopting IFRS 16 'Leases'. Assets held for sale comprised our 39% interest in Quadgas, which was sold in June 2019. Pension liabilities increased in the US, as a result of lower asset valuations and foreign exchange movements, partly offset by a lower discount rate. Provisions increased principally as a result of additional environmental provisions recognised in the year and foreign exchange movements. Other movements are largely explained by net working capital inflows and changes in the sterling-dollar exchange rate.

Regulatory gearing, measured as net debt as a proportion of total regulatory asset value and other business invested capital, was 63% as at 31 March 2020. This was down from 66% at the previous year-end and remains appropriate for the current Group credit rating of A-/A3 (S&P/Moody's).

Retained cash flow as a proportion of adjusted net debt was 9.2%, which is above the long-term average 9% level currently indicated by Moody's as consistent with maintaining our current Group rating.

Off-balance sheet items
There were no significant off-balance sheet items other than the commitments and contingencies detailed in note 30 of the financial statements.

Economic returns

In addition to value added, one of the principal ways in which we measure our performance in generating value for shareholders is to divide regulated financial performance by regulatory equity, to produce Return on Equity (RoE).

As explained on page 245, regulated financial performance adjusts reported operating profit to reflect the impact of the Group's various regulatory economic arrangements in the UK and US. In order to show underlying performance, we calculate RoE measures excluding exceptional items of income or expenditure.

Group RoE is used to measure our performance in generating value for our shareholders by dividing regulated and non-regulated financial performance, after interest and tax, by our measure of equity investment in all our businesses, including the regulated businesses, NGV and Other activities and joint ventures.

Regulated RoEs are measures of how the businesses are performing compared to the assumptions and allowances set by our regulators. US and UK regulated returns are calculated using the capital structure assumed within their respective regulatory arrangements and, in the case of the UK, assuming 3% RPI inflation. As these assumptions differ between the UK and the US, RoE measures are not directly comparable between the two geographies. In our performance measures, we compare achieved RoEs to the level assumed when setting base rate and revenue allowances in each jurisdiction.

Return on Equity

£m	2019/20	2018/19	Change
UK Electricity Transmission	**13.5%**	13.7%	-20bps
UK Gas Transmission	**9.8%**	9.5%	30bps
UK weighted average	**12.4%**	12.4%	–bps
US Regulated	**9.3%**	8.8%	50bps
Group Return on Equity	**11.7%**	11.8%	-10bps

The overall weighted average RoE for the two UK transmission businesses was 12.4%, representing 230 basis points outperformance of the base allowed return. Electricity Transmission performance reduced in the year with improved totex incentive performance offset by lower SO incentives including a reversal of profits recognised in 2018/19. Gas Transmission return increased due to improved totex performance in 2019/20.

RoE for the US Regulated business of 9.3% was 50bps higher in 2019/20, with improved performances in KEDNY, across Massachusetts and in Rhode Island all contributing to this increase. The achieved RoE represents 99% of the weighted average allowed return across all jurisdictions. US returns exclude the impact of the Massachusetts Gas labour dispute in 2018/19. They are also not impacted by the COVID-19 related bad debt provision recognised in 2019/20 and include an adjustment reflecting our expectation for future recovery of these bad debt costs.

Overall Group RoE, which incorporates Property, Corporate and Other, and financing performance was 11.7%, slightly lower than 2018/19.

Tax transparency

As a responsible tax payer, we have voluntarily increased our tax disclosures, which continue to be an area of significant interest to many of our stakeholders.

Tax strategy
National Grid is a responsible tax payer. Our approach to tax is consistent with the Group's broader commitments to doing business responsibly and upholding the highest ethical standards. This includes managing our tax affairs, as we recognise that our tax contribution supports public services and the wider economy. We endeavour to manage our tax affairs so that we pay and collect the right amount of tax, at the right time, in accordance with the tax laws in all the territories in which we operate. We will claim valid tax reliefs and incentives where these are applicable to our business operations, but only where they are widely accepted through the relevant tax legislation such as those established by government to promote investment, employment and economic growth. We do not have operations in tax havens or low tax jurisdictions without commercial purpose.

We have a strong governance framework and our internal control and risk management framework helps us manage risks, including tax risk, appropriately. We take a conservative approach to tax risk. However, there is no prescriptive level or pre-defined limit to the amount of acceptable tax risk.

We act with openness and honesty when engaging with relevant tax authorities and seek to work with tax authorities on a real-time basis. We engage proactively in developments of external tax policy and engage with relevant bodies where appropriate. Ultimate responsibility and oversight of our tax strategy and governance rests with the Finance Committee, with executive management delegated to our CFO. For more detailed information, please refer to our published global tax strategy on our website.

Country-by-country reporting summary

In the current year for the first time we have disclosed in the table below data showing the scale of our activities in each of the countries we operate in. This allows our stakeholders to see the profits earned, taxes paid and the context of those payments.

	Revenue				
Tax jurisdiction	Unrelated party £m	Related party[1] £m	Total £m	Profit/(loss) before income tax[2] £m	Income tax accrued – current year[3] £m
United Kingdom	5,282	113	**5,395**	1,821	179
United States	9,258	82	**9,340**	(82)	(2)
Ireland	–	–	**–**	–	–
Isle of Man	–	16	**16**	3	–
Luxembourg	–	–	**–**	–	–
Netherlands	–	55	**55**	12	–
Total	14,540	266	**14,806**	1,754	177

1. Related party revenue only includes cross-border transactions.
2. Profit/(loss) before income tax from continuing operations after exceptionals.
3. See the tax charge to tax paid reconciliation below for further information.

Our Hong Kong entity is UK tax resident and our entities in Australia and Canada are dormant. Therefore, those jurisdictions have not been included in the table above.

Our Isle of Man company is a captive insurance company which is treated as a controlled foreign company for UK tax purposes and as such UK corporation tax is paid on its profits by National Grid. In the Netherlands, we have a finance company which raised external finance for the Group and an old holding company which held trading investments which were sold many years ago, which is in the process of being liquidated. The finance company is taxed on its profits in the Netherlands at the corporate tax rate of 25%, whilst the holding company's profits are offset by tax losses on which deferred tax has not previously been recognised.

Transfer pricing is not a significant issue for the Group since there are limited transactions between Group companies, but any transactions between related parties are made on an arm's-length basis and aligned to OECD principles.

Group's total tax charge to tax paid

The total tax charge for the year disclosed in the financial statements in accordance with accounting standards and the equivalent total corporate income tax paid during the year will differ.

The principal differences between these two measures are as follows:

Reconciliation of Group's total tax charge to tax paid

£m	2019/20	2018/19
Total Group tax charge/(credit)	**480**	339
Adjustment for Group non-cash deferred tax	**(348)**	(251)
Adjustments for Group current tax (charge)/credit in respect of prior years	**45**	52
Group current tax charge/(credit)	**177**	140
Group tax instalment payments payable/(repayable) in respect of the prior year	**78**	92
Group tax instalment payments payable/(repayable) in the following year	**5**	(69)
Repayment due to the Group in respect of current year estimated payments	**47**	–
Group tax payments/(refunds) in respect of prior years paid in the current year[1]	**(113)**	(93)
Group tax payments relating to tax disclosed elsewhere in the income statement	**5**	5
Group tax paid/(repaid)	**199**	75
Profit/(loss) before income tax[2]	**1,754**	1,841
	%	%
Effective cash tax rate	**11.3**	4.1
Effective tax rate (see note 7)	**27.4**	18.4

1. Tax refunds in respect of prior years are primarily driven by a refund received in respect of tax losses carried back to earlier years following agreement of historical US Federal tax audits.
2. Profit/(loss) before income tax from continuing operations after exceptionals.

Effective cash tax rate

The effective cash tax rate for the Group is 11.3%. The difference between this and the accounting effective rate of 27.4% (see note 7 on page 143) is due to the following factors.

National Grid is a capital-intensive business, across both the UK and the US, and as such invests significant sums each year in its networks. In 2019/20 the total capital expenditure was £5,079 million. To promote investment, tax legislation allows a deduction for qualifying capital expenditure at a faster rate than the associated depreciation in the statutory accounts. The impact of this is to defer cash tax payments into future years.

Given the substantial amounts of expenditure qualifying for deduction incurred by National Grid this has left us in a net tax loss position in the US in the year ended 31 March 2020. Consequently, in the current period we made no significant federal tax payments.

In the current year we made significant cash tax payments in the UK (£306 million). This was offset by the receipt of cash for tax losses carried back to earlier years in the US as a result of settlement of prior year audits. These receipts in the US also contributed to a lower overall effective rate of cash tax for the Group.

The Group continues to fund deficit payments into its defined benefit pension schemes and has made significant payments into the Gas and Electricity schemes during the course of the year. These payments have further reduced the overall cash tax paid in the UK.

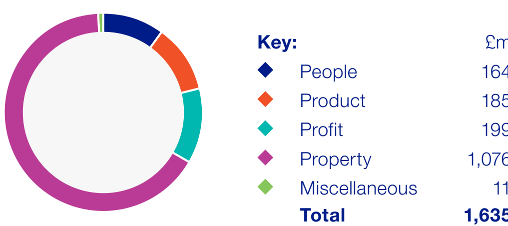
Financial review
continued

Group’s total tax contribution

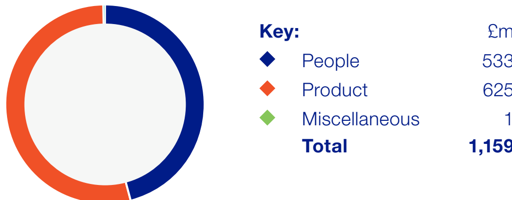
In the current year we have expanded this disclosure to cover our global total tax contribution. The total amount of taxes we pay and collect globally year-on-year is significantly more than just the tax which we pay on our global profits.

Group’s total tax contribution 2019/20 (taxes paid/collected)

Taxes borne



Taxes collected



	Tax contribution					
Tax jurisdiction	Income tax paid/(repaid) on cash basis[1] £m	Property taxes £m	Other taxes borne £m	Taxes collected £m	**Total tax contribution £m**	Number of employees as at 31 March 2020
United Kingdom	306	226	57	586	**1,175**	6,321
United States	(107)	850	303	573	**1,619**	16,748
Ireland	–	–	–	–	**–**	–
Isle of Man	–	–	–	–	**–**	–
Luxembourg	–	–	–	–	**–**	–
Netherlands	–	–	–	–	**–**	–
Total	199	1,076	360	1,159	**2,794**	23,069

1. See the tax charge to tax paid reconciliation above for further information.

For 2019/20 our total tax contribution globally was £2,794 million (2018/19: £2,620 million), taxes borne were £1,635 million (2018/19: £1,422 million) and taxes collected were £1,159 million (2018/19: £1,198 million). Whilst total tax collected in 2019/20 has remained consistent with the prior year, the total taxes borne by the Group has increased from the prior year primarily as a result of higher property and profit taxes being paid.

Two thirds of the tax borne by the Group is in relation to property taxes of which c. £850 million are paid in the US across over 1,100 cities and towns in Massachusetts, New Hampshire, New York, Rhode Island and Vermont. These taxes are the municipalities principal source of revenue to fund school districts, police and fire departments, road construction and other local services.

In the UK we participate in the 100 Group’s Total Tax Contribution Survey. The survey ranks the UK’s biggest listed companies in terms of their contribution to the total UK government’s tax receipts. The most recent results of the survey for 2018/19 ranks National Grid as 21st highest contributor of UK taxes (2017/18: 25th), 18th in respect of taxes borne (2017/18: 23rd) and 5th in respect of capital expenditure (£1,200 million) on fixed assets (2017/18: 4th). Our ranking in the survey is proportionate to the size of our business and capitalisation relative to the other contributors to the survey.

However, National Grid’s contribution to the UK and US economies is broader than just the taxes it pays over to and collects on behalf of the tax authorities.

Both in the UK and the US we employ thousands of individuals directly. We also support jobs in the construction industry through our capital expenditure, which in 2019/20 was £5,079 million, as well as supporting a significant number of jobs in our supply chain.

Furthermore, as a utility we provide a core essential service which allows the infrastructure of the country/states we operate in to run smoothly. This enables individuals and businesses to flourish and contribute to the economy and society.

Development of future tax policy

We believe that the continued development of a coherent and transparent tax policy across the Group is critical to help drive growth in the economy. In the UK we continue to contribute to research into the structure of business tax and its economic impact by contributing to the funding of the Oxford University Centre for Business Tax at the Saïd Business School.

We are a member of a number of industry groups which participate in the development of future tax policy, such as the Electricity Tax Forum and CBI Employment Taxes Working Group, together with the 100 Group in the UK, which represents the views of Finance Directors of FTSE 100 companies and several other large UK companies. We undertake similar activities in the US, where the Company is an active member in the Edison Electric Institute, the American Gas Association and the Global Business Alliance. This helps to ensure that we are engaged at the earliest opportunity on tax issues which affect our business.

We continue to engage on consultations where the subject matter of which directly impacts taxes borne or collected by our business, with the aim of openly contributing to the debate and development of tax legislation.

Pensions

In 2019/20, the defined benefits pensions and other post-retirement benefits operating costs decreased by £97 million to £197 million, principally as a result of our UK restructuring programme and the GMP equalisation ruling. Employer contributions during the year were £327 million (2018/19: £418 million), including £86 million (2018/19: £84 million) of deficit contributions.

As at 31 March 2020, the total UK and US assets and liabilities and the overall net IAS 19 (revised) accounting deficit is shown below. Further information can be found in note 25 to the financial statements.

Net pension and other post-retirement obligations

	UK	US	Total
Plan assets	14,364	9,384	23,748
Plan liabilities	(12,844)	(11,857)	(24,701)
Net surplus/(deficit)	1,520	(2,473)	(953)

As at 31 March 2020, pension assets of £1,589 million in the UK pension schemes and £260 million in the US Niagara Mohawk Plan were recognised on the basis that these plans were in a surplus position.

Dividend

The Board has recommended an increase in the final dividend to 32.00p per ordinary share ($2.0126 per American Depository Share) which will be paid on 19 August 2020 to shareholders on the register of members as at 3 July 2020. If approved, this will bring the full year dividend to 48.57p per ordinary share, an increase of 2.6% over the 47.34p per ordinary share in respect of the financial year ended 31 March 2019. This is in line with the increase in average UK RPI inflation for the year ended 31 March 2020 as set out in the announcement of 28 March 2013, in which we stated that our dividend policy aims to grow the ordinary dividend per share at least in line with the rate of RPI inflation each year for the foreseeable future.

At 31 March 2020, National Grid plc had in excess of £5 billion of distributable reserves, which is sufficient to cover more than two years of forecast Group dividends. If approved, the final dividend will absorb approximately £1,123 million of shareholders' funds. This year's dividend is covered approximately 1.2x by underlying earnings.

The Directors consider the Group's capital structure and dividend policy at least twice a year when proposing an interim and final dividend and aim to maintain distributable reserves that provide adequate cover for dividend payments.

Brexit

As described elsewhere in the Strategic Report, our Brexit working group considered the issues and consequences of the UK's decision to leave the EU. In the last month of 2018/19, and in anticipation of the original 29 March 2019 deadline for the UK to exit the EU, we executed our plan to bring forward the procurement of key items for capital delivery and operations in case of delays at ports. In the context of the Group financial statements, however, these actions did not have a material effect.

New accounting standards

As of 1 April 2019, we adopted IFRS 16 'Leases'. This did not have a material impact on the Group's results or financial position, although as described in note 37 to the financial statements, on transition our property, plant and equipment and net debt each increased by £0.5 billion to take account of the additional lease obligations. We note that the rating agencies already made adjustments to impute this and accordingly, adoption of the new standard does not impact our credit ratings.

Post balance sheet events

In the period between 31 March 2020 and 17 June 2020, there have continued to be substantial environmental, economic and social changes in both the UK and US. As described further in the Strategic Report, these have had, and will continue to have, significant ramifications for the Group. Other than as disclosed in respect of those areas where forward-looking forecasts are relevant (notably goodwill impairment reviews (note 11 to the financial statements), expected credit losses on financial instruments including trade receivables (notes 19 and 32) and the presumption of the going concern basis generally (note 1)), none of these developments have impacted or caused adjustment to the financial statements.

Principal operations – UK

Our UK business performed well in 2019/20. We maintained our focus on safe, reliable, customer-led, innovative and efficient operations.

Our UK performance

Optimise performance

Measure	2019/20	2018/19	2017/18
Return on Equity (£m)	**12.4**	12.4	12.1
Statutory operating profit (£m)	**1,663**	1,045	1,528
Underlying operating profit (£m)	**1,576**	1,433	1,560
Adjusted operating profit (£m)	**1,668**	1,318	1,528
RIIO-T1 customer savings (£m)	**128**	101	78

Grow core business

Measure	2019/20	2018/19	2017/18
Capital expenditure (£m)	**1,292**	1,233	1,309
Asset growth (%)	**3.8**	3.6	4.5

Customer first

Customer satisfaction: ET
(out of 10)
8.2
(2018/19: 7.9)

Customer satisfaction: ESO
(out of 10)
7.6
(2018/19: N/A)

Customer satisfaction: GT
(out of 10)
8.0
(2018/19: 7.8)

Highlights

Our UK business performed well in 2019/20 as we maintained our focus on safe, customer-led, reliable, innovative and efficient operations. On 1 April 2019, we completed the legal separation of the ESO within a newly formed subsidiary company which holds the ESO licence. To ensure appropriate ring-fencing between itself and the rest of the National Grid Group, the company is governed by its own Board of Directors including three independent directors. Following separation, we moved the Gas System Operator (GSO) function to become part of the Gas Transmission business to further simplify our structure.

Optimise performance

Our safety ambition is to have a culture where we always do the right thing regarding safety. Our strategy is to be proactive in our safety management by engaging our leaders and employees and implementing a consistent and simple risk-based approach. This strategy will enable us to develop the highest level of safety culture maturity. To support this ambition, we are focusing more on leading indicators that measure our positive efforts on safety management to help prevent incidents, while continuing to track more traditional lagging indicators.

As at 31 March 2020, our LTIFR was 0.06. This is better than our UK target of <0.08, and is our best ever LTIFR performance. Our Electricity Capital Delivery business has worked more than a year without having any LTIs in approaching five million person hours of complex construction activity. This outstanding result was driven by a relentless focus on the work we do and commitment to keeping one another safe.

We delivered a good year of returns, with a Return on Equity of 12.4%. Statutory operating profit and underlying operating profit were higher at £1,663 million and £1,576 million respectively.

We have committed to reduce our direct emissions to net zero by 2050 and to increase our influence to support the overall industry-wide transition to a low-carbon future. We have developed solutions to enable the rollout of a strategic backbone for electric vehicles throughout the UK and are working in partnership with industry to develop Carbon Capture and Storage (CCS) solutions. We continue to engage with stakeholders to shape and define the delivery of the £500 million funding commitments to help grow the UK's rapid charging network made in the Chancellor's March 2020 Budget. In addition, the Chancellor announced at least £800 million for a CCS Infrastructure Fund which will support CCS in at least two sites.

Following the floods of 2007, we instigated an investment programme to protect assets against future flooding. The programme ensures overall resilience of the network to threats, focusing on protection of specific sites against the threat of flooding and reducing the likelihood of consumers being affected by a flooding incident on the ET system. Following detailed modelling and consultation with the Environment Agency, permanent flood defences were installed at Thorpe Marsh 400 kV substation in 2014 and a demountable barrier was procured to protect the 275 kV substation which is located on higher ground. Neither of the substations were jeopardised during the flooding event. The ET network remained resilient during Storm Ciara in February 2020.

Customer first

As noted in the Chief Executive's review, at the end of 2019/20, we found new ways to put the customer first in the face of the COVID-19 pandemic.

We work with our customers to meet their needs and deliver successful outcomes for all parties. We were pleased to see continued improvement in our CSAT scores in our ET and GT businesses, achieving scores of 8.2 (2018/19: 7.9) and 8.0 (2018/19: 7.8) respectively. For the ESO, our CSAT score in 2019/20 was 7.6.

In October 2019, we welcomed Ofgem's 'minded-to' position on Hinkley-Seabank connection to use the existing Strategic Wider Works (SWW) mechanism for this vital project. In May 2020, we reached agreement on the final cost and the regulatory funding model. The allowance for the project is £656 million and will be funded through the existing SWW mechanism rather than the Competition Proxy Model (CPM). The project remains on target to be ready for connection in 2025.

Grow core business

In December we awarded the £400 million tunnelling contract associated with our London Power Tunnels 2 project, a 20.8 mile (33.5 kilometre), £1 billion link from Wimbledon to Crayford which will provide significant resilience across South London when completed in 2028. We have embarked on a partnership with a social enterprise, My Kinda Future, to inspire the next generation of engineers in South London and to help us with local recruitment and upskilling required around our key sites. The team will work on designs and set up across key sites this year, launching four different tunnel-boring machines in 2021. Four other major contracts associated with the cable and substation works will be let this year. These partners will form an enterprise, focused on innovation and collaboration to successfully deliver the project outcome, rewiring London and connecting with the capital.

We took over the Western Link HVDC cable with our Joint Venture partner Scottish Power Transmission on 23 November 2019. The link is a submarine HVDC link between Scotland and England and Wales which delivers up to 2,250 MW. We are working with Ofgem after they opened an investigation into the delivery and operation of the cable in January 2020.

A particular highlight has been the completion of the tunnelling for Feeder 9 under the Humber estuary, a critical reinforcement of the gas network.

Evolve for the future

We published and submitted our business plans to Ofgem in December 2019 for our ET, GT and ESO businesses for the 2021–2026 RIIO-2 price control period. These plans have been developed following our largest ever engagement exercise to date, with customers, industry stakeholders, businesses and households across the country.

Our plans include investment to maintain network reliability and provide flexibility and optionality for the UK to achieve net zero greenhouse gas emissions by 2050, while being protected against new threats:

- Our ET plan has a baseline total expenditure spend of £7.1 billion over the five-year period. Our ET business assumes connection of 15.3 GW of customer capacity, providing the UK with clean power and flexible storage, as well as increased investment to maintain reliability and resilience. The baseline spend for ET, under our proposed financial plan, would see consumer bills reduce slightly in real terms.
- Our GT plan has a baseline total expenditure spend of £2.8 billion over the five-year period. Our GT business, which comprises GB gas system operator and gas transmission, includes an increase in asset health and cyber resilience investment, as well as a programme of work to test and prove hydrogen conversion options. The baseline spend for GT, under our proposed financial plan, would see consumer bills reduce slightly in real terms.

These plans will deliver a safer, cleaner, greener and more affordable energy system. We have challenged ourselves to ensure our business plans deliver at the lowest cost and create optionality as we develop the pathway to net zero. We continue to constructively work with our regulator, Ofgem, ahead of draft determinations in the summer and final determinations in November 2020.

The wellbeing of our workforce is important to us. 38% of our UK employees have undertaken mental-health-related training courses during the year, an increase of 30% compared to last year.

The UK cost efficiency programme that we announced in 2018 continues to deliver a more efficient and agile business ahead of RIIO-2. Through this initiative we have simplified ways of working with a leaner organisation and more efficient IT and back office activities. In 2019/20, the programme enabled us to deliver efficiency savings of £54 million in ET, and £19 million in GT.

We have made good progress on the £116 million Dorset Visual Impact Provision (VIP) project, with site establishment and preliminary civil works well underway. We are on track to underground 5.5 miles (8.8 kilometres) of overhead line and remove 22 pylons in the Dorset Area of Outstanding Natural Beauty (AONB) by 2022. Funding and planning applications have been submitted for the Peak District East VIP project. This £43 million project will remove six pylons and 1.2 miles (2 kilometres) of overhead line in the Peak District National Park. The planning application for Snowdonia VIP project has been submitted. This project will replace a section of overhead line which goes through Snowdonia National Park with cables in a 2.1 mile (3.4 kilometre) tunnel. Engineering and consenting activities have also commenced on the first of our RIIO-2 portfolio of VIP projects: the undergrounding of 2.7 miles (4.4 kilometres) of overhead line through the North Wessex Downs AONB.

Scan here to view the story

Our GSO became part of the GT business with effect from 1 January 2020, providing even greater transparency and clarity around the management of Great Britain's gas and electricity networks. A unified GSO and GT structure is a better way to be organised, offering greater alignment, simplified governance, clearer accountability, and better coordination between system operator and gas asset management. It makes the legal separation of the ESO even clearer.

In our GT business we are reviewing the potential to decarbonise the gas network through a transition to carbon-free hydrogen. Working with the UK gas networks on the Gas Goes Green programme, we are identifying the steps required to repurpose our assets to carry hydrogen either as a blend or up to 100%.

nationalgridESO

System Operator

As the ESO, we continue to help facilitate the move to a lower-carbon economy while simultaneously delivering safe, reliable and affordable energy to the end consumer. We operate an electricity system that is transitioning towards net zero and have seen several new energy records set, as greater levels of renewables continue to connect to the network and coal power stations close. During the spring of 2019 there were 18 consecutive days where coal-fired generation was not part of the generation mix; solar output peaked in May 2019 at around 9.5 GW and the maximum wind output of 16.86 GW was recorded in December 2019. In combination, these changes to the generation mix have led to 2019 being the first year on record in which low-carbon sources generated more electricity than fossil fuel sources. In 2020, we have continued to see further records set. Further details about the ESO power generation mix can be found at: www.nationalgrideso.com/great-britains-electricity-explained

Our ESO RIIO-2 plan proposes new activities that will generate net benefits of around £2 billion for consumers over the five-year RIIO-2 period and spend over its two-year price control (2021–2023) of £514 million. The ambitious ESO plan focuses on how the ESO must evolve to meet the challenges of the changing energy landscape. Supported by a new, bespoke regulatory model designed to drive the right behaviours and outcomes, the ESO will facilitate the transition to a zero-carbon power system. Under RIIO-2, the ESO will lower average annual consumer bills by around £3.

Following the cessation of the UK's Capacity Market scheme in November 2018 due to the ruling of the European Court of Justice, we worked closely with BEIS and Ofgem to initiate contingency plans making sure that security of supply could be maintained during the 2019/20 winter period. On 24 October 2019, the EU Commission ruled on the validity of the Capacity Market state aid challenge, confirming their original decision in 2015 to grant state aid approval. Following the announcement, we have resumed our role as the Electricity Market Delivery Body and ran auctions in early 2020.

On 15 May 2018, Ofgem opened an investigation into the ESO (when it still formed part of National Grid Electricity Transmission plc) pertaining to an alleged breach of its licence condition to operate the system in an economic and efficient manner, including the production and publication of forecasts of demand on the electricity transmission network. The investigation is ongoing.

On 9 August 2019, following the near simultaneous tripping of two large power generators, we experienced power outages in various parts of England and Wales. The frequency on our network dropped resulting in low frequency demand disconnections, preventing further issues. Service was restored within 45 minutes to all customers. In September 2019, we published the technical report into the event. In January 2020 Ofgem published its findings which supported many of the recommendations we included in our report. We operate one of the safest and most resilient power networks in the world and, while we recognise the disruption that the outage caused, our systems performed as they should. We have worked closely with Ofgem, the government, the wider energy industry and other sectors like transport to learn the lessons from this incident.

On 1 April 2019, National Grid ESO became a separate legal entity within the National Grid Group. The major programme to achieve this saw the creation of the NGESO Board, which includes three Non-executive Directors and the creation of a new office space, physically separate from other parts of National Grid. Following separation, we moved the GSO function to become part of the GT business to further simplify our structure and to provide greater clarity. We will continue to regularly review the way we are structured to make sure we are delivering the best possible service for our customers.

Principal operations – US

Our US business performed well operationally and financially in 2019/20, despite challenges across our jurisdictions. We maintained our focus on safe, reliable, customer-led, innovative and efficient operations. We continued to optimise our operational performance.

Our US performance

Optimise performance

Measure	2019/20	2018/19	2017/18
Return on Equity (£m)	**9.3**	8.8	8.9
Statutory operating profit (£m)	**880**	1,425	1,734
Underlying operating profit (£m)	**1,636**	1,594	1,704
Adjusted operating profit (£m)	**1,397**	1,724	1,698

Grow core business

Measure	2019/20	2018/19	2017/18
Capital expenditure (£m)	**3,228**	2,650	2,424
Asset growth (%)	**12.2**	9.2	7.4
Rate base* (£m)	**20,644**	17,565	14,762

* US rate base is as previously reported at historical exchange rates

Customer first

US Residential – Customer Trust Advice

59.8%

(2018/19: 58.7%)

Highlights

In the US, in 2019/20 we improved our storm restoration efforts, successfully replaced hundreds of miles of leak-prone pipe in our gas network, exceeded our electric vehicle charging deployment goals ahead of schedule, reached record-setting Distributed Generation (DG) in Rhode Island, and renewed our focus on safety culture.

The clean energy future continues to be a focus in the US. The Company's net zero by 2050 announcement was in line with the ambitious targets and important steps being taken by governments, regulators and across our communities, to deeply decarbonise economy-wide. The US business is currently building a plan to achieve this new target, which will impact our fleet, building stock, and pipeline replacement efforts. At the end of March 2019, we had already reduced emissions by 71% below 1990 levels in the US, exceeding our interim target of 45% by 2020 group wide. We achieved this by focusing on a range of activities, which include a major pipeline replacement programme to minimise gas losses through leakage and the reduction of a high-emission greenhouse gas called SF_6 in our electricity networks.

An important milestone we reached, contributing to decarbonisation, was exceeding our electric vehicle charging station deployment goals ahead of schedule in New York. We enabled over 1,405 ports at roughly 184 customer sites and have a number of customers who are eagerly awaiting an extension of the programme, which will be proposed to our New York State regulator in a future rate case.

In the renewable space, we interconnected a record number of DG projects for our customers in Rhode Island, totalling 99.8 MW and connecting 1,938 applications.

We were pleased to accept a number of awards that demonstrate our commitment to our workforce and customers in 2019/20. National Grid was listed in the top ten of DiversityInc Top Utility and we earned a designation as a "Best Place to Work for LGBTQ Equality" by the Human Rights Campaign Foundation in the Corporate Equality Index 2020.

Forbes named National Grid one of the Best Employers for Diversity in 2020. Edison Electric Institute honoured National Grid in 2019 with an Emergency Assistance Award and Emergency Recovery Award for restoration efforts during hard-hitting storms.

Safety continues to be a critical pillar of our daily operations. The Company is fully committed to the well-being and safety of our workforce and customers alike. This year, a tragic event took the life of one of our employees and reminded us to continue striving to 'find a better way' to improve our safety culture. As at 31 March 2020, our LTIFR was 0.16. We have focused safety culture transformation programmes to engage our workers on hazard and risk awareness, and required controls to prevent safety incidents. We have asked our workforce to direct their attention to the safety of themselves and their colleagues every day.

Optimise performance

During 2019/20, the US business focused on growth, customer value, and deep decarbonisation. Our US Regulated net revenue was £123 million (2%) lower, with £257 million of incremental rate cases and £85 million of exchange rate benefit, more than offset by £465 million adverse timing (lower volumes and commodity recoveries). We invested £3.2 billion in energy infrastructure and technology solutions during the year. We also added 41,043 active new customer accounts across gas, electric and DG combined.

Our energy infrastructure investments are designed to bring cleaner energy to our customers and enhance reliability. One of our larger investments, The Metropolitan Reliability Infrastructure Project, will increase system reliability and operational flexibility of the existing transmission system in Brooklyn, New York. It will also increase supply diversity options and provide capacity for operation in case there is an outage. The project consists of roughly 40,000 feet of transmission main that will connect the Southern line to the Brooklyn Backbone and our Greenpoint Facility by autumn 2021.

Through our gas pipeline replacement programme, we have successfully replaced 460 miles (740 kilometres) of pipe in 2019/20, compared to 400 miles (644 kilometres) in 2018/19. By replacing leak-prone pipe, we are significantly reducing unintended release of natural gas, reducing methane emissions and keeping our customers and communities safe. An innovative robotic sealing technique has helped us to seal cast iron pipes in congested urban areas like Boston and New York City. We are on schedule to replace our leak-prone pipe inventory across the US enterprise within the next 20 years.

A challenge we are currently facing that came to the forefront in 2019/20, is significant growth in demand for natural gas across our service area in New York City and Long Island. That growth is expected to continue over the next 10 years due to increased demand from new construction and conversion of oil to natural gas. As a solution to the gas supply issue, we supported the NESE Pipeline project to meet increased demand. When NESE was not approved by New York State, we ceased to connect new customers to gas in order to ensure we could continue to deliver gas to our existing customers safely and reliably. The New York Public Service Commission ultimately ordered us to connect some of those new customers, which we accomplished by increasing use of temporary supply solutions. We are now working with New York State, our stakeholders and our customers to find long-term solutions to gas supply constraints in the region.

In 2019, we experienced an unprecedented gas supply disruption on Aquidneck Island that required temporarily stopping service to about 7,500 customers. This was caused by a reduction in transmission flow coming into our system in Rhode Island. Since then, we have been working hard to learn from the event and have cooperated with a federal investigation and the Division of Public Utilities and Carriers in a summary investigation. The Division's report, released in autumn 2019, reflected National Grid's fundamental commitment to safety and exemplary emergency response. We have already addressed many of the proposed recommendations included in their report, securing additional winter gas supply, expanding our energy efficiency and demand response programmes and improving long-range planning. We now remain focused on securing the ongoing needs of Aquidneck Island and Rhode Island's energy future.

Customer first

As noted in the CEO review, at the end of 2019/20, we identified new ways to put the customer first in the face of the COVID-19 pandemic.

Our unwavering commitment to our customers was demonstrated by a few initiatives designed to make it easier for our customers to do business with us. We converted more customers to paperless billing by improving our paperless capabilities, strengthened our online marketplace where customers can purchase energy efficiency and smart home products, increased the speed at which we verify our customers' identity who call into the customer service line, and improved estimated time of restoration calculations during storms.

Our proactive outage communications and our Interactive Voice Recording upgrades increased our customer satisfaction scores, while storms and challenges with gas shortages in Rhode Island and downstate New York have caused some headwinds. As a result, customer ease has remained relatively flat and improvements in trust have increased slightly.

We continue to work towards quick and efficient storm response to improve these scores. We have improved our restoration efforts over the past decade by developing an emergency response team that works hard to service our customers. The team focuses on forestry, staging crews, materials, advanced analytics and reporting tools, while employing a classification index that anticipates restoration times based on storm types. We demonstrated efficient and successful storm response in April 2020 when 70 mph+ winds caused power outages for over 200,000 customers across all of our jurisdictions.

National Grid has a long history as a leader in economic development, investing in the communities across our territory. We have seen record-breaking economic development grant activity in New York over the past five years. We help our customers evaluate infrastructure needs and improve productivity, efficiency and profitability so that they remain and grow in the region.

The town of Lima, New York, recently experienced a significant economic boost with the expansion of Bristol ID Technologies creating new jobs within this rural community. The Company's electric capital investment grant provided $118,000 to help offset the new electric infrastructure required for this impactful business expansion, resulting in higher-volume production at a reduced cost and more clients.

Grow core business

In September, the Massachusetts Department of Public Utilities (MADPU) approved an electric rate case, which enables us to deliver on important investments in reliability and storm response, provide greater assistance to income-eligible customers and support electric transportation and energy storage policies that are helping drive us towards a clean energy future. The Company had not updated its rates since 2016 and will not file a new rate case for Massachusetts Electric until 2023.

In December, our Rhode Island Gas and Electric Infrastructure, Safety, and Reliability (ISR) plans were filed with the Rhode Island Public Utilities Commission (RIPUC). The plans provide mechanisms to fund maintaining and upgrading the gas and electric distribution systems by replacing aging equipment, addressing load growth, and responding to emergencies. In addition, the Gas ISR plan allows for proactive replacement of leak-prone pipe. Both of these plans were approved by the RIPUC in March 2020.

In the latest gas rate case, filed April 2019 for KEDNY/KEDLI, the Company proposed a suite of demonstration projects to explore low-carbon heating solutions. The solutions are divided into programmes or technologies. The rate case is still underway. Over the past year, we have taken meaningful steps to develop low-carbon heating solutions. In coordination with all New York's gas utilities, we have developed the RNG Interconnection Guideline. RNG is pipeline-compatible, gaseous fuel with lower lifecycle carbon dioxide equivalent emissions than geologic natural gas. The purpose of the guideline is to provide a necessary technical framework that can incorporate RNG into the natural gas distribution network.

Scan here to view the story

Evolve for the future

Over the past few years, the Company has been hard at work decarbonising the transportation sector.

In partnership with the Capital District Transportation Authority, National Grid deployed four electric public buses in Albany, New York. National Grid and the transportation authority will monitor the range, charging timelines, electricity usage and performance of the vehicles throughout its route network. If the demonstration proves to be successful, the Company will work with other transportation authorities to deploy more electric buses across the region.

In upstate New York, National Grid's EV charging programme surpassed its EV charging installation goal. The Company originally planned to complete 56 projects through this programme with an approximate $3 million allocation. However, we have more than tripled that goal with the completion of over 184 projects. Over 40 of the programme's site hosts serve disadvantaged communities.

Looking ahead

In 2018/19, the Company announced the Accelerate Programme, an ambitious, three-year efficiency challenge that set out an aspirational target of a 20% efficiency improvement in operational and capital expenses across the US business by 2020/21. The Accelerate Programme is aimed at improving both the quality and cost-effectiveness of our services to customers. This programme will continue to allow us to find a better way, so we can grow and serve customers long into the future. As we forge ahead into our clean energy future, we continue to identify pathways for deep decarbonisation along with the states we serve, focusing on the power, heat and transportation sectors. As one of the world's largest investor-owned utilities, we will work alongside policymakers to ensure we can deliver clean, safe, reliable and affordable energy to customers today and tomorrow.

National Grid Ventures and other activities

Our NGV and other activities business performed well in 2019/20. We maintained our focus on safety and reliability while developing new projects to support the energy transition.

BritNed availability

98.6%

(2018/19: 98.2%)

Nemo Link availability

96.1%

(2018/19: NA)

IFA availability

91.4%

(2018/19: 93.9%)

Interconnector capacity by 2024

7.8 GW

Statutory operating profit Ⓐ

£237m

(2018/19: £400m)

Underlying operating profit Ⓐ

£242m

(2018/19: £400m)

Adjusted operating profit Ⓐ

£242m

(2018/19: £400m)

Capital investment Ⓐ

£885m

(2018/19: £623m)

Highlights

This section relates to NGV, non-regulated businesses and other commercial operations not included within the business segments.

NGV, which operates separately from our core regulated units, is focused on investment in a broad range of energy businesses that operate in competitive markets across the UK and US. Its portfolio includes electricity interconnectors, LNG storage and regasification, energy metering, large-scale renewable generation and competitive transmission.

Our 'other' activities comprise NGP, the venture investment and innovation arm of National Grid plc, as well as UK property and US non-regulated businesses, which include LNG operations and corporate costs.

In aggregate, the NGV and other segment delivered £237 million of statutory operating profit, £242 million underlying operating profit and accounted for £885 million of continuing investment in 2019/20.

As at 31 March 2020, our LTIFR was 0.05. This is better than our NGV target of 0.08.

Operational performance

Electricity interconnectors: NGV is the leading developer and operator of electricity interconnectors to and from the UK. NGV's operational portfolio currently comprises 4 GW of interconnector capacity.

BritNed is an independent joint venture between National Grid and TenneT, the Dutch transmission system operator. It owns and operates a 1 GW HVDC link between GB and the Netherlands. In 2019/20 BritNed's availability was 98.6%.

The England-France interconnector (IFA) is a 2 GW HVDC link between the French and British transmission systems, with ownership shared between National Grid and Réseau de Transport d'Electricité (RTE). In 2019/20, IFA's availability was 91.4%.

Nemo Link is an independent joint venture between National Grid and Elia, the Belgian transmission system operator. It owns and operates a 1 GW HVDC link between GB and Belgium. Nemo Link's availability was 96.1% in 2019/20.

LNG storage and regasification: Grain LNG is one of three LNG importation facilities in the UK. It operates under long-term take or pay contracts with customers and provides importation services of ship berthing, temporary storage, ship reloading and regasification into the NTS. Utilisation of terminal capacity was 30.8% in 2019/20, up from 18.8% in 2018/19. Grain LNG set a record for the highest single-day gas send-out from a European terminal in November 2019.

Grain LNG's road tanker loading also offers the UK's transport and off-grid industrial sector a more environmentally friendly alternative to diesel or heavy fuel oil. The facility allows tanker operators to load and transport LNG in bulk across the UK via road or rail.

UK metering: National Grid Metering (NGM) provides installation and maintenance services to energy suppliers in the UK's regulated market. It maintains an asset base of around 8.8 million domestic, industrial and commercial meters, down from 9.9 million in 2018/19.

US competitive transmission: NGV is a part-owner of Millennium Pipeline, which provides consumers in the northeastern US with additional natural gas infrastructure to meet growing demand for cleaner and more reliable energy. It is strategically positioned to serve utility and power plant loads across New York State and into New England.

NGV is also a part-owner of New York Transco, which energised three new transmission upgrade projects in New York in 2016 that provide several ongoing benefits, including reducing upstate to downstate transmission congestion to save money for electricity consumers and offering better access to clean energy, and supporting the retirement of traditional power generation. The assets include the Ramapo to Rock Tavern 345 kV Line, Frasers-Coopers Corner 345 kV Line and Staten Island Unbottling.

US battery storage: NGV is a 50-50 joint venture partner with NextEra Energy Resources in two battery energy storage systems on Long Island. These include two 5 MW, 40 MWh battery energy storage systems in East Hampton and Montauk, New York. The batteries have helped decrease emissions and enabled energy peak-shaving during the busy summer months on the eastern end of Long Island.

UK property: National Grid Property deals with the management and regeneration of our brownfield surplus estate in the UK. Our specialist team works with our communities to return these redundant sites back into beneficial use to provide new homes and employment opportunities across the UK.

In 2019/20, we disposed of 34 sites and exchanged contracts on a further five land sales, to facilitate the delivery of thousands of new homes across the UK. Our joint venture with Berkeley Group, called St William Homes, has entered its sixth year and recorded its first profit in 2019/20. Around 7,600 homes are already under construction across London and the South East.

Grow core business

Electricity interconnectors: NGV will grow its interconnector portfolio by 3.8 GW in the next four years, with new subsea power links to France, Norway and Denmark.

Construction continues on the 149-mile (240-kilometre) IFA 2 interconnector. Developed with RTE, the 1 GW subsea cable will connect Great Britain and France. The link is expected to be operational in 2020.

North Sea Link (NSL) will connect Great Britain and Norway. Developed between National Grid and the Norwegian transmission system operator Statnett, NSL will be 447 miles (720 kilometres). The 1.4 GW link is expected to be operational in 2021/22.

Preliminary construction works have now also commenced on the Viking Link interconnector. Developed together with Danish transmission system operator Energinet, Viking Link will be a 1.4 GW 472-mile (760-kilometre) long subsea link connecting Great Britain and Denmark.

NGV will have 7.8 GW of operational interconnector capacity when Viking Link becomes operational in 2023/24.

US large-scale renewables: NGV completed its acquisition of Geronimo, a leading wind and solar developer in North America based in Minneapolis, in July 2019. Since the acquisition, National Grid has announced the commercial operation of its 200 MW Crocker Wind Farm in South Dakota, along with the signing of a Power Purchase Agreement with Basin Electric Power Cooperative for its 128 MW Wild Springs solar project, also in South Dakota. These developments, together with further activities that build on their strong pipeline of future renewable energy projects, complement the 379 MW portfolio of operational wind and solar assets which are held in joint venture with Washington State Investment Board and operated by National Grid.

US competitive transmission: In April 2019, New York Transco's New York Energy Solution (NYES) was selected by the New York Independent System Operator to provide transmission upgrades that will relieve congestion of New York's bulk electric power system, while enhancing reliability and facilitating upstate clean energy resources to the downstate demand centers. The upgrades will be taking place on an existing 54.5-mile (88-kilometre) utility corridor and on utility-owned land. New York Transco is well into the consenting and permitting process for the NYES project, which remains on track for a late 2023 service date. NGV expects to participate in additional public policy electric transmission projects in New York that will be necessary to accommodate increasing amounts of renewable energy, in particular offshore wind.

UK property: St William continues to grow and we now expect the joint venture to deliver around 20,000 new homes across London and the South East. A further four sites have been negotiated into the joint venture during 2019/20 with further sites expected to be negotiated into the joint venture during 2020/21. In the next 12 months, we expect our St William Homes joint venture to complete construction of over 100 new homes across London.

Scan here to view the story

National Grid Property entered into a new joint venture agreement with Places for People, one of the largest regeneration, development and property management companies in the UK and a registered provider of affordable housing. As part of the venture, we aim to build up to 500 new homes on the first three sites, and delivering 10 sites into the joint venture over the next three years.

Evolve for the future

UK Carbon Capture, Utilisation & Storage (CCUS): In 2019 NGV launched Zero Carbon Humber, a consortium looking to develop the world's first zero-carbon industrial cluster in the UK's Humber region by 2040. Such a project would protect 55,000 jobs in the region and establish the UK as a world leader in CCUS technology.

US offshore wind: Ørsted and Eversource, with support from NGV, are developing the Revolution Wind offshore wind farm which was awarded competitive tenders to supply electricity to distribution utilities in Rhode Island and Connecticut. The proposed 704 MW wind farm will be located over 15 miles (24 kilometres) south of the Rhode Island and Massachusetts coasts. The project is expected to be operational by 2023, pending permits and final investment decisions. NGV has the option to acquire the transmission connection between Revolution Wind and the onshore electric transmission network.

National Grid Partners: NGP is the venture investment and innovation arm of National Grid. NGP's portfolio at the close of the fiscal year comprises 21 companies at a fair value of £134 million.

Our stakeholders

As the Board of Directors, we prioritise our responsibilities to our different but interrelated stakeholder groups and wider society. We endeavour to ascertain the interests of our stakeholders and reflect them in the decisions that we make. We recognise that in balancing those different perspectives, it isn't always possible to achieve each stakeholder's preferred outcome.

You can find out more about our key stakeholders and their interests, how we engaged with them and how this influenced decision-making in our 'Section 172(1) Statement' that follows. For more details on how our Board operates, including the matters it discussed and debated during the year, see pages 64 – 87.

How we create value for our stakeholders

The long-term success of our business is critically dependent on the way we work with a large number of important stakeholders. We aim to create value for our stakeholders every day by maintaining levels of business conduct that are governed by our values. We continue doing so as the energy landscape changes.

How our Board keeps up to date with stakeholder interests

Reporting and monitoring: Our Company-wide engagement collates information on stakeholder interests that informs business-level decisions, with an overview of developments being reported on a regular basis to the Board or a Board Committee. In some cases, this will be through an annual or more frequent round-up for the business area interfacing with the relevant stakeholder (this is generally the case for customers and suppliers).

Direct engagement: In other instances, one or more members of the Board may be involved directly in the engagement (such as shareholder or other investor networking). In each case, it is important for all members of the Board to gain sufficient understanding of the issues relating to every stakeholder, so their views are taken into account in Board discussions. The table below sets out our focus on the key relationships and shows how the relevant stakeholder engagement is reported up to the Board or Board Committees to help inform decisions made by Directors.

We have provided some examples of how particular engagement outcomes were considered by the Board below, noting that these examples are not exhaustive in summarising all our stakeholder considerations. Within each example, when outlining how the Board considered the impact on a particular stakeholder group, we also list the broader range of stakeholders the Board considered as part of its discussions.

We considered the interests of our stakeholders in reviewing matters such as our liquidity and financial arrangements, our dividend, operational matters, for example resolving the gas supply issues in New York City and Long Island and developing our business plans. You can also read more about how the Board showed regard for the interests of various stakeholder groups through a worked example of its response to the COVID-19 pandemic on page 65.

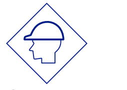
This section, How we create value for our stakeholders, serves as our section 172 (1) statement.

Stakeholder group	How we engage and communicate	How stakeholder interests have influenced decision-making and the execution of our strategy
Our investors – individual shareholders	**Company engagement** The Company Secretariat team, together with the Company's Registrar, engage with our retail shareholders throughout the year to deal with enquiries relating to shareholdings. **Board-level engagement** Updates from Company-level engagement with shareholders are provided to the Board as appropriate. The AGM and shareholder networking programme provide the Board with valuable opportunities to engage with our shareholders. All members of the Board attended the 2019 AGM to discuss proposals and answer shareholder questions as necessary. The shareholder networking programme in 2019 included presentations, and a visit to our Gas National Control Centre in Warwick where shareholder attendees had direct one-to-one contact with senior management, Board members and engineers across a two-day period. During the shareholder networking programme and 2019 AGM, the Board members listened and responded to views of our shareholders. Any resulting actions were fed back to the businesses as necessary.	We recognise the importance of keeping an engaged shareholder base so that we can closely monitor their interests. As such, the Company Secretariat team, in collaboration with our Registrar, implemented an asset reunification programme in January 2020. This exercise provided us with an opportunity to re-unite as many shareholders as possible with their unclaimed assets. The programme will continue throughout 2020 and so far, as at 30 May 2020, £13 million was reunited with the respective shareholders and we have re-engaged 8,372 shareholders on the register. Ongoing engagement between our investors and the political sub-group of our Executive Committee highlighted concerns around the UK Labour Party's policy for state ownership of the UK operating companies. The Board, in line with its fiduciary duty to its shareholders, took steps to protect the value of shareholdings in the event of UK state ownership. **Views of other stakeholder groups considered** Customers, Regulators, Communities and governments, Our colleagues, Suppliers
 Our investors – institutional (equity investors and debt investors)	**Company engagement** Over the year, the Investor Relations team held 436 investor meetings across 10 countries and 26 cities: met with over 400 institutions, representing 49.9% of our share register; and hosted three site visits, offering investors the opportunity to meet divisional management and view our assets. Our engagement programme focuses on updating investors on the regulatory and operational progress in our UK, US and NGV businesses, as well as the growth opportunities available to us. During the year, the Debt Investor Relations team in Treasury held meetings between senior Group Treasury representatives and debt investors in the UK, Continental Europe and the US. Topics covered included our financial results, US rate case filings and bond issuance. The team also met with debt investors at various conferences over the course of the year. **Board-level engagement** The Board received regular feedback on investor perceptions and opinions about the Company and as part of our engagement programme we provide the opportunity for our current and potential investors to meet with the Chairman, the Executive Committee and operational management. Additionally, the Board received the results of an independent audit of investor perceptions where interviews were carried out with investors to establish their views on the performance of the business and management. The findings and recommendations of the audit were then reviewed by the Board.	The investor perception study highlighted that senior management was held in high regard and that the ability to maintain operational excellence is taken for granted. The survey further noted that there was an opportunity for the Company to raise the profile of the role it is playing in the energy transition and also emphasised the strategic benefits of the combination of the Company's UK and US assets. Our investors also expect that we stand for something far more than providing economic returns. To facilitate the change towards net zero, in January 2020, we also announced the launch of our first green bond, issued by National Grid Electricity Transmission plc. The €500 million proceeds from the bond issuance will finance electricity transmission projects with environmental benefits. An ESG data book was published in the year to measure the overall performance of the Company in operating responsibly, while creating positive social impact. In preparing this data book, we held discussions with investors to identify the most commonly used ESG data providers, and reviewed these questionnaires to determine the most relevant data to communicate to investors. During this process over 400 questions were reviewed. Subsequently, these were consolidated and refined down to those included in this document. **Views of other stakeholder groups considered** Regulators, Communities and governments, Our colleagues

Our stakeholders continued

How we create value for our stakeholders continued

Stakeholder group	How we engage and communicate	How stakeholder interests have influenced decision-making and the execution of our strategy
Our colleagues	**Company engagement** Engagement with our people takes many forms, including reviewing and implementing actions from the EES results; Employee Resource Group (ERG) sessions, which provide the opportunity for ERG chairs and leads to discuss the importance and impact of their group and provide valuable feedback on inclusion and diversity related topics; meetings with trade union representatives, and leadership offsites located at a range of different business locations in the UK and US. **Board-level engagement** The annual EES provides senior leaders and the Executive Committee and Board with an insight into how our employees are feeling about the Company and its direction. Action plans are developed to progress any areas of improvements that are identified. The Board also conducts site visits and meets with a wide range of employees through our employee engagement programme: you can read more on this on page 73. The Executive Committee also received regular talent updates and considered the remuneration structure for senior management.	The topics discussed and actions from Board and Executive Committee's engagement with our people can be found on page 73. The Board was pleased to see a continued improving trend in overall employee engagement through the 2020 EES results. The introduction of the Leadership Index has allowed leaders to gain feedback from their direct reports on areas where their personal actions, style and behaviours can have an immediate impact on enablement and engagement. The Leadership Index will be a key focus area for 2019/20.
Our regulators	**Company engagement** **UK** – regular interactions with Ofgem and the Health and Safety Executive. The Company also organises stakeholder fora and consultations with stakeholders, including members of the public, our suppliers and customers around specific projects and proposed business plan submissions for RIIO-2. We work with other networks and organisations outside of the energy industry to identify good practice. **US** – regular interface with both federal and state regulators and customers on an ongoing basis, as well as the pre-filing stakeholder engagement programme in the build-up to and during any rate case process. Specific engagement was undertaken regarding the decarbonisation pathways and the Niagara Mohawk Power Corporation advanced metering infrastructure. **Board-level engagement** The Board met with the Chair, CEO and incoming CEO of Ofgem in November 2019. The topics of conversation included our net zero ambition, with a focus on practical solutions to move the agenda forward. The discussions also covered RIIO-2. The outcomes of engagement activities are reported to the appropriate forum and ultimately to the Executive Committee and Board. In the US, any rate case engagement is reported up to the Executive Committee and the ordering of Executive Committee and Board as appropriate. The Board met with the Governor of Massachusetts and a member of the Governor's office in March 2019. Recognising the severity of the adverse reaction of various stakeholders to the gas moratorium that was enforced by the Company in downstate New York, the Board commissioned two external reviews to understand how the US business had made the original decision. Long-term solutions are being implemented.	In the UK, discussions with our regulators have contributed to the productive outcome of key business issues such as: • the 9 August 2019 power outage: the Company had regular engagement with Ofgem and the UK government, and the Board regularly discussed the outcome of investigations and reports focused on this, including the response to Ofgem on the findings from the investigation. In January 2020, the Board welcomed Ofgem's report on this incident which confirmed that our actions did not cause the outage. • the future of our ESO business, which will be reviewed by Ofgem following legal separation last year. • RIIO-2 business plans: for the development of the RIIO-2 business plans, we have followed Ofgem's enhanced stakeholder engagement process, which is based on greater engagement with our industry and end consumers to prioritise their needs in our RIIO-2 business plans. Three independent groups were established to provide challenge throughout this process – two independently Chaired User Groups, (one for the ESO and one for the transmission businesses) and an Ofgem Challenge Group. Regular discussions were held at the Executive Committee and the Board on progress with stakeholder engagement, the development of the RIIO-2 business plans and on interactions with the challenge groups. On invitation, the Chairs of the Chaired Independent User Groups met with the Board in 2019. Following a period of engagement with Ofgem, we submitted our final business plans for RIIO-2 in December 2019. Thereafter, engagement has continued with Ofgem evidencing various aspects of the Company's RIIO-2 business plans such as the formal question and answer process to explore our RIIO-2 business plan submission ahead of its draft and final determinations later in 2020. In the US we refined the Company's regulatory strategy and business planning for rate cases and other US regulatory priorities. The Company's rate case pre-filing stakeholder engagement programme has become a major contributor to the Company's successful rate case outcomes. The external reviews conducted on the gas moratorium have highlighted lessons and recommendations which are already being implemented. In the short term, all affected customers have been contacted and plans are in place to make sure that they are connected to a gas supply in the near future. Medium- to long-term solutions that are in the best interests of our customers and regulators continue to be progressed. The Board is closely monitoring the output of these developments. **Views of other stakeholder groups considered** Customers, Investors, Communities and governments, Suppliers, Our colleagues.

Stakeholder group	How we engage and communicate	How stakeholder interests have influenced decision-making and the execution of our strategy
Communities and governments	**Company engagement** Regular discussions and satisfaction surveys to journalists and government. Policy and public affairs and in house US government relations teams develop, grow and leverage the Company's relationships with key politicians, officials, wider stakeholders and influencers to ensure the Company is connected with legislation and government policy. Engagement with local communities in the form of consultations during construction phases of projects and work with environmental education centres. We liaise with land owners and wider communities where the Company has assets and we have established dedicated teams to manage relationships. **Board-level engagement** During the year, the Board received regular updates on the potential impact of renationalisation which had been included as a policy in the Labour Party manifesto ahead of the December 2019 UK General Election. Regular updates were also received in relation to Brexit. The downstate New York gas moratorium and feedback from engagement with the Governor of New York formed an important part of the Board's agenda for the US business.	The Board agenda continued to be strongly focused on community and governmental issues this year such as: • the December 2019 UK General Election and the resulting exit from the European Union on 31 January 2020. We have continued to work with our UK regulators and the UK government to ensure that free trade agreements are negotiated for our interconnectors so that consumers continue to reap their benefits. We have also looked after the interests of our European staff and sought to ensure continued co-operation in energy balancing across Europe in the future. • in the US, the impact on communities following the gas moratorium in downstate New York was considered in depth by the Board and the Safety, Environment and Health Committee. We progressed dialogue with the New York State Governor and enacted settlement agreements and are now developing long-term solutions. • the clean energy agenda: UK and US governments and communities are strongly focused on carbon reduction activities. To focus on meeting our net zero commitment and embedding sustainability into our culture, we applied a sustainability lens across our operations and challenged our businesses to commit to challenging targets. In the US, at the state level, we have strong alignment with policymakers and regulators who, like us, are committed to a cleaner energy agenda. In the UK, we continue to work to maintain access for customers to european energy that is affordable and renewable, and the Board also approved the Company's announcement of its target to become carbon neutral by 2050. **Views of other stakeholder groups considered** Customers, Investors, Regulators, Suppliers, Our colleagues
Our customers	**Company engagement** **UK customer programme** – we use several channels such as operational fora, liaison meetings, market research, stakeholder events and interactive customer listening sessions to engage with our customers. We have in place a robust governance structure to ensure our engagements and insights are shared at all levels. This includes a strategic meeting accountable for customer and stakeholder experience across the UK core business. It is chaired by our UK Executive Director and attended by the UK Executive Committee members on a quarterly basis. To support this, we have a committee made up of senior leaders from across the UK business. This governance is designed to ensure our pipeline of work addresses customer needs and continuously raises the bar. We also ensure customer experience remains one of our top priorities by measuring and tracking progress against our customer experience strategy throughout the Company. **US customer team** – collects and communicates 'voice of customer' feedback throughout the business, gathered via customer surveys on a tracking and ad hoc basis to measure customer sentiment of residential, commercial and wholesale customers. An online community of 6,000 residential customers enhances insight with fast and continuous feedback. We are also leveraging design to inform customer experience solutions, process changes and product development. **Board-level engagement** In the year, the Board received updates on both the UK and US customer strategies. Bi-annual reports were also submitted to the Board from the UK, US and NGV businesses.	In the UK, feedback received through our stakeholder-led RIIO-2 business plan provided an understanding on how satisfied our customers are with the service we provide. Their views on the outputs we should provide during RIIO-2, how these should be delivered and the effect on their bills, were considered by the Board. In the US, we have incorporated 'voice of the customer' in Executive Committee and Board papers and received feedback to support our five new strategic imperatives which will guide our customer focus. The Executive Committee and Board also received updates on the US KEDNY/KEDLI and Niagara Mohawk rate case filings. **Views of other stakeholder groups considered** Investors, Regulators, Our colleagues, Communities and government
 **Our suppliers**	**Company engagement** Strategic relationship meetings are conducted regularly between suppliers and the procurement team. We work closely with our suppliers and peers to build on our knowledge and promote best practice in the industry to combat issues such as climate change. **Board-level engagement** Bi-annual reports relating to our suppliers were submitted to the Executive Committee and annual reports to the Board.	In collaboration with our suppliers, our focus is on delivering low-carbon and sustainable schemes for our projects. We established major contracts that will support our role in accelerating the clean energy transition. For example: • the Board were updated on the six-year, £400 million contract with Hochtief-Murphy Joint Venture, who will deliver the tunnelling and shaft work for the London Power Tunnels 2 project; and • the Board received an update on the chosen supplier, Balfour Beatty, who had been chosen to be the civil works supplier for the Company's interconnector to Denmark. The four-year, £90 million contract will deliver the British onshore civils works for the project. **Views of other stakeholder groups considered** Investors, Regulators, Communities and government, Customers

Our commitment to being a responsible business

In 2019, National Grid conducted a comprehensive review of where we can create the most positive impact on society. The resulting principles of responsibility are being embedded to inform everything we do as a business.

Responsibility at National Grid

Our purpose is to "Bring Energy to Life" and we do this through the delivery of the electricity and gas that powers our customers and communities; safely, reliably, and efficiently. But we also have an important role as a responsible citizen in society as a whole, in our communities, and as a responsible employer.

To further this ambition, during 2019/20 we applied the lens of being a purpose-led organisation, including the principles of an ESG (Environmental, Social and Governance) framework, to review and adapt the way we manage our business responsibly, looking at everything from our strategic investment process, to our role in the community, to our procurement processes and policies. This brings together, and enhances, our focus on the environment, people and communities that have been at the core of our approach to responsible business for many years.

We have committed to embedding the following five key elements of being a responsible business into our strategy and goals. These are areas where the Company can create maximum total societal impact: the environment, our governance, our colleagues, the communities we serve and operate within, and the economy.

This approach has informed and guided our response to the COVID-19 crisis, with a focus on caring for our colleagues, supporting the communities and customers we serve, and helping protect and restore the economies we operate within.

Our approach to reporting

This section contains information relating to the key focus areas that are considered material to shareholders, as identified by our internal review of total societal impact.

We have rigorous policies in place that support our approach to corporate responsibility and we report on a number of non-financial performance measures relating to these policies.

Our principles of responsible business

Our communities

We are committed to delivering sustainable energy safely, reliably and affordably for the communities we serve. In 2019 we recognised the importance of ensuring that our communities enjoy the benefits of the clean energy transition and that no one should be left behind in delivering those benefits.

These shifts in our sector will require investment. We are committed to working with the communities we serve to help them meet, or exceed, their overall climate and carbon ambitions, and we will look to do so in an affordable way. As we develop long-term affordability targets, we will ensure that National Grid's cost to our customers is reported transparently on an annual basis.

As well as affordability, the principle of fairness is also important. We will play our role in ensuring that no-one is left behind in the transition to clean energy, and that the associated benefits are enjoyed by all. A fully decarbonised transportation infrastructure, for example, should be accessible by everyone across the communities we serve.

Finally, we embrace our responsibility to maintaining the delivery of energy to the communities we serve, safely and reliably.

Engaging with our communities

We regularly seek feedback from our customers to find out what they think of us and the services we provide, and take the appropriate action to improve and exceed customer satisfaction. You can read more about our customer satisfaction performance on page 18.

Supporting communities to thrive

Responsibility in our communities means safely maintaining the resilient energy systems society expects and has become accustomed to, as well as ensuring that our economic and social role in the community has the greatest possible positive impact. That's why we partner with charity organisations and encourage and enable our employees to volunteer to work with them. In early 2020 we launched a Company-wide community investment strategy to ensure that our programmes enable skills development with a focus on lower-income communities. These programmes are intended to create employment opportunities in the energy sector, related to the clean energy transition. We are committed to tracking programme participants from initial interaction all the way through to eventual employment either at National Grid, our partners, suppliers or other organisations involved in the challenge of meeting net zero. Our goal is to create 45,000 jobs across the US and UK through this new initiative.

"In early 2020 we launched a Company-wide community investment strategy to ensure that our programmes enable skills development with a focus on lower-income communities."

45,000

Jobs to be created across the UK and US to support lower-income communities

£47m

(2018/19: £54m)

Contribution of our corporate responsibility work

Part of our responsibility is to serve society fairly and affordably. In the US we already care for vulnerable customers with low-income programmes, bill discounts and free energy efficiency advice. In response to the COVID-19 crisis, we have expanded customer support, paused late payment collections activities, and placed a freeze on related service cutoffs.

In the UK, National Grid established a £150 million Warm Homes Fund. This is the largest private sector investment in energy efficiency ever made in the UK, and is designed to support local authorities, registered social landlords and partnerships to help approximately 50,000 households suffering from fuel poverty. Protecting vulnerable customers remains a key priority as we seek to ensure that no-one gets left behind in the transition. And by engaging with customers to reduce their energy usage, we can also help them reduce their carbon emissions, contributing to the overall decarbonisation of the economy.

Reliability and resilience are part of our regulatory duty, but also our social contract. There isn't a choice between a clean energy system and a reliable one. Due to the effects of climate change, we expect our network will need to be more prepared to recover from extreme weather events, and we are committed to ensuring the reliability of supply, as well as playing a leading role in disaster recovery.

Case study – UK

The Hinkley Connection Project

Our project will connect the UK's first nuclear power station for a generation; introduce T-pylons to our network; and release low-carbon and renewable energy from the south west. It's a positive and exciting future. Getting there, however, means impacting communities with construction for seven years.

In return, we're helping local people create a future of their own and are investing in the local economy via adult skills and employment. Working with stakeholders we have created bespoke training and support for the long-term unemployed. Our aim is to help more than 300 long-term unemployed into work; so far, 49% of those under training have gained employment.

We listened to government agencies, local authorities, job centres and charities – as well as our customer, EDF. Their feedback helped us design a course that responds to local labour markets and, with retention a key challenge, encourages trainees to complete it. Based on stakeholder feedback, we emphasised traffic management training.

Stakeholders challenged us to focus training in areas most affected by construction and we are now revisiting our approach.

Through our commitment to benefit the communities in which we operate, we are connecting with people, as well as low-carbon generation, leaving a legacy of job creation and upskilling.

Case study – US

Ideal Dairy Farm, New York

The New York State Energy Research and Development Authority and National Grid work collaboratively to deliver technical and financial resources to the agriculture community across New York State. We are pleased Ideal Dairy, LLC has been a beneficiary of this scheme.

Energy costs are a significant expense for a farm. Expansion has always been part of Ideal Dairy farm. Recognising the importance of greater economies of scale, Ideal Dairy decided to proceed with a multi-million dollar expansion project. National Grid provided financial incentives for the energy-efficient equipment as well as an economic development grant for a new commercial underground three-phase 1,600 amp service to support this expansion. The new well-lit parlour and barns with efficient ventilation systems keep the areas bright and comfortable for the cows and workers. This optimises production.

Ideal Dairy has grown from 1,230 cows in 2016 to 2,300 cows while doubling production to 22,000 gallons of milk a day through efficiencies. With the success of this project, they added a freestall barn in 2019 and plan for another one in 2021. They anticipate this will enable them to grow to 3,000 cows. Through this expansion, Ideal Dairy is improving the environment by reducing their energy consumption, and keeping their workers satisfied, whilst serving their community.

Our commitment to being a responsible business continued

Environmental: The path to net zero

We are embracing our role at the heart of the energy system and understand the critical role we play in tackling climate change. The markets in which we operate have announced ambitious carbon reduction targets and further legislative actions are anticipated in all our markets. These targets will be challenging and we embrace the opportunity to support the delivery of these goals.

While the biggest impact we can have is supporting the economy-wide clean energy transition, it is important we also reduce our own direct impact on the environment.

In 2012, we developed our environmental sustainability strategy, "Our Contribution", to set a framework for embedding sustainable decision-making into our business operations. We focused on three key areas – climate change, responsible use of natural resources and caring for the natural environment – and set targets to deliver progress through the end of 2020. In 2019/20, we have continued to advance our work.

We continue to focus on carbon reduction being factored into both our major investment decisions and our tender process for major construction projects. These actions encourage not only our teams, but also our supply chain to deliver lower-carbon solutions. Supply chain emissions are classified as Scope 3 emissions and, as such, the tender carbon weighting will help us reduce our Scope 3 emissions.

We also have programmes in place to ensure that we are making improvements to the natural environment. One such programme focuses us on finding better ways to deliver an increase in environmental benefits on non-operational land, while working with local partners and communities. Work under this programme prioritises local environmental benefits, for example increasing pollination, community access to green space and bio-diversity (see the Pollinator Meadow Project case study below).

> "In 2019 we furthered our commitment to combating climate change with the announcement that we will aim to achieve net zero for our direct emissions by 2050."

Our Contribution Progress Highlights

Metric	End of Calendar Year 2020 Target	Progress through 2019/20
Reduce Scope 1 and 2 GHG Emissions	45% reduction	70% reduction
Send zero office waste to landfill	100% from major sites	95%
Reuse or recycle recovered assets	100% by 2020	100%
Recognise and enhance the value of our natural assets	50 sites	50 sites with 8 additional sites in progress
Carbon pricing	Implement carbon pricing in major investment decisions	On track to complete in major business areas by end of 2020

Case study – US
Pollinator Meadow Project – Pawtucket, Rhode Island

Our electric transmission corridors must be regularly maintained to prevent vegetation from endangering the wires. We see this as an opportunity to practise environmental stewardship.

As meadows are becoming rare as more New England pastures grow back into forests, transmission line corridors are increasingly important as low growing-shrub and meadow habitat. To assess the viability and practicality of incorporating wildflower plantings into our vegetation management program, we implemented a pollinator pilot project in Pawtucket, Rhode Island. During this pilot, we converted almost two acres of transmission line corridor to wildflower meadow. The project was a success and the flowers continue to flourish. We will continue to monitor the project and are committed to creating at least one new pollinator site in the US per year, over the next five years.

Projects like these not only help the environment, but also allow us to build connections with local environmental organisations and customers and increase public understanding of our vegetation management programmes.

Case study – UK
Chairman's Awards: Save Evie's Whale

The annual Chairman's Awards are a demonstration of how we use governance to bring our purpose, vision and values and the role we play in society to life. Every year more than 150 teams submit entries that show how the work we do at National Grid contributes positively to our people, our customers and communities now and in the future.

In 2019 the "Save Evie's Whale" campaign was chosen as the winner of the Chairman's Awards at an event in New York. The campaign was inspired by Evie O'Grady, the seven-year-old daughter of one of our employees, who made a drawing of a whale – because she was so upset about the number of whales dying due to plastic pollution in our oceans. Evie's drawing and her story became an inspiration to encourage employees to think about the environmental impact of single-use plastics. In June 2019 we made a commitment to remove single-use plastics from sale at our UK offices by 2020.

The "Save Evie's Whale" campaign brought that commitment to life and provided a platform to engage with employees and suppliers about reusable cups and other materials, and effective recycling behaviours. Piloted in our Warwick UK offices, with the campaign we have successfully eliminated plastic straws and plastic cutlery and eliminated over 46,000 polystyrene containers and 22,000 plastic containers going into general waste annually. The programme also created significant cost savings by reducing the use of consumables, improving recycling rates, and cutting the volume of waste generated. "Save Evie's Whale" has since been rolled out in offices across the UK, and also at local schools and community groups, inspiring behaviour change in society. Over 4 million pieces of single-use plastic have so far been eliminated.

4 million+
pieces of single-use plastic eliminated

Building on earlier actions to manage office waste, we launched waste reduction campaigns across our offices in the UK and the US. In the UK we have eliminated over four million items of single-use plastics, mainly related to food and beverages (see the Save Evie's Whale case study on the previous page). In 2019, we also diverted 95% of office waste from our targeted sites away from landfill, and are aiming to complete work at the remaining sites in 2020.

Our Further Commitments to Reducing our Impact and Achieving Net Zero

As we work to meet our 2020 'Our Contribution' commitments, we will continue to reduce our carbon footprint, maximise the value of our resources and enhance the environment; however, we recognise that we can do more to combat climate change and improve the environment. To accomplish this, as part of our Responsible Business review, we are developing new metrics and targets to further challenge us and allow for monitoring and evaluating our performance. These will be announced later this year.

The cornerstone of our revised targets is our commitment to achieve net zero for our scope 1 and 2 greenhouse gas emissions by 2050 that was announced in November 2019. This replaces our previous target of an 80% reduction by 2050 to better align with our ambitions. We also set more ambitious interim targets for our emissions reductions of 80% by 2030 and 90% by 2040.

To achieve these targets, we will also progress our emission reductions by continuing, and accelerating, current emissions reduction programmes, and by looking for new, innovative ways to reduce our emissions. We are reducing leakage from our gas pipelines through our gas mains replacement programmes and through innovative robotic pipe sealing techniques. We are piloting the use of parts of our gas network for the distribution of hydrogen and RNG. We are working with suppliers to evaluate potential alternatives to SF_6.

Energy efficiency is one of our key focus areas. We have ongoing energy reduction targets in our US and UK core office facilities. As an example of our progress, in the UK, we have exceeded our target by reducing energy consumption by 11% from a 2015/16 baseline. In the US, we performed whole-building LED replacements at two of our key locations and expect to yield annual site electricity savings of 6% and 17%. We are also working to reduce our transport energy use through the purchase of alternative fuel fleet vehicles and employee programmes promoting the purchase/lease of electric vehicles.

For the US and UK, our operational energy use is 2,330 GWh, our facilities energy use is 285 GWh, our transport energy use is 405 GWh and electricity energy losses from our networks are 12,311 GWh. US generation is also responsible for 12,892 GWh. In these figures, facilities energy use is defined as the energy used in powering and heating our offices, whilst operational energy accounts for energy used in fulfilling our primary business. Transport covers business travel, including our own fleet, hire cars and personal car use for business.

Understanding National Grid's greenhouse gas emissions

We monitor and report our greenhouse gas emissions in accordance with the World Resources Institute and World Business Council on Sustainable Development Greenhouse Gas Protocol.

Scope 1: Direct Emissions from the operational activities of National Grid.

Scope 2: Indirect Emissions from gas and electricity purchased and used by National Grid.

Scope 3: Other Indirect Emissions from activities occurring from sources that National Grid does not own or control.

Our main sources of greenhouse gas emissions are shown below.

We have committed to achieving net zero emissions for our Scope 1 and 2 emissions by 2050. Most of our Scope 3 emissions are emitted from two key business activities: the sale of gas and electricity to customers in the US (82%) and the purchase of goods and services (18%). We are working with our customers and our supply chain to reduce Scope 3 emissions and assessing appropriate targets for our Scope 3 emissions to align with pathways to 2050 targets.

Key:

◆ included in our net zero target

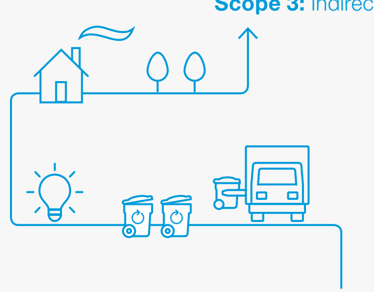
Greenhouse gas emissions

Scope 2: Indirect

Scope 3: Indirect

Scope 1: Direct

Scope 3: Indirect



Upstream

Scope 2 ◆
- Line losses from our electricity transmission and distribution lines
- Energy purchased for use at our facilities
- Use of electric drive compressors in our gas business

Scope 3
- Purchased goods and services
- Business travel
- Employee commuting

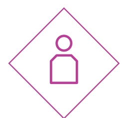
Our operations

Scope 1 ◆
- LIPA electricity generation
- Leaks and venting from our gas transmission and distribution systems
- SF_6 leaks from our electric equipment
- Fleet vehicle use
- Gas-fired compressor use

Downstream

Scope 3
- Use of 'sold product' or emissions from our customers' use of the gas and electricity we purchase on their behalf
- Waste management

Our commitment to being a responsible business continued



Our colleagues

We employ around 23,000 people, located both in the UK and the US. Our people are the lifeblood of National Grid. Their safety and wellbeing are our primary concern and a priority for every one of us at National Grid – they underpin everything we do. Any safety incident is one too many and we continually strive to improve safety for our employees. Our ambition is to ensure that all of our employees and contractors are able to go home safely at the end of each and every day.

Our COVID-19 response started with supporting our people to work safely from home or as required in the field for essential activity, and to support their physical and mental health needs wherever they are. We have also facilitated volunteering opportunities during the crisis, and increased paid-time available for volunteerism.

Preparing our colleagues for the clean energy transition

Responsibility towards our people also means training them and (re)skilling them for the evolving needs of our businesses. The necessary skills and profiles of our employees and those at our partners and competitors are changing. We need forward-thinking, creative minds to help meet the challenges we face in connecting people to the energy they use. We anticipate a number of areas of increased focus in the future, such as data analytics to manage more complex grid flows and the customer interactions needed to balance supply and demand. We will also need skills to design and implement new energy technologies, such as renewables and heat pumps. Technicians will have skills to install and maintain energy efficiency measures and technologies as well as skills to support the deployment and enablement of new heating technologies such as hydrogen and change management skills to bring society along in the green transition. In 2019 National Grid commissioned a "Net Zero Skills Report" to identify the jobs needed to help society achieve net zero and provide a basis for engagement with stakeholders working on the challenge alongside us.

Investing in our colleagues

Our people and our communities will benefit from the time and financial investments we are making in ensuring that the future skills needed for National Grid, and the broader energy industry, are available. We are developing national and local skills development partnerships and initiatives, with a focus on the lower-income communities we serve. We aim to give access to 45,000 young people from these communities over the next five years, tracking their progress from first interaction right through to employment at National Grid, our partners and suppliers, or adjacent companies and industries. Our employees are expected to play a critical role in these programmes.

Keeping our colleagues safe

The safety of all our employees, contractors and the general public is of prime importance to us. We measure the safety of our employees and contractors and this is reflected in our KPIs, shown on page 20. To ensure we maintain our high standards of safety performance, we have effective policies, procedures and training in place so we can continue to perform at the level we and our stakeholders expect.

Delivering energy every second of every day is critical to the functioning of the economies and communities we serve. The reliability of our energy networks is one of the highest priorities after safety. Our networks continue to provide reliability running at more than 99.9% availability in both the UK and US. You can read more about this on page 19, and find out how we manage our operational risks on pages 22 – 25.

Engaging with our colleagues

Through a third-party partner, we carry out an annual EES to measure engagement levels and to help us address areas employees believe we need to improve. Employee engagement forms one of our KPIs – you can read more about this and our performance on page 20.

> **"We create an environment in which our employees can make a positive contribution, develop their careers and reach their full potential."**

Employee engagement score
77
(2018/19: 73)

The Times
Top 50
Employers for women

Living wage

In the UK, we are accredited by the Living Wage Foundation. Our commitment to our direct employees extends to our contractors and the work they do on behalf of National Grid. We believe that everyone should be appropriately rewarded for their time and effort. We also go above the Living Wage requirements and voluntarily pay our trainees the Living Wage.

We undertake a Living Wage review each year to ensure continued alignment. We also increase individual salaries as required.

Our culture

The culture we strive for stems from embracing our values: every day we do the right thing, find a better way and make it happen. You can read more about our values on page 12. We also know that building sufficient capability and leadership capacity (including effective succession planning) is an important factor in delivering our vision and strategy. You can read more about how we are mitigating the risks in this area on pages 22 – 25.

Health and wellbeing

We take a proactive, risk-based approach to managing health and wellbeing at National Grid. We continue to focus our efforts on creating sustainable wellbeing behaviour change within our workforce. We do this mainly through education and training and by managing our key wellbeing risks.

Our wellbeing programme focuses on musculoskeletal injury prevention and mitigation, chronic disease prevention, support for a healthy lifestyle and mental wellbeing. We engaged in mental health awareness week focusing on tools to support managers and employees dealing with mental health and wellbeing. The training has been well attended. We supported World Mental Health Day to focus on suicide prevention and encouraging employees to talk and help remove stigma. In 2019, the UK and NGV businesses signed up to the Mental Health at Work Commitment focusing on six key commitments which are implemented and monitored through the Thriving at Work standard. In the US, we are tackling musculoskeletal and soft tissue injuries through preventive athletic training programmes to encourage stretching and flexing before undertaking manual tasks. In 2019, the US launched a Fatigue Risk Management System, with essential training for employees and supervisors to identify and mitigate fatigue risk in each area of Operations.

Gender pay gap

We review gender and ethnicity pay gaps annually in both the UK and US and although we are broadly comfortable with our performance, we continue to strive to recruit and develop more women and ethnic minorities. For more information about our UK gender pay, visit our website at: www.nationalgrid.com/careers/understanding-our-uk-gender-pay-gap

Promoting an inclusive and diverse workforce

National Grid is dedicated to building a workforce which is representative of the communities we serve, in all aspects of diversity. We also continue to provide an inclusive culture across each stage of our colleague journey.

Our inclusion and diversity policies demonstrate our commitment to providing an inclusive, equal and fair working environment by:

- driving inclusion and promoting equal opportunities for all;
- ensuring our workforce, whether part-time, full-time or temporary, is treated fairly and with respect;
- eliminating discrimination; and
- ensuring that selection for employment, promotion, training, development, benefit and reward is based on merit and in line with relevant legislation.

We are committed to transparency and reporting annually on our progress on BAME and female representation on our Board, at manager level, among new joiners and our workforce as a whole. We remain focused on bringing the best diverse talent into our organisation and supporting them to reach their full potential.

We also adopt this approach to our future talent, with our Apprenticeship and Graduate programmes actively encouraging applications from diverse candidates. During 2019/20, in the US we attracted 31% female applicants and 51% ethnically and racially diverse applicants to our graduate development roles. We also took 36% female applicants and 52% ethnically and racially diverse applicants into our internship programmes. Our UK Graduate Programme attracted 25% female applicants and 57% ethnically and racially diverse applicants. Our UK Industrial Placement and Student Internship programmes attracted 28% female applicants and 45% ethnically and racially diverse applicants.

A total of 18.3% of our workforce have declared themselves to be of 'minority' racial or ethnic heritage and we currently have 24.7% females across our total workforce. We are very much aware, however, of the number of 'declined to state' responses we have across all diverse characteristics and as a result in 2019/20 we launched our #thisisme campaign, not only to increase our disclosure rates, but also to demonstrate our commitment to a culture of openness and security for colleagues to share who they are. This year also saw a number of our most senior leaders participate in reverse mentoring. This allowed them to get a different perspective on life, not only at National Grid but also more generally. This has provided a mutual knowledge share and dialogue between senior individuals from our organisation and more junior individuals from a diverse range of background with fantastic feedback from all parties.

We continually work to ensure our application, assessment, development and training provisions more broadly, are all inclusive and accessible. We offer our current colleagues training and development programmes which ensure they are aware of acting on bias, while providing specific development programmes for our diverse colleagues in both the UK and US. We have 17 Employee Resource Groups (ERG) (11 in the US; 6 in the UK), which are all highly active and visible across the business, with events and awareness-raising campaigns throughout the year (including a strong presence at WorldPride in New York this year). Our ERGs also provide a crucial support network to our diverse colleagues.

We continue to participate in numerous awards and benchmarks to recognise the great work of our colleagues (including Disability Confident, The Times Top 50 Employers for Women, Best Places to Work for LGBT Equality and Forbes 2019 Best in State Employer; we were also shortlisted in the Top 10 Outstanding Employers at The Ethnicity Awards for 2019). These also offer us the opportunity to learn, focus our strategy and continually improve our approach to inclusion and diversity. We have close partnerships with external best practice organisations and are active members of sector- and industry-wide groups which ensure we are sharing best practice and campaigning at a sector-wide level for greater inclusion for all.

Our policy is that people with disabilities should be given fair consideration for all vacancies against the requirements for the role. Where possible, we make reasonable adjustments in job design and provide appropriate training for existing employees who become disabled. We are committed to equal opportunity in recruitment, promotion and career development for all employees, including those with disabilities. Our policy recognises the right for all people to work in an environment that is free from discrimination.

The gender demographic table that follows shows the breakdown in numbers of employees by gender at different levels of the organisation. We have included information relating to subsidiary directors, as this is required by the Companies Act 2006 (Strategic Report and Directors' Reports) Regulations 2013.

We define 'senior management' as those managers who are at the same level, or one level below, the Executive Committee. Our definition also includes those who are directors of subsidiaries, or who have responsibility for planning, directing or controlling the activities of the Group, or a strategically significant part of the Group, and are employees of the Group.

Gender demographic as at 31 March 2020

	Our Board[1]	Senior management[2]	Whole company[3]
	number	number	number
Male	8	165	17,379
Female	4	82	5,690
Total[6]	**12**	**247**	**23,069**
Male (%)	66.7	66.8	75.3
Female (%)	33.3	33.2	24.7

1. 'Board' refers to members as defined on the Company website.
2. 'Senior management' refers to Band A/B employees as well as subsidiary directors.
3. This measure is also one of our Company KPIs. For more information, see page 20.

Our commitment to being a responsible business continued

Total headcount as at 31 March 2020[4]

The tables below show the breakdown of employees by work pattern and diversity.

Work pattern

	Full-time		Part-time[5]	
	number	%	number	%
UK	6,027	95.3	294	4.7
US	16,629	99.3	119	0.7
Total[6]	**22,656**	**98.2**	**413**	**1.8**

4. In scope are active, permanent employees. Out of scope are temporary employees.
5. Employees recorded in our system as part time, or have <1 full time equivalent.

Gender

	Male		Female	
	number	%	number	%
UK	4,548	72.0	1,773	28.0
US	12,831	76.6	3,917	23.4
Total[6]	**17,379**	**75.3**	**5,690**	**24.7**

Ethnicity demographic as at 31 March 2020

'Minority' refers to racial/ethnic heritage declarations as recorded in our system. Those who have not stated their ethnicity are excluded from the baseline.

White	17,482
Minority	3,918
Declined to state	1,669
White (%)	81.7
Minority (%)	18.3

Employee turnover

Turnover is defined as employees who have left in the last 12 months as a percentage of headcount last year. Voluntary turnover relates to employees who have left through either resignation or retirement. Non-voluntary attrition includes any other leave reasons – including dismissal and severance.

	Voluntary	Non-voluntary	Total
	%	%	%
UK	6.4	4.8	11.2
US	7.7	1.6	9.3
Total[6]	**7.4**	**2.4**	**9.8**

6. Included in 'Total' are Non-executive Directors and Executive Directors.

National Grid traditionally has low voluntary turnover and high employee tenure, driven by high engagement and good career opportunities as evidenced by our high internal churn rates. Non-voluntary attrition is in the majority comprised of severance.

Training days per employee

From 1 April 2019 to 31 March 2020, the total number of training days delivered per employee (as recorded in our HR systems), across the whole Company was 6.0 days (2018/19: 5.3). There was also a reduction in training activity towards the tail-end of March as a result of the COVID-19 lockdown in both our UK and US businesses.

Promotion rate

The table below shows the rate of promotion within the business. Promotion rate is defined as the number of employees who were promoted to a higher grade as a percentage of headcount last year.

	Promotion rate %
UK	14.1
US	16.1
Total	**15.5**

The economy

Our economic contribution to society comes primarily through the delivery of safe and reliable energy. Crucially, we make sure energy reaches homes and businesses safely, reliably and efficiently. But our contribution as a responsible, purpose-led business also comes as an employer, a tax contributor, a business partner, and community partner.

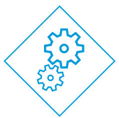
We help national and regional governments formulate and deliver their energy policies and commitments. Our approach to regulatory consultation is to seek a framework that puts consumers at the centre of our price control, while enabling the clean energy transition. Evolving that partnership to help enable the clean energy transition and slow the pace of climate change before it cannot be reversed, will also be key in protecting future economic growth, and safety and wellbeing in society.

Our geographic footprint means that our economic contribution is felt in lower-income communities that can truly benefit from the ripple effect of our local presence, from rural communities in New England, to the UK where most of our economic contributions are made outside London. Our tax contribution helps to fund services and we are committed to a coherent and transparent tax policy and recognise our economic role in society in doing this (more information on tax can be found on pages 28 – 37).

> **"We are fair to our suppliers and committed to paying them promptly."**

We are fair to our suppliers and committed to paying them promptly. We also influence our supply chain to operate as responsible businesses, requiring all suppliers to share our commitment to respecting, protecting and promoting human rights.

This includes alignment to the United Nations Compact Guiding Principles, the International Labour Organisation standards and the Ethical Trade Initiative Base Code as a reference standard.



Governance

Our approach to corporate governance plays an important role in helping us develop our culture at National Grid – a culture that embraces diversity and inclusion, and an environment where everyone can fulfil their potential. Our Board will continue to play a vital role in setting the tone right from the top. We apply a robust framework to ensure that stakeholder considerations are suitably captured and enhancements made to strengthen the views of stakeholders in the boardroom.

Human rights

Respect for human rights is incorporated into our employment practices and our values, which are integral to our Code of Ethical Business Conduct – the way in which we conduct ourselves allows us to build trust with the people we work with. We earn this trust by doing things in the right way, building our reputation as an ethical company that our stakeholders want to do business with, and that our employees want to work for. We were recently recognised by Ethisphere as one of 2020's World's Most Ethical Companies. Although we do not have specific policies relating to human rights, slavery or human trafficking, our Global Supplier Code of Conduct (GSCoC) integrates human rights into the way we do business. Throughout our supply chain alongside other areas of sustainability we create value, preserve natural resources and respect the interests of the communities we serve and from which we procure goods and services. Through our GSCoC, we expect our suppliers to comply with all legislation relating to their business, as well as adhering to the principles of the United Nations Global Compact, the International Labour Organisation (ILO) minimum standards, the Ethical Trading Initiative (ETI) Base Code, the UK Modern Slavery Act 2015, the US Trafficking and Violence Protection Act 2000 and, for our UK suppliers, the requirements of the Living Wage Foundation.

Anti-bribery and corruption

We have policies and governance in place that set and monitor our approach to preventing financial crimes, fraud, bribery and corruption, including our Code of Ethical Business Conduct (covering bribery and corruption). We have a Company-wide framework of controls designed to prevent and detect bribery.

We investigate all allegations of ethical misconduct thoroughly and, where appropriate, we take corrective action and share learnings. We also record trends and metrics relating to such allegations – only a small percentage of these relate to bribery or corrupt practices, so we do not consider them to be material for reporting purposes.

Governance and oversight

We review and update our framework regularly so we can make sure our procedures remain proportionate to the principal risks we have identified.

Our UK and US Ethics and Compliance Committees (ECC) oversee the Code of Ethical Business Conduct and associated awareness programmes. Any cases alleging bribery are required to be referred immediately to the relevant ECC so the members can satisfy themselves that cases are investigated promptly and, where appropriate, acted upon, including ensuring any lessons learnt are communicated across the business.

The Audit Committee receives an annual report on the procedures currently in place to prevent and detect fraud and bribery. You can read more about the Audit Committee's role on pages 76 – 81. None of our investigations over the last 12 months have identified cases of bribery.

Anti-financial crimes policy

We have launched a new Anti-Financial Crimes policy which applies to all employees and those working on our behalf. It sets out our zero-tolerance approach to bribery, fraud, money laundering, tax evasion and other corrupt business practices.

To ensure compliance with the UK Bribery Act 2010 and other relevant legislation, we operate an anti-financial crime risk assessment process across the Company to identify higher-risk areas and make sure adequate procedures are in place to address them. Fraud and bribery risk assessments are conducted annually across the business. As part of our global training strategy, we introduced an e-learning course for all employees so they can adequately understand the Company's zero-tolerance approach to fraud, bribery or corruption of any kind.

> **"Our Code of Ethical Business Conduct sets out the standards and behaviours we expect from all employees to meet our values of Do the Right Thing, Find a Better Way and Make it Happen."**

Ethical business conduct

Our Code of Ethical Business Conduct sets out the standards and behaviours we expect from all employees to meet our values of Do the Right Thing, Find a Better Way and Make it Happen. The document is issued to all employees and is supported by a global communication and training programme to promote a strong ethical culture. Additionally, we provide briefings for high-risk areas of the business, such as Procurement. Our Code is updated every three years and is currently being updated with a release date later in 2020. In addition, we have a new Ethics Business Management Standard which provides a framework around our ethics programme and describes what is expected of the business.

Compliance framework

Each of our business areas is required to consider its specific risks and maintain a compliance framework, setting out the controls it has in place to detect and prevent bribery. As part of our compliance procedure, the business is asked to self-assess the effectiveness of its controls and provide evidence that supports its compliance.

Each year, all function heads are asked to certify the compliance in their area, and to provide details of any exceptions. This culminates in presentation of a Certificate of Assurance from the Chief Executive to the Board (following consideration by the Audit Committee).

Working with our supply chain

Our GSCoC is issued to our suppliers annually and sets out our expectations and fundamental principles, including preventing and detecting bribery and corruption, which should extend into the supply chain. All our suppliers must comply with all laws relating to their business which includes human rights, business ethics, resilience, supplier diversity, skills development and environmental sustainability, as well as adherence to the principles of the United Nations Global Compact, in accordance with all applicable local, state, federal, national and international laws or regulations including the UK Bribery Act 2010 and the US Foreign Corrupt Practices Act 1977. We provide specific guidance and briefings for high-risk areas, so contractors, agents and others who are acting on behalf of National Grid do not engage in any illegal or improper conduct.

Whistleblowing

We have confidential external speak-up helplines available 24/7 in all the regions where we operate. We publicise the contact information to our employees and on our external website so concerns can be reported anonymously. Our policies make it clear that we will support and protect whistleblowers and any form of retaliation will not be tolerated.

Our commitment to being a responsible business continued

Preventing modern slavery

We strive to prevent modern slavery from taking place anywhere in our business or in our supply chain.

We expect all our suppliers to be compliant with the Modern Slavery Act and to publish a Statement if required. Each year, we update our own Statement and publish this on our Company website in line with the Modern Slavery Act's requirements. In 2019, our Statement was independently assessed by Development International, a new ranking of the nation's largest publicly listed organisations, and we were listed in the top quartile for FTSE 100 listed companies. In 2018, we were also assessed by the Business & Human Rights Resource Centre (BHRRC) and were positioned 12th in the FTSE 100 ranking and recognised as one of a 'small cluster of leaders standing out' in this space. BHRRC did not publish a ranking in 2019.

We work closely with our suppliers and peers to build on our knowledge and promote best practice in the industry to combat modern slavery. During 2019, we continued to engage with suppliers identified as being within potentially high-risk categories. Through this engagement, which included a US workshop following on from the UK workshop in 2018, we encouraged our suppliers to conduct similar risk assessments with their own supply chain.

We also facilitated an industry masterclass to discuss common issues in the sector and work more closely together to increase awareness and drive positive change.

We are an active member of the United Nations Global Compact Modern Slavery Working Group, signatories to the Construction Protocol, and are working with Achilles to develop a community approach to address the issue. We are also revising our procurement process, so that modern slavery criteria and identifying human rights risks form part of our sourcing process.

In 2019 we signed up to the People Matter Charter which has been created by the Supply Chain Sustainability School, of which we are a partner member, to develop and implement consistent workforce standards throughout our industry.

Non-financial information

This section provides information as required by regulation in relation to:

- environmental matters;
- our employees;
- social matters;
- human rights; and
- anti-corruption and anti-bribery.

In addition, other information describing the business relationships, products and services which are likely to cause adverse impacts in relation to the matters above, can be found as follows:

- business model – pages 2 – 7;
- KPIs – pages 18 – 20;
- principal risks – pages 22 – 25; and
- Audit Committee Report (our due diligence) – pages 76 – 81.

Our policies and related governance

Descriptions of the policies and the outcomes pursued in relation to the above matters are discussed, where material, throughout this section. A full list of our policies can be found online, at www.nationalgrid.com/about-us/corporate-governance

In addition to our policies, we have a suite of Business Management System (BMS) standards. These standards provide the foundation for bringing energy to life for our stakeholders. They act as our guiderails by defining the minimum requirements for the high value and risk activities most important to our business – allowing our leaders to effectively drive change instead of responding to it.

The BMS delivers benefit in four key ways:

Risk Mitigation: The BMS defines and sets minimum requirements for our principal and other risks so they can be effectively and consistently managed across our businesses.

Best Practice: The BMS establishes a common language and framework for what constitutes best practice and provides the opportunity for Communities of Practice (CoP) to share across the organisation.

Standardisation: The BMS helps us build efficient processes and lean functions in our business areas with global responsibilities – HR, IT, Procurement, Finance and Corporate Affairs. By building one way of doing things, we can capture the maximum benefit from our work.

Simplification: The BMS acts as a catalyst to challenge and remove documentation and rules that don't deliver value. The standards will also increase the freedom of leaders to act, knowing the boundaries which can't be compromised as they strive to work in new and innovative ways.

Some of the BMS standards that we pursue to ensure consistent governance on a range of non-financial matters, can be seen below. They are not limited to this selection. These have been summarised for the purpose of the Non-Financial Information Statement.

Policies and documentation

People

- Our Code of Ethical Business Conduct for employees: helps our ethical reputation while ensuring we maintain stakeholder confidence in our ability to deliver on our ethical commitments.
- The Wellbeing and Health BMS Standard: enables our business to proactively manage our health risks and controls by fostering a proactive approach to wellbeing that can measure and target areas of greatest impact for the business.
- The Occupational Safety BMS Standard: ensures that no matter where in the world our employees or contractors work, they can expect to receive the same consistent and high level of protection for their own safety.
- The Process Safety BMS Standard: helps to protect people and the environment from the risk of major accidents by establishing a safety-focused culture. Process safety is an important commitment at National Grid. Our aim is to be recognised as a high performer in process safety through the demonstration of industry-leading risk controls, performance and cultural maturity across the management of all of National Grid's major hazard assets.
- The Human Resources BMS Standard: sets out what is expected of our leaders when managing their employees throughout the employment lifecycle.
- The Performance Excellence BMS Standard: sets out how we at National Grid 'find a better way'. It provides the basis for continuous improvement across everything we do.

Environment

- The Environmental Sustainability BMS Standard: establishes environmental compliance and environmental sustainability performance requirements for all operational and non-operational activities.

Society

- The Stakeholder Engagement BMS Standard: defines performance requirements for digital and physical external stakeholder engagement by creating a consistent approach towards addressing the most important stakeholder issues and opportunities.

Human rights and anti-corruption and anti-bribery matters

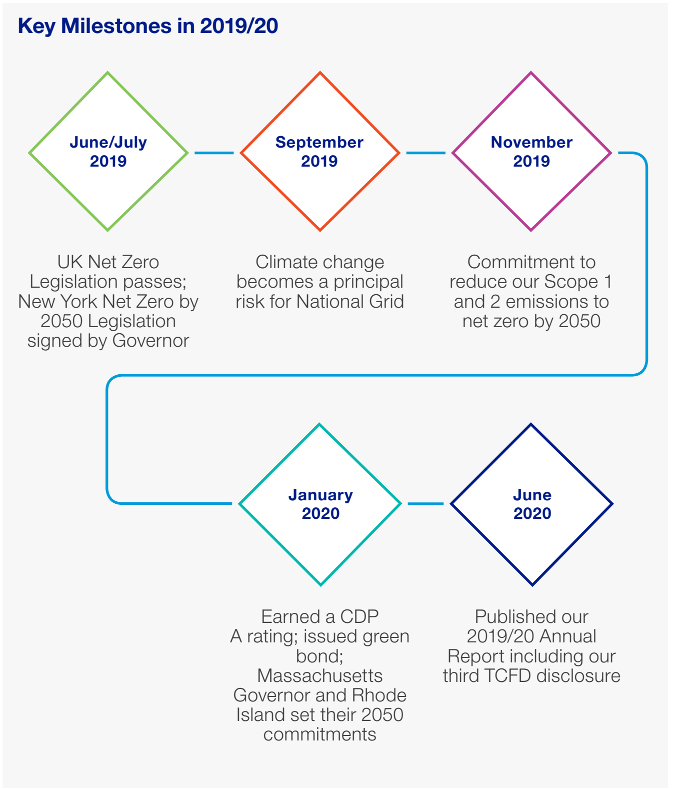
- Procurement Standard: defines how to improve efficiency within our supply chain expenditure.
- Global Supplier Code of Conduct.
- Modern Slavery Act.
- Human rights.

Task Force on Climate-related Financial Disclosures (TCFD)

National Grid has committed to implementing the recommendations of the TCFD in full, and below is our third disclosure which builds on our previous two.

This year we have continued to make good progress on the recommendations, aided by developments in the markets we operate in, with aggressive 'net zero emissions' and renewable targets set in the UK, New York State, Rhode Island and Massachusetts in the last 12 months, as well as increasing public scrutiny and focus across the sector and in corporate boardrooms. This year, we have progressed our scenario planning work, elevated climate change as a principal risk to our Group risk register, issued our first green bond, and evolved our greenhouse gas emission reduction targets. Our work was recognised by CDP as we were named on its climate change A List for the fourth year in a row.

In our 2018/19 disclosure, we outlined the areas we planned to focus our attention on during 2019/20. The table below outlines those actions, the progress we have made against each during this financial year, and our areas of focus for the upcoming financial year.



Focus Area	Actions outlined in 2018/19	Progress made in 2019/20	Actions to progress in 2020/21
Governance	Ensuring senior leadership has an appropriate understanding and responsibility for the risks and opportunities associated with climate change.	The Board and Executive Committee have discussed climate change throughout the year and taken actions as follows: • engaged with key stakeholders on aspects of the net zero transition, for example, bringing in the UK Committee for Climate Change to speak to Electricity Transmission executives; • senior leadership devoted a day to responsible business and our total societal impact, including climate change; and • committed National Grid to reduce our Scope 1 and 2 emissions to net zero by 2050.	Continue to increase knowledge and skills among senior leadership in this area and include climate change expertise as a factor to consider in our Board succession planning.
Strategy	The use of climate-related scenarios to inform our business strategy (and disclosure of the possible outcomes under those scenarios).	We have undertaken an analysis of the impact to our business model of transitional scenarios where decarbonisation goals are, or are not, met. The details of this are presented in the scenarios section of this disclosure.	Assess the physical risk to our assets using updated climate scenarios and quantify the potential impacts. Incorporate this work into the transition scenario analysis. Build on the transitional scenarios we have developed.
Risk Management	Embedding climate change into our risk management process.	After a full review of our risks, climate change is now a principal risk for the Group, from its previous status as an emerging risk. See page 23. We also developed 'business unit specific risks' to ensure that each part of the business has specific climate change risks.	Deliver identified control actions to mitigate climate change risk. Continue to review the risk and controls as further information is developed, including through scenario planning work.
Metrics and Targets	The development of metrics and targets to assess performance, and influence decision-making and remuneration.	We announced our commitment to be net zero for Scope 1 and 2 emissions by 2050 in November 2019. We revised our interim Scope 1 and 2 targets to an 80% reduction by 2030 and a 90% reduction by 2040. In addition, our NGESO published an update to their operability strategy showing the milestones to deliver zero carbon operation of the Great Britain Transmission network by 2025. See page 39.	Personal objectives will be set throughout the business to ensure delivery against our commitments. Continue monitoring our metrics and targets and develop and/or evolve metrics, as needed.

Task Force on Climate-related Financial Disclosures (TCFD) continued

How do we approach the governance of climate-related risks and opportunities?

The **Board of Directors** is responsible for the oversight of climate-related risks and opportunities impacting the Group. During the year, there has been an increased focus on climate-related matters as the landscape evolved with regulatory developments and changes in stakeholder expectations. The Board was involved in the following discussions relevant to climate change:

- Approving the Group's commitment to achieve net zero for our Scope 1 and 2 greenhouse gas emissions by 2050 replacing our previous target of 80% reduction by 2050. In addition, we have set the following interim targets: 80% reductions by 2030 and 90% by 2040.
- Climate change was elevated to a principal risk during the year, with the risk now being owned by Alison Kay, a member of the Executive Committee who has responsibility for Group Safety, Health and Environment. The governance process that was undertaken to upgrade the risk from an emerging risk to a principal risk is described in the case study on page 23.
- Strategy sessions were held, which included discussions related to climate change and considered the scenario testing performed this year (discussed on page 26). Topics discussed included the clean energy transition, the future of heat, as well as our strategy for renewables and electrification of vehicles. In addition, the Board held four sessions to consider our role as a responsible business and our role as a key facilitator of the energy transition featured.
- Approving the RIIO-2 submissions which reflect our investment proposition for supporting the UK energy transition.
- Quarterly review of performance on our environmental sustainability metrics and targets.

Responsibility for asset investment and maintenance planning is delegated by the Board to the **Executive Committee** who then further delegates the responsibility to the core operational businesses.

What is the oversight process for climate change related risks and opportunities?

The **Safety, Environment and Health Committee** (SEH Committee) is responsible for assessing the Group environmental sustainability strategy and performance, as well as how the Company adapts its business strategy considering potential climate change risks and opportunities. As part of this, the SEH Committee tracks, challenges and seeks assurance for the delivery of the plans approved by the Executive Committee.

The **Audit Committee** remains responsible for reviewing and approving the content of our TCFD disclosures and is taking an increasingly active role in overseeing disclosures around metrics and targets. The Committee considered papers in September 2019, November 2019, March 2020 and May 2020 summarising the financial reporting and disclosure considerations in respect of climate change.

The **Finance Committee** is responsible for overseeing our financing strategy. This year, the Committee reviewed and approved our Green Financing Framework. This framework, published in November 2019, aims to facilitate the disclosure, transparency and integrity of our Green Financing for our stakeholders.

A **TCFD steering group** oversees progress against the TCFD recommendations and the publication of our annual disclosure. The group reports to the Chief Financial Officer, Andy Agg.

Future Intent

As the climate change landscape is evolving, we will continue to build upon the good base level of experience and knowledge within senior management (including at Board and Executive levels), as well as consider climate change expertise in our Board succession planning. The SEH Committee will continue to monitor our environmental sustainability performance quarterly and approve updates to our environmental sustainability strategy and targets annually. The Audit Committee will continue to oversee the programme to evolve the assurance model for our responsible business reporting. The Finance Committee will consider the financial impact of environmental factors on our credit metrics and relevant considerations with regards to debt investors.

What is our strategy for responding to climate change?

Our strategy focus is three-fold: tackle the climate crisis by helping the markets we operate in transition to a net zero economy, while reducing our own impact on the environment and ensuring our networks operate reliably under changing conditions. Our strategy is informed by the evolving climate change policy and ambitions of the states and countries in which we operate, by the risks and opportunities identified during our continuing climate change scenario testing and by our ambition to have a positive impact.

Our financing strategy, which includes us issuing debt from our operating companies, is focused on aligning the debt issuances to the business purpose of each of our regulatory deals. As part of this strategy, we launched a Green Financing Framework to enable us to issue green bonds, loans or other financial instruments in November 2019. Green bonds allow us to access new capital pools and engage with investors who are keen to work with asset owners to facilitate the clean energy transition. In January 2020, we issued our first green bond in the UK, with the €500 million proceeds being used to finance projects with an environmental benefit across our UK electricity business. We are currently evaluating issuing a green bond in the US in 2020.

Regulatory Framework

The next 10 years are a crucial period with expected rapid change in the energy system, and therefore it is vital that the funding and regulatory framework is in place to deliver against these targets. Across our business, we are developing proposals for our regulatory rate filings that support our strategy to enable the transition and reduce our own impact.

UK RIIO-2 Business Plans

Our RIIO-2 Business Plans were developed through a comprehensive stakeholder engagement programme throughout the RIIO-2 process and have also evolved to reflect the UK government target, announced in June 2019, to achieve net zero emissions by 2050. Our plans cover a crucial period (2021 – 2026) for investment to help deliver the UK's net zero target. The route to net zero emissions is not yet clear but our plans are flexible enough to deliver the investment needed in the 2020s. We have built a plan to align with the pathway to net zero by 2050.

In our Electricity Transmission business, we propose £1.35 billion of expenditure to connect new generation and transport electricity across the country to where it is consumed, connect us to neighbouring electricity markets and support the Electricity System Operator in being able to operate a zero-carbon electricity system by 2025. Whilst consistent with Ofgem's business plan criteria, we recognise that these investments alone are insufficient to deliver net zero targets and have therefore proposed whole system options to accelerate progress towards net zero, for example through ultra-rapid vehicle charging at motorway service areas. As the optimal path to achieving net zero is unclear, we developed a series of uncertainty mechanisms that allow our plans to flex to deliver against the range of low-carbon system developments our customers could bring forward.

In our Gas Transmission business, we recognise that natural gas has an important role to play in supporting the transition to a low-carbon future. Natural gas, hydrogen and biomethane can help to decarbonise heat, the biggest source of UK carbon emissions. Our business plans cover a period where developing options and understanding choices is key. We will focus on leading the development of options associated with gas transmission, specifically hydrogen, to facilitate the decarbonisation of heat, industry and transport.

In our ESO business, our business plans focus on facilitating the transition to net zero. For example, our business plans aim to deliver new architecture and systems in our control centres to be able to operate a zero carbon network by 2025, and new monitoring and control systems to ensure power system stability in a low-carbon world.

Across all our businesses our plans include targets and commitments to manage our own environmental impact, with £530 million of investment planned across Electricity and Gas Transmission. We have committed to reducing NO_x emissions from our gas compressors, and achieving net zero construction emissions by 2025/26. We are targeting investments to replace leaking SF_6 (an insulating gas and source of GHG emissions) equipment to reduce emissions by 50% by 2030, phasing out the procurement of new assets containing SF_6 and introducing SF_6 free technologies.

In the UK, there is uncertainty on what further measures will be needed to adapt to climate change and meet the UK goal of net zero by 2050. We welcome Ofgem's Decarbonisation Action Plan and the shift to a more flexible, adaptive regulatory price control regime with a system-wide net zero re-opening mechanism.

US Rate Cases

In the US, we have ongoing and upcoming regulatory rate case proceedings. In all proceedings, gas and electric, we are focused on including proposals to support our climate change strategy and enable the net zero transition of the states in which we operate.

In the US gas distribution businesses, we are focused on decarbonising our gas networks and the heating sector. We are doing this by reducing emissions related to natural gas through energy efficiency and demand response, continued investment in our leaking pipe replacement programmes and advancement of the future of heat. For example, we included a $90 million future of heat proposal in our April 2019 KEDNY/KEDLI filing which combined expanded energy efficiency and demand response programmes, renewable natural gas interconnection investments, geothermal investments, and a hydrogen blending study. We plan to include future of heat proposals and continued pipe replacement programmes in our next Niagara Mohawk and Massachusetts gas rate filings. This work aligns with the Rhode Island Heating Sector Transformation, launched by the Governor in July 2019 to identify how the heating sector needs to change to meet the state's climate objectives. This initiative concluded in April 2020 with recommendations provided to the Governor. Those recommendations included increased energy efficiency, electrification through air and ground source heat pumps, and fuel decarbonisation through renewable natural gas and renewable oil.

In the US electric distribution businesses, we are focused on climate change and the new energy landscape. For our next Niagara Mohawk rate case filing, we will submit a proposal that focuses on three key areas: grid modernisation, customer engagement and supporting the state to achieve its clean energy goals outlined in the Climate Leadership and Community Protection Act (CLCPA). We will also leverage these grid modernisation investments to enable customers to engage with their energy consumption in an informed and seamless manner. Enabling New York State's clean energy transition is a common theme across all the above-described proposals and will be further enabled by our work in the electrification of transportation. The Massachusetts rate filing, approved in October 2019, includes work to advance Massachusetts's climate objectives including a climate change mitigation and adaptation plan, an off-peak rebate programme for electric vehicle owners, approval to include up to $50 million in energy storage in our 2021 grid modernisation plan filing, and a path forward for a significant investment in electric vehicle charging infrastructure in 2021. In Rhode Island, we launched an electric vehicle infrastructure and off-peak rebate programme and will be filing a Grid Modernisation and Advanced Metering Functionality proposal in the second half of 2020/21.

Future Intent

We are in the process of updating our budgets and forecasts to reflect the detailed financial impacts of our net zero strategy.

How have we advanced our climate change scenario analysis?

This year, we have advanced our scenario analysis work that considered both the transition and physical risks to our business. This work is and will continue to inform our strategy and investment plans.

Transition Risk Analysis

To further understand the risk that climate change could have on our business, we have undertaken a high-level scenario analysis. We used two scenarios: the first assumes that the global response to the threat of climate change is enough to limit global average temperature increases to no more than 1.5ºC above pre-industrial levels (as set out in the Paris Agreement) by 2100 (**the 1.5ºC scenario**). The second scenario assumes that the 1.5ºC target is missed by some margin, comparable to a 4ºC global average temperature increase (**the 4ºC scenario**).

To facilitate business planning, we have considered scenarios out to 2030. In this analysis, we assessed the impacts of the scenarios without factoring in activities we might take to adapt to the threats of climate change, or the opportunities of decarbonisation.

We made the following simplifying assumptions:

- In the 1.5ºC scenario, rapid changes are made to progress decarbonisation goals: coordinated policy, regulation and customer behaviour favours bans on polluting technologies, and support for low-carbon solutions. We have assumed that transition impacts in this scenario would be focused around technological shifts to support decarbonisation.
- In the 4ºC scenario, changes are less rapid and less comprehensive, and emissions remain high, so that the physical ramifications of climate change are more apparent by 2030. In rationalising this slower global progress, our 4ºC scenario assumed fragmented and ad hoc policy (within the Group's operating territories and globally).

The main transition impacts of the 1.5ºC scenario were:

- **A trend towards more large-scale renewables in the generation mix:** this would be a positive development for the Group, but for our electric network businesses the rate of new connections could increase beyond today's levels: this could increase costs or, without investment ahead of need, lead to a backlog.
- **A trend towards electrification:** increases in electricity demand would likely trigger electricity network upgrades and investment. Although network costs are a very small proportion of the customer bill, spikes in spending would need to be managed in conjunction with our regulators to ensure that customers, especially lower-income customers, are not unduly adversely affected.
- **Public pressure on gas:** in line with the Committee on Climate Change and other external sources, we do not believe substitutes to methane gas for space heating can reach scale in our territories by 2030 (or even 2040, unless extensive new policy is rapidly deployed). However, in this scenario we anticipate that, without mitigating action to reduce and offset emissions, there is a risk of pushback against the use of gas by environmental groups or concerned citizens. We are already experiencing growing resistance to building new gas infrastructure in our US business from politicians, concerned citizens and environmental groups.

The main impacts of the 4ºC scenario were:

- **Physical ramifications of climate change:** in this scenario we expect extreme weather events of escalating severity and frequency, which could increase disruption to our assets and our customers. This would require investment to 'harden' assets and would heighten the safety risk to our field employees. Our approach to physical climate risk is discussed in more detail below.
- **Lower system visibility:** as this scenario sees less coordinated policy and regulation in pursuit of decarbonisation, we would anticipate a greater variety of solutions being deployed across our networks. This could increase overall system costs and reduce visibility over the network, potentially slowing our responsiveness to disruptive events. We do note, however, that a greater number of distributed assets would increase the potential for local balancing, which could mitigate this.
- **Inequality of access:** without carefully designed policy, we believe decarbonisation activities have the potential to leave some sectors of society behind: for example, heat pumps and the energy efficiency upgrades they typically require are currently cost-prohibitive for many. As well as the ethical implications of this, there is a risk to the Group, especially for our US businesses, that a proportion of our customers would struggle to pay their bills.

Analysis shows that, without action, both scenarios present risks to us. However, while these would need to be managed, we would not need to materially change our business model. We also note that for a group in our position, some of these changes represent material opportunities.

Physical Risk Scenario Analysis

We recognise that, due to the amount of carbon already in the atmosphere, some escalation of extreme weather events is likely in both the '1.5ºC' and '4ºC' scenarios, especially under a longer-term view. This year, we began Group-level work to assess our physical risks to ensure that any necessary measures to defend our assets are identified. We ran an initial workshop with the US, UK and NGV teams and the UK Meteorological Office (Met Office) consultancy team to define the key areas of focus (e.g. flooding, icing and hurricane frequency for the US and UK regions) and define how the climate science can answer the questions we have on the weather conditions our assets will have to operate in up until 2100. Using the output of this work, we will develop and progress a scope to analyse weather data specific to the regions we operate in and assist in developing an understanding of the vulnerability of our assets as well as the mitigating measures that will be needed to protect them. We are also undertaking work with a team from the Massachusetts Institute of Technology (MIT) to study the impacts of weather changes related to climate change in the northeastern US.

Task Force on Climate-related Financial Disclosures (TCFD) continued

What are the risks and opportunities from climate change?

The rapid changes in the energy market and demands to meet net zero emission targets present several challenges that are both a risk and opportunity for us. In addition, the changes in temperature and weather patterns have and continue to present challenges and risks. These risks and opportunities, along with a summary of the work we are doing to address them, are presented in the table below.

Risk/ opportunity type	Description	Our response
Transition		
Markets	The operating environment and regulatory framework are rapidly changing in line with the decarbonisation of the electricity and gas networks in the UK and US.	Facilitating the transition to a low-carbon economy is central to our purpose as a business, and certain key actions we are taking in relation to decarbonisation and decentralisation are set out on pages 12 – 15.
Markets	Commercial opportunities from the transition towards net zero (short/medium and long-term).	Development of a strategy to enable the building of charging stations across our US jurisdictions and UK highways and to meet demand for **electric vehicles**. We have developed a dedicated programme to understand what is required to incorporate **hydrogen and renewable natural gas** into the gas supply. Acquisition of Geronimo, a leading developer of wind and solar generation assets based in Minneapolis, Minnesota, to help position us to develop and **grow a large-scale renewable business** in the US. Our **interconnectors** form an important part of the UK decarbonisation, by allowing us to exchange surplus renewable electricity with neighbouring countries. We are leading the development of **Carbon Capture Utilisation and Storage (CCUS)** technology in the Humber, UK, to support this area to become the first zero carbon region in the world. **Our continuing energy-efficiency** programmes across Massachusetts, Rhode Island and New York have reduced CO_2 emissions by more than 725,000 metric tonnes over the past year which is equivalent to the GHG emissions from over 156,000 passenger vehicles driven for one year.
Markets	Changes in supply and demand for existing and new technologies.	Our analysis, underpinned by the ESO Future Energy Scenarios (FES) shows that, even with increased decentralisation of electricity, there is a key role for Electricity Transmission in the UK under a range of scenarios that meet the UK's 2050 climate change goals. As the transition to renewable generation continues, we will work with the Long Island Power Authority (LIPA) to transform our generation fleet by responding to future RFPs. Under our existing contracts which extend through 2028, LIPA determines their reliability and sustainability needs and which units are operated, retired or transformed. Our FES will be aligned to not meeting, meeting or exceeding the 2050 net zero target.
Security and reliability	Electricity grid reliability and peak capacity.	Our principal focus is around ensuring that our electricity network is able to actively support and contribute to a future where demand for and supply of electricity are ever changing. With growth in renewables increasing intermittency on the network, and electrification of transport and heat likely, we are working with our stakeholders to ensure that grid reliability is understood, managed and planned at appropriate levels.
Security and reliability	Facilitating zero carbon operation of the Great Britain electricity system.	In April 2019, the ESO announced its ambition to transform the operation of the electricity system by 2025. Our goal is to be able to operate the system safely and securely at zero carbon whenever there is sufficient renewable generation online and available to meet the total national load. To facilitate this, the ESO has agreed contracts with five parties, worth £328 million over a six-year period, in a world-first approach to managing the stability of the electricity system.
Physical risks		
Extreme weather	Physical impacts from extreme weather events such as storms and flooding.	We continue to address the physical risks from extreme weather-related events, with a focus on flooding events (in both the UK and US) and storm hardening (in the US). See case study on page 61. As this work continues, it will be informed by not only the weather patterns we are experiencing, but also the results of the ongoing scenario testing.
Changing weather conditions	Increased frequency of weather incidents leading to asset damage/compromise and operational risks.	We will undertake a review of resilience from weather impacts to date. Work is ongoing to update standards with updated information. As an example, our US engineering team is updating standards for new and rebuilt substations to address changes in inland and coastal flooding projections. The ongoing scenario testing will consider whether our design standards are still appropriate under different scenarios, for example, a wider temperature range.
Changing weather conditions	Changes in supply of and demand for gas and electricity as a result of changing weather conditions.	The ESO is undertaking a project, Mapping Impacts and Visualisation of Risks of extreme weather on system operation (MIVOR), to evaluate the impacts of extreme weather events on system operation up to 2050.

Future intent

We will continue our physical risk analysis in 2020/21, including a review of the effectiveness of adaptation measures to date, identification of future areas of vulnerability, and assessment of these against future weather conditions and the likelihood of that happening. We will complete the scenario testing and determine any further adaptation measures that need to be undertaken. While financial provision has been made in the UK business plans for flood measures based on 2019 climate science data, additional adaptation measures can only be determined after this exercise has been completed and will be considered under the uncertainty mechanism provisions in the RIIO-2 business plans. The US business plans also include actions to harden our networks against expected weather conditions in the nearer term, but this work will help us better plan for future conditions.

What is the process for identifying and managing climate-related risks?

Our approach to identifying and managing the risks in our business is set out on page 22. During the year, a Group-level bespoke climate change principal risk was developed and added to our Group risk register, as described in the case study on page 23. The newly added climate change principal risk is underpinned by a series of Group controls and actions to mitigate the risk (this is further described on page 24). Several of the Group-level controls have been implemented while others are in progress. Ongoing work includes establishing programmes to develop the skills in our current and future workforce. Our recent report, Building the Net Zero Energy Workforce, looks at the skills and expertise the energy sector will need to help the UK reach its emissions target. It also identifies the need to recruit for 400,000 jobs in the sector between 2020 and 2050 to meet the target. Supported by the #jobthatcantwait campaign, we will be recruiting new talent who can help deliver the transition to net zero and adapt our networks accordingly. We have seen a marked increase in applicants in response to this campaign.

Following the adoption of the Group-level climate change principal risk, the US and UK businesses developed bespoke climate change risks on their respective risk profiles. These risks are being cascaded to the underlying operating business units to develop to ensure their risks and control actions are specific to them.

Future intent

The Executive Committee will review the results as part of the regular semi-annual review of Group risks in early 2020/21 and as part of that discussion will specifically consider whether changes need to be made to the Group climate change risk.

Case study: extreme weather-related planning

Ensuring network reliability is core to our business and we are constantly undertaking actions, often referred to as storm hardening, to improve our networks' resilience to the increasing frequency of strong weather events, given the significant impact this can have on our customers. These activities have focused on both our electric and gas businesses. As noted in the financial review (see page 30), this year we incurred $98 million of major storm costs, the majority of which are recoverable under our rate plans. Examples of ongoing efforts in 2020/21 include hardening efforts for our gas assets in Long Island and New York City. We worked with a collaboration of New York State and New York City representatives and other key stakeholders, to develop recommendations for future storm hardening and resiliency projects for our gas network, strategies for addressing climate risk factors, and guidelines for incorporating climate change projections in long-term capital planning. Another example is our annual investment in our electric distribution infrastructure to improve resilience and grid modernisation work to increase speed in knowing outage locations and improving our ability to restore supply.

In the UK, flood defence has been a keen focus for the business. Our target is resilience to 1 in 1000-year flooding events in the UK or a 0.1% chance in any given year. This resilience level was developed through consultation with Ofgem and BEIS via the ENA Flood Working Group and recognised in the National Flood Resilience Review 2016 as being best practice for critical local and national infrastructure. As of 31 March 2020, we had invested £71 million in flood defences with work completed or in progress at 37 sites and expected to be completed at a further 12 sites in 2020 and 2021. Our RIIO-2 (2021 – 2026) plans aim to protect a further 100 sites from surface-level flooding and recommend further investments to manage the risks posed from the secondary impacts of flooding, such as erosion and subsidence to our tower and cable routes.

Task Force on Climate-related Financial Disclosures (TCFD) continued

Image: Newtown Creek, a renewable gas project

Case study: the future of heat

The transition to a low-carbon economy is and will continue to change the sources of energy used (e.g. heat pumps and hybrid solutions), and the way energy is supplied and consumed (e.g. building retrofits to improve energy efficiency). Gas distribution in the US and gas transmission in the UK and US remain core to our business strategy, and we believe it will remain central to the energy mix in both countries. There is likely to be a mosaic of solutions, including reducing emissions from the natural gas transmission and distribution networks, as well as conversions to both electric and lower carbon gas heating (renewable natural gas or gas blended with hydrogen), focusing on cost-effective solutions and meeting different consumer needs.

In conjunction with government agencies, other utilities and key stakeholders and other gas networks, we have developed a programme of work to gather evidence and help us understand what is required to incorporate hydrogen and renewable natural gas into the gas supply. We are also working with industry to consider what improvements and changes are needed to maintain well-functioning, liquid gas markets throughout the transition, and ensure security of supply and delivery of natural gas, renewable natural gas and hydrogen.

Refer to page 13 for further details on the future of heat.

What metrics are used to assess these risks and opportunities?

We have continued to advance our environmental sustainability strategy, focusing on three key areas: climate change, responsible use of natural resources and caring for the natural environment. We have metrics and targets that allow us to measure our impact on the environment, demonstrate our commitment and monitor our performance. As previously discussed, the cornerstone of our suite of metrics is our commitment to reducing our impact by achieving net zero for our Scope 1 and 2 emissions by 2050, with interim targets of an 80% reduction by 2030 and a 90% reduction by 2040. Numerous underlying metrics support this goal and our broader sustainability ambition, including reducing the carbon footprint of our operating facilities, enhancing the natural value of our properties, recycling and/or reusing our recovered assets and reducing our office waste. These are discussed in more detail on pages 50 and 51.

We have also included enhanced disclosures in the financial statements prepared under IFRS to explain how we have considered the financial impacts of climate change, in particular evaluating the impact of new net zero commitments in our territories, and the effect this has had on judgements and estimates such as the useful economic life of our assets. See notes 1 and 13 to the financial statements for details. This remains a recurring area of focus for the Audit Committee.

Future intent

We continually review our metrics and targets, as needed, to ensure that the data we are measuring is meaningful, aligns with our strategy, and is providing the information the business and our stakeholders need to effectively monitor our performance and demonstrate our progress. In 2020/21, we will be laying out our pathway to achieve our net zero by 2050 emission reductions and setting targets to align our ambitions and provide better visibility to our progress.

We are also evaluating development of a meaningful Scope 3 target that enables us to align to Science Based Targets Initiative (SBTI) criteria, specifically focusing on our customers.

2. Corporate Governance

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Letter from the Chairman

Sir Peter Gershon
Chairman

Dear shareholders,

I am pleased to present to you our Corporate Governance Report for 2019/20. The report provides an insight into the activities of the Board and its Committees over the year including how it has evaluated its effectiveness and how it provides appropriate and effective stewardship to the Company to ensure it achieves its strategic priorities. It also discusses how we create value for shareholders and wider stakeholders during an ongoing period of external economic, regulatory and political uncertainty.

Towards the end of the year we have seen the acceleration of the COVID-19 pandemic. This is having a profound effect on how companies around the world operate during these unprecedented times and we recognise the increased importance of good governance at a time when effective engagement and collaboration with our stakeholders has never been more important. As a Board we are closely monitoring the developments of COVID-19 and the impact of this on all areas of the Company. Please see overleaf for information on our response to COVID-19.

Over the year there have been a number of other key events such as the brief power outage experienced on 9 August 2019 in the UK and the gas connection supply challenges in downstate New York in the US. Other external factors which have influenced the Board agenda include: the regulatory environment in the UK and the RIIO-2 business plan submissions; the increased gas regulation in the US, in particular New England; the increased political uncertainty leading up to the December 2019 UK General Election; Brexit; and the impact of the legal separation of the ESO. All of which have had, and some will continue to have, an impact on the way we work and operate.

UK Corporate Governance Code 2018 and stakeholder engagement

We are pleased to report that we are fully compliant with the requirements of the new UK Corporate Governance Code (the Code); see page 86 for information on how we have adapted our practices to ensure compliance and transparent reporting against the Code.

Our stakeholders are very important to us and we remain committed to maintaining regular open dialogue and effective communication with them. With the global restrictions in place due to COVID-19 this is requiring us to consider alternative methods to ensure we maintain the same level of engagement.

During the year, our discussions around RIIO-2, gas supply contingency planning in the US, the brief power outage on 9 August 2019 in the UK and payment of the final dividend are examples of how the Board has had regard to section 172 of the Companies Act 2006. We have considered the broader implications of our decisions, not just for shareholders but for a wider group of stakeholders and the likely consequences of our decisions in the longer term. On page 44 we set out our key stakeholders and how we have engaged with them to ensure that their views are being captured in the boardroom, to assist us in maintaining focus on creating the right culture for the Company. We continue to provide details throughout the Directors' Report of the stakeholder matters that are considered in our decision-making. We will continue to engage with our stakeholders in a way that is guided by our purpose to Bring Energy to Life, our vision and values and the Company's culture.

This year the Board has continued with its chosen approach to workforce engagement under the Code: to build on and enhance the extensive existing range of engagement activities and employee communication channels to properly consider workforce views in relevant decision-making processes; see page 73 for further information. Following the success of our employee engagement sessions with Non-executive Directors in 2018/19, we have continued to utilise and evolve these sessions throughout the year to ensure key topics, discussions and potential areas of concern amongst the workforce are considered. The Board has been able to identify key trends and topical issues, such as gender pay, culture, and safety. Where trends have been identified and Board action taken, employees have been kept informed through internal communications. Our chosen approach allows for the sharing of responsibility, and interaction amongst all Board members, which we believe ultimately drives a greater focus on the 'true employee voice' in Board decisions. We will continue to review and adapt our approach to ensure that we are utilising this vital engagement both in and out of the boardroom including considering the facilitation of virtual engagement sessions to enable the Board to continue with this despite COVID-19 restrictions.

Culture and the internal Board evaluation

Promoting a culture of openness and debate in the boardroom is one of my key responsibilities as Chairman, and as a Board we play an important leadership role in promoting the desired culture throughout the organisation. The Company has spent considerable time over the last few years getting the culture right for the Company and it continues on its journey; you can read more about this on page 72 where we explain how culture formed part of this year's Board evaluation.

During the year, we undertook a formal and rigorous internal evaluation of our Board and Committees which included some follow-up areas from our external evaluation last year. The evaluation focused on three areas: Board effectiveness; Board decision-making; and organisational culture and the individual style of leaders. During the evaluation process the Board gained insight into the different aspects of culture and the alignment of cultures around the Company. A facilitated session was arranged to discuss the comparisons of the Board evaluation results with the culture survey results of the Company's senior management. Unfortunately, due to the COVID-19 pandemic, this session has been postponed as it would not have been effective to do this when Board members were not physically in the same location. The evaluation process and associated outcomes can be found on page 74.

Board succession and diversity

In November 2019 Dean Seavers, US Executive Director stepped down and in May 2019 and January 2020 we appointed Jonathan Silver and Liz Hewitt as Non-executive Directors respectively. On appointment Jonathan joined the Finance Committee, Remuneration Committee and Nominations Committee and his US regulatory experience alongside his strong financial background has provided valuable insight into Board and Committee discussions. Liz became a member of the Audit Committee, Safety, Environment and Health (SEH) Committee and Nominations Committee on appointment. Liz's diverse and extensive experience has served to strengthen the Code's requirement in relation to the Audit Committee's competence, as a whole, to be relevant to the sector in which the Company operates. Her input to Board and Committee discussions is already very helpful. The Nominations Committee oversaw the rigorous selection process for these appointments. See page 84 for more information.

Last year Mark Williamson, the Board's Senior Independent Director, reported that in order to lead the Company through the completion of the RIIO-2 regulatory process it would be in the Company's best interests for me to stay beyond the nine-year term identified in the Code. Following on from this, in January 2020 I formally notified my intention to step down as Chairman of the Board following the identification of a suitable successor. Mark has been leading this process and we plan to have my designated successor in place in time for me to step down at the 2021 Annual General Meeting (AGM) at the latest. I will be standing for re-election at the Company's AGM in July 2020 and, in order to facilitate an effective succession, it is intended I remain as Chairman until my successor has been successfully onboarded. This crucial succession process will be set out further in next year's Nominations Committee Report.

Ensuring a diverse culture on the Board is crucial to improving effectiveness, encouraging constructive debate, delivering superior performance and enhancing the success of the Company. With the recent appointment of Liz Hewitt I am pleased to report that we are again meeting our diversity target of 33.3% of the Board being women. We also currently meet the Parker Review target for ethnic diversity on FTSE 100 boards. You can read more on how we strive towards our objectives in our Board Diversity Policy on page 85.

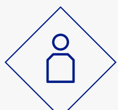
Sir Peter Gershon
Chairman

Our response to COVID-19

In order for us, as a Board, to be able to effectively monitor the Company's crisis management we met on a weekly basis throughout April 2020 to monitor the impact of the current COVID-19 pandemic on the Company's operations and how the Company was responding to the latest developments. These meetings were moved to a fortnightly basis from May 2020 and we will assess the need and frequency of these regular briefings as the pandemic continues.

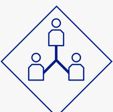
How we have considered our stakeholders during COVID-19

Our commitment to being a responsible business is central to the way in which we operate. This has been the governing principle behind our response to the COVID-19 pandemic as Directors. We have had to think through and debate on the choices and actions we need to consider over the coming months to position us best for success in the medium- to long-term taking account of the impact on our key stakeholders. The Board has continued to monitor its responsibilities to the Company's different stakeholder groups. Good engagement has been crucial in understanding the views of our stakeholders in order to make informed decisions during this period of crisis. For example, the Company has been seeking feedback from employees that has helped to shape its response to the COVID-19 pandemic.



Our colleagues

Our colleagues have been critical in making sure that we keep the lights on. The Board considered both the physical and mental wellbeing of our employees and are regularly briefed on the actions that would be taken to keep them safe and also to equip them to work from home efficiently. The Board has been in support of these initiatives, including: sequestering critical operations staff on-site in the UK and US to ensure service continuity; senior leaders communicating regularly via virtual online group calls; webchats and video messages; rolling out mental health training courses; and understanding colleague sentiment to the crisis and the COVID-19 recovery strategy through a pulse survey in the UK and US. The Company has not implemented pay reductions, furlough or compulsory redundancy schemes. We continue to monitor progress of how the Company can accommodate employees to return safely in the field, and how we can build on some of the positive changes in our culture and ways of working as the restrictions are lifted.



Communities

Our employees have also been supporting our communities by volunteering and providing their time and expertise to support charities and the most vulnerable. In the UK for example, as well as monetary support to various charities, the Company is operating a food bank and has helped the University Hospitals Birmingham (UHB) Charity to purchase almost 400 tablet computers that will be used by patients to help them speak to their loved ones while in isolation, see page 15 for a case study. In the US, the Company approved cessation of service disconnections for non-payment of outstanding bills. This reflects our commitment to support the communities in which we operate. Looking beyond the short-term, the Board will be kept informed of work to support getting people back into employment and into crucial roles, as well as helping support small- and medium-sized businesses (SMEs) to drive the local economies we operate in.

Investors

The Board recognises it is imperative to promote the success of the Company on behalf of its members. The Finance Committee has held two ad hoc meetings to consider the short- and longer-term liquidity of the Company in a range of different COVID-19 related scenarios. The Board approved the recommendation to pay a final dividend in August 2020 following stress testing of the financials in various adverse scenarios.

Customers, regulators and suppliers

We are very conscious that many of our customers are currently experiencing additional financial challenges and have therefore willingly agreed to moratoriums on debt collection activities in our US regulated businesses.

Furthermore, US Niagara Mohawk sought and received permissions from regulators to defer for three months, scheduled rate changes that would have increased customer bills as of 1 April 2020. In addition, we decided to postpone the filing of the US Niagara Mohawk rate case which could have resulted in bill increases in 2021.

The Board also supported the active and constructive engagement with Ofgem to protect customers by supporting the proposal for the relaxation of network charge payment terms for those suppliers and shippers who are facing cash flow challenges as a result of COVID-19. Additionally, the Board noted the request made to modify the collection of forecast additional balancing costs by the ESO for a further year. These costs, estimated at up to £500 million, are required to safely and securely manage and balance the system given the unprecedented reduction in demand levels caused by COVID-19. We recognise that the increase is significant and is a material issue for ESO customers. The Board notes that the ESO is working with Ofgem and the industry with a view to ensuring that any scheme put in place is in the interests of end consumers and our customers. We have also continued the development and tender of future work for our suppliers, giving longer term visibility and greater certainty of income and the Board has been kept informed of any impacts on our suppliers and supply chain.

We will continue to work closely with our stakeholders across both sides of the Atlantic in the current environment. The Board continues to be kept updated regularly on our COVID-19 response and on learnings that can be sustained to improve our ways of working and Company culture.

For information on how we have considered our stakeholders through the year see pages 44 – 47.

Our Board

Committee membership key

A — Audit Committee

F — Finance Committee

N — Nominations Committee

R — Remuneration Committee

S — Safety, Environment and Health Committee

E — Executive Committee

Chair of the Committee

Biographies as at 17 June 2020

Other Board members during the year were:

- Dean Seavers – stepped down on 5 November 2019
- Nora Mead Brownell – stepped down on 8 April 2019

N

Sir Peter Gershon CBE FREng (73)
Chairman

Appointed: 1 August 2011 as Deputy Chairman and Chairman with effect from 1 January 2012

Tenure: 8 years

Skills and competencies: Sir Peter is an experienced leader, having held senior board-level positions in the computer, defence and telecommunications industries. He has served as a Managing Director in several high-profile organisations and was previously Chairman of Tate and Lyle plc. Sir Peter is committed to engaging with employees, for example, through site visits in the UK and US. He annually hosts the Chairman's Awards, an excellent opportunity to appreciate employees at National Grid; and further engages through the recent employee engagement sessions. Sir Peter brings external insight, understanding of diverse issues and the strong corporate governance expertise required to create and lead an effective Board.

External appointments:

- Chairman of the Dreadnought Alliance Leadership Board;
- Trustee of the Sutton Trust;
- Trustee of the Education Endowment Foundation;
- Chairman of Join Dementia Research (JDR) Partnership Board; and
- Board member of the Investor Forum.

E F

John Pettigrew FEI FIET (51)
Chief Executive

Appointed: 1 April 2014 and Chief Executive with effect from 1 April 2016

Tenure: 6 years

Skills and competencies: John joined the Group as a graduate in 1991 and has progressed through many senior management roles. Together with his extensive operational experience of the Group, John brings significant know-how and commerciality to his leadership of the executive team and management of the Group's business.

John continues to lead the implementation and development of the Group's strategy, creating new opportunities for the continued future growth of our core businesses. He maintains a productive dialogue with institutional investors on Group strategy and performance.

External appointments:

- Member of the UK government's Inclusive Economy Partnership;
- Member of the CBI's President's Committee;
- Member of the Edison Electric Institute Executive Committee; and
- Non-executive Director and Senior Independent Director of Rentokil Initial plc.

E F

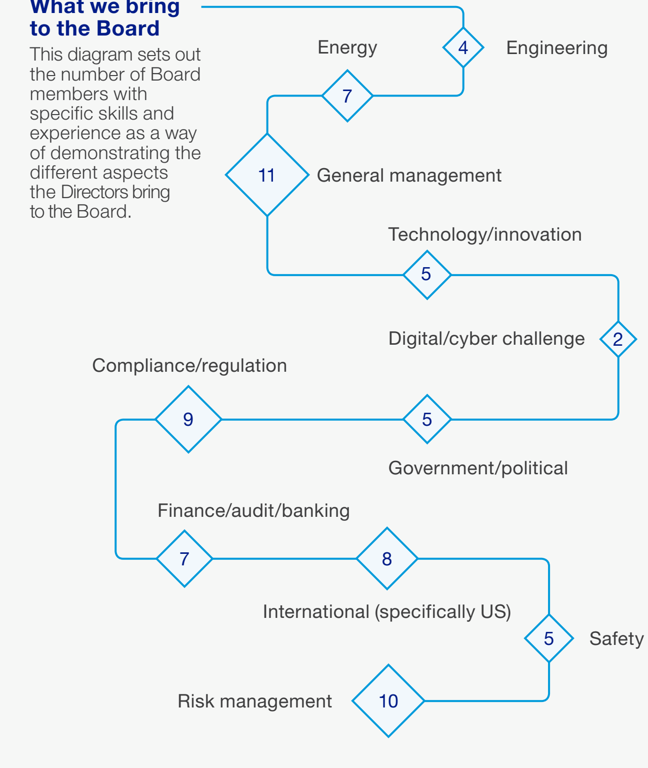
Andy Agg (50)
Chief Financial Officer (CFO)

Appointed: 1 January 2019

Tenure: 1 year

Skills and competencies: Andy trained and qualified as a chartered accountant with PricewaterhouseCoopers and is a member of the ICAEW. He has significant financial experience, having held a number of senior finance leadership roles across the Group, including Group Financial Controller, UK CFO and Group Tax and Treasury Director. Andy brings in-depth knowledge of National Grid, both in the UK and US, and his broad experience across operational and corporate finance roles led to a smooth transition into his role. He contributes broadly on a wide range of topics at Board, Finance and Audit Committee meetings.

External appointments: None.



E

Nicola Shaw CBE (51)
Executive Director, UK

Appointed: 1 July 2016

Tenure: 3 years

Skills and competencies: Nicola's career, in the UK and overseas, has included several senior operational and commercial roles in regulated businesses. She has a strong leadership track record, which has included Chief Executive of HS1 and Managing Director of the UK Business Division at FirstGroup plc.

Her broad range of experience working with the UK government, the European Commission and Parliament and industry regulators, as well as leading large regulated businesses, enables Nicola to implement Board decisions and lead our UK business with the requisite experience, knowledge and leadership expertise.

External appointments:

- Non-executive Director of International Consolidated Airlines Group, S.A.;
- Director of Major Projects Association;
- Director of Energy Networks Association Limited; and
- Director of Energy UK.

E

Alison Kay (56)
Group General Counsel and Company Secretary

Appointed: 24 January 2013

Skills and competencies: Alison has responsibility for the legal, compliance and governance framework of the Group. She is an experienced commercial lawyer and brings advice and guidance to her current role as Group General Counsel and Company Secretary.

Alison provides support and advice to the Directors, the Board and its Committees. She brings rigour to corporate governance and ensures that Board procedures are fit for purpose and adhered to. She also has expertise in regulatory and contractual law and legal risk management from her previous experience at National Grid.

External appointments:

- Member and Vice-Chair of the GC100 Group; and
- Member of the Marie Curie West Midlands Development Board.

Jonathan Dawson (68)
Non-executive Director; Independent

Appointed: 4 March 2013

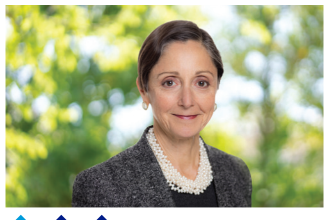
Tenure: 7 years

Skills and competencies: Jonathan, through his broad range of expertise within the finance and pensions sector, brings significant in-depth understanding in remuneration and financial matters to his role as Chair of the Remuneration Committee. Jonathan previously held positions as Chairman of the Remuneration Committee and Senior Independent Director of Next plc and Senior Independent Director and Chairman of the Audit & Risk Committee at Jardine Lloyd Thompson Group plc.

As a Non-executive Director, Jonathan brings an innovative perspective, scrutiny, constructive challenge and independent oversight to the Board.

External appointments:

- Chairman of River and Mercantile Group PLC; and
- Chairman and a founding partner of Penfida Ltd.



F A N

Therese Esperdy (59)
Non-executive Director; Independent

Appointed: 18 March 2014. Appointed to the Board of National Grid USA from 1 May 2015

Tenure: 6 years

Skills and competencies: Therese has significant international investment banking experience, having held a variety of leadership roles spanning 27 years. Her career began at Lehman Brothers and in 1997 she joined Chase Securities and subsequently JPMorgan Chase & Co., where she held a number of senior positions. With a distinguished career in the investment banking sector, Therese brings significant banking, strategic and international financial management expertise and knowledge of financial markets to the Board and to her role as Chair of the Finance Committee.

Therese's specialist knowledge combined with her sharp and incisive thinking enables her to contribute and constructively challenge on a wide range of Board debates.

External appointments:

- Chairman of Imperial Brands PLC; and
- Non-executive Director of Moody's Corporation.

Dr Paul Golby CBE FREng, FIET, FIMechE, FEI, FCGI (69)
Non-executive Director; Independent

Appointed: 1 February 2012

Tenure: 8 years

Skills and competencies: Paul is a Chartered Engineer and has a lifelong passion for engineering and innovation, having spent his career in the energy and regulatory sectors. He brings a valuable engineering and industry perspective to the Board as well as the attributes of an experienced Chairman and Chief Executive to his role as a Non-executive Director. Paul's deep understanding and specialised experience in safety and risk management combined with his deep insight into regulatory issues faced by the Group, particularly in the UK, is crucial to his role as Chair of the Safety, Environment and Health Committee.

External appointments:

- Chairman of Costain Group PLC; and
- Chairman of NATS Holdings Limited.

Liz Hewitt (63)
Non-executive Director; Independent

Appointed: 1 January 2020

Tenure: Less than 1 year

Skills and competencies: Liz qualified as a chartered accountant with Arthur Andersen & Co. and has held a variety of executive positions in private equity companies including 3i Group plc, Gartmore Investment Management Limited and Citicorp Venture Capital Ltd. Liz was also Director of Corporate Affairs at Smith & Nephew plc. Liz brings significant business, financial and investment knowledge to the Board, and has wide experience of being a chair and a member of audit, remuneration, nominations, disclosure, risk and corporate social responsibility committees. Liz's diverse knowledge and broad range of financial expertise is a great addition to the boardroom bringing a fresh, logical perspective to Board discussions and decision-making.

External appointments:

- Senior Independent Director and chair of the Audit Committee at Melrose Industries plc;
- Non-executive Director and chair of the Audit Committee at Novo Nordisk A/S; and
- External member of the House of Lords Commission and chair of its Audit Committee.

Amanda Mesler (56)
Non-executive Director; Independent

Appointed: 17 May 2018

Tenure: 2 years

Skills and competencies: Amanda brings to the Group extensive international leadership and general management experience from the technology and fintech sectors. She has over 26 years of experience at senior management and Board level at large international companies. She led a $1 billion global practice at Electronic Data Services and has experience sitting on audit, risk and remuneration committees. Amanda provides an entrepreneurial perspective to the Board and valuable insight into the Company's increasingly important technical evolution.

External appointments:

- Chief Executive Officer of CashFlows Europe Limited; and
- Non-executive Director of Insect Technology Group Holdings Limited.

Earl Shipp (62)
Non-executive Director; Independent

Appointed: 1 January 2019

Tenure: 1 year

Skills and competencies: With an extensive career in the chemicals industry and having held a senior leadership role in a safety-critical process environment, Earl brings significant safety, project management, environmental, sustainability and strategic expertise to the Board and Committees. This, along with his innovative way of thinking, enables Earl to contribute on a wide range of issues to Board and Committee debates, particularly in relation to safety management.

External appointments:

- Non-executive Director of Olin Corporation;
- Non-executive Director of CHI St. Luke's Health System of Texas; and
- Commissioner of Brazoria-Fort Bend Rail District (Texas).

Jonathan Silver (62)
Non-executive Director; Independent

Appointed: 16 May 2019

Tenure: 1 year

Skills and competencies: Jonathan has considerable knowledge of the US-regulated energy environment, experience and understanding of integrating public policy and technology into a utility as well as a strong background in finance. Previously, Jonathan was the head of the US government's $40 billion clean energy investment fund. He is currently the Managing Partner of Tax Equity Advisors LLC, which manages investment in large-scale renewable projects and was recognised as one of the 'Top 10 Green Tech Influencers' in the US. Jonathan's strong background in finance and government policy along with his long career at the intersection of policy, technology, finance, and energy brings innovative and positive insight to the Board's policy discussions and to its interaction with management.

External appointments:

- Managing Partner of Tax Equity Advisors LLC;
- Director of Plug Power, Inc; and
- Director of Intellihot Inc.

A N R

Mark Williamson (62)
Non-executive Director and Senior Independent Director

Appointed: 3 September 2012

Tenure: 7 years

Skills and competencies: As a qualified chartered accountant, Mark brings considerable financial and general managerial experience to the Company. His previous roles as Chief Financial Officer of International Power plc, Non-executive Director and Senior Independent Director of Alent plc and Chairman of Imperial Brands PLC cement his extensive financial experience and give him a deep understanding of the utilities sector. This allows him to bring a financial and strategic outlook on diverse subjects in support of the Board and its Committees. Mark acts as an effective board evaluator, provides a logical eye, and makes impartial judgements weighing up options for the Board in a dispassionate way. In his role as Senior Independent Director, Mark brings an excellent understanding of investor expectations as well as providing significant insight into managing relationships with investor and financial communities.

External appointment:

- Chairman of Spectris plc.

Corporate Governance overview

Your Board remains committed to the highest standards of Corporate Governance and in 2019/20 continued to embed the new UK Corporate Governance Code into the work that we do.

Board

Our Board is responsible collectively for the effective oversight of the Company and its businesses. It determines the Company's strategic direction and objectives, business plan, dividend policy, viability and governance structure to help achieve long-term success and deliver sustainable shareholder value. The Board also plays a major role in setting and leading the Company's culture and wider sustainability goals. It considers key stakeholders in its decision-making and, in doing so, ensures that Directors comply with their duty under section 172 of the Companies Act 2006.

To operate efficiently and give the right level of attention and consideration to relevant matters, the Board delegates authority to its Board Committees. Each Committee Chair reports to the Board on their Committee's activities after each meeting.

Key matters considered by the Board include:

- the Company's strategy and long-term strategic objectives;
- risk appetite and determination of principal risks;
- overall corporate governance arrangements, systems of internal control and risk management;
- annual business plan and budget;
- significant changes in capital structure;
- succession planning for Board and senior management;
- half-year and full-year results statements, Annual Report and Accounts and other statutory announcements;
- oversight of the Company's response to major crises and other significant challenges; and
- determination of the framework or policy for the remuneration of the Chairman, Chief Executive, Executive Directors, Group General Counsel and Company Secretary, and direct reports to the Chief Executive, following recommendation from the Remuneration Committee.

Board Committees

Audit Committee:
- Financial reporting.
- Internal controls.
- Processes for risk management.
- Internal audit.
- External auditor.

Nominations Committee:
- Board and Committee composition.
- Succession planning.
- Board appointments.

Remuneration Committee:
- Policy.
- Consideration of exercise of discretion.
- Implementation of policy.
- Incentive design and setting of targets.

Finance Committee:
- Financing policies and decisions.
- Credit exposure.
- Hedging.
- Foreign exchange transactions.
- Tax strategy and policy.
- Guarantees and indemnities.

Safety, Environment and Health (SEH) Committee:
- SEH strategy and policies.
- Performance targets.
- Sustainability.

Executive Committee

Led by the Chief Executive, the Committee oversees the safety, operational and financial performance of the Company. It is responsible for making the day-to-day management and operational decisions it considers necessary to safeguard the interests of the Company and to further the strategy, business objectives and targets established by the Board.

The Committee members have a broad range of skills and expertise that are updated through training and development. Some members also hold external non-executive directorships, giving them valuable board experience. Those members of the Committee who are not Directors regularly attend Board and Committee meetings for specific agenda items.

Other management committees

Disclosure Committee; Investment Committee; Share Schemes Sub-Committee.

Our Executive Committee

Three Executive Directors are members of the Executive Committee, as well as being on the Board. The Group General Counsel and Company Secretary is also a member of the Executive Committee. See their biographies on page 66.

John Pettigrew – Chief Executive and Committee Chair
Andy Agg – Chief Financial Officer
Nicola Shaw – Executive Director, UK
Alison Kay – Group General Counsel and Company Secretary

Governance structure

The schedule of matters reserved for the Board and terms of reference for each Board Committee are available in our Board Governance Document at: www.nationalgrid.com

Reports from each of the Board Committees, together with details of their activities, are set out on pages 76 – 87.

Full biographies for the Executive Committee are available at: www.nationalgrid.com

Andy Doyle
Chief Human Resources Officer

Badar Khan
President, National Grid US

Barney Wyld
Group Corporate Affairs Director

Adriana Karaboutis
Chief Information and Digital Officer

Jon Butterworth
Managing Director, National Grid Ventures

Badar was previously President of the National Grid Ventures business before stepping into the role of Interim President of the US Business, following Dean Seavers stepping down in November 2019, and was appointed to the role permanently on 2 April 2020. Jon Butterworth was appointed Managing Director of National Grid Ventures and a member of the Executive Committee after fulfilling this role on an interim basis since November 2019.

Matters considered by the Board

Board and Committee membership and attendance

The table below sets out the Board and Committee attendance during the year to 31 March 2020. Attendance is shown as the number of meetings attended out of the total number of meetings possible for the individual Director during the year.

Director	Board	Audit	Finance	Nominations	Remuneration	Safety, Environment and Health
Sir Peter Gershon	◆ 12 of 12	–	–	◆ 7 of 7	–	–
John Pettigrew	12 of 12	–	4 of 4	–	–	–
Andy Agg	12 of 12	–	4 of 4	–	–	–
Nicola Shaw	12 of 12	–	–	–	–	–
Jonathan Dawson	12 of 12	–	4 of 4	7 of 7	◆ 5 of 5	–
Therese Esperdy	11 of 12[1]	4 of 4	◆ 4 of 4	7 of 7	–	–
Paul Golby	11 of 12[1]	4 of 4	–	7 of 7	–	◆ 6 of 6
Liz Hewitt – Appointed on 1 January 2020	2 of 2	1 of 1	–	2 of 2	–	1 of 1
Amanda Mesler	12 of 12	4 of 4	1 of 1	7 of 7	–	5 of 5
Earl Shipp	12 of 12	–	–	6 of 7[2]	4 of 5[2]	6 of 6
Jonathan Silver – Appointed on 16 May 2019	9 of 9	–	3 of 3	6 of 6	2 of 3[3]	–
Mark Williamson	11 of 12[1]	◆ 4 of 4	–	7 of 7	5 of 5	–
Former Directors who served for part of the year						
Dean Seavers – Stepped down from position of Executive Director, US on 5 November 2019	6 of 8[4]	–	–	–	–	–
Nora Mead Brownell – Stepped down from position of Non-executive Director on 8 April 2019	–	–	–	–	–	–

1. Four ad hoc Board meetings were held during the year and all non-attendance was due to short notice.
2. Earl Shipp did not attend the April Nominations and Remuneration Committee meetings due to personal circumstances.
3. A Remuneration Committee meeting was held at short notice in November 2019 and Jonathan Silver was unable to attend.
4. Dean Seavers was unable to attend the October and November 2019 Board meetings.

All Board/Committee members who were unable to attend a meeting provided comments in advance.

◆ Board/Committee Chair

Examples of Board focus during the year include:

Key areas of activity	Matters considered	Key decisions made/link to purpose	Views of key stakeholder groups considered
Strategy and performance	Strategy remained a key focus throughout the year. The Board participated in two interactive strategy sessions in addition to the time allocated during Board meetings this year. The offsite sessions in September 2019 and January 2020 provided the Board with an opportunity to scrutinise business performance against the strategic plan and review the key strategic objectives for the year. In the year, the Board focused on: • developing a Business Plan that meets the Group's requirements, aligned to the Company's purpose, vision and values and underpinned by a robust financial strategy; • reviewing and scrutinising Group trading performance, budget and consideration of share price; • shareholders' interests if the Labour Party had won the 2019 UK General Election and implemented its manifesto commitment to nationalise National Grid UK regulated business and interconnectors; • growth strategies for NGV, including renewable generation strategy; • performance updates from the UK and US businesses; • the key milestones and progress made by the Company on the energy transition; • climate change and our strategy to further reduce our emissions, to achieve net zero by 2050 and make a wider contribution to the decarbonisation of the economies in which we operate; • innovation and technology – see separate section below; • the increasingly strong performance of the UK and US commercial property portfolio; and • the sequence of events that took place on Friday 9 August 2019 cumulatively resulted in a widespread electricity power outage across the country.	• Board approval of the Company's Business Plan and strategy; • the direction of travel for our digital strategy; • following consideration of the external energy landscape, endorsed the strategic priority areas for management focus for 2020/21; • reviewed and endorsed the ambition of net zero by 2050 and the interim targets for the Company as a whole; • received updates on cyber security activities and the progress being made in this area. The Board agreed it was acting in accordance with its risk appetite in this area; and • commissioned an internal investigation report, along with an ESO technical report to establish the factors that had led to, and the lessons that could be learned from, the power outage which had occurred on Friday 9 August 2019.	All: Investors Suppliers Customers Regulators Communities and governments Our colleagues

Corporate Governance overview continued

Matters considered by the Board continued

Key areas of activity	Matters considered	Key decisions made/link to purpose	Views of key stakeholder groups considered
Business plan and dividend	Discussed the ongoing financial strategy and business plan for the year. Regular updates were received on emerging themes and key external challenges, and particular consideration was given to these and the current political environment. The Group's financial capacity under the Business Plan was stress tested using the current approach to fund the dividend until Financial Year 2026, in the context of current market expectations. The Board also reviewed the suitability of the Group's dividend policy wording considering the key regulatory processes in the UK and US. In light of the COVID-19 pandemic, the Board discussed the issues that had been considered and analysis undertaken in relation to the payment of a dividend, which had included financial scenarios and resilience testing, and consideration of stakeholders including investors such as pension funds.	• Approval of the initial five-year plan and the viability and going concern statements; • Confirmation that the Group had a financially sustainable business model for the foreseeable future, defined for this purpose only as the five years from March 2019 to March 2024; • The Board considers a range of factors when annually reviewing and setting the dividend, including expected performance and regulatory developments. No dividend policy changes were recommended and the current policy was reaffirmed; and • Approved the payment of the final dividend at its additional June 2020 Board meeting.	Investors Customers Communities and governments Our colleagues
Employee engagement and culture	This year the Board received biannual updates on the implementation of employee voice on Board activity and culture. The Board reviewed the existing employee engagement implementation plan and commented on the overview of activity for the next half of the year. Focus has continued on improving communication channels between the Board and employees to ensure feedback and updates on actions are shared. Discussed the importance of a diverse and engaged workforce to deliver our Group strategy and the continued need to ensure an open culture where dialogue between the Board, senior management and the workforce is encouraged. Our workforce continued to be a key focus as we navigated the impact of the COVID-19 pandemic. The health and safety of our employees remained paramount and discussions centred on keeping critical employees safe whilst their work continued. The Board received weekly updates on employee wellbeing and absenteeism.	• Board input on the approach taken to workforce engagement activities and the topics discussed based on employee feedback; and • The Board believes that existing approaches and mechanisms enable comprehensive two-way engagement opportunities with the workforce and is satisfied that the approach taken is an effective alternative to the proposed methods set out in the Code. Please see pages 72 and 73 for more information.	Our colleagues
Political and regulatory environment	The Board has continued to focus on how to promote the success of the Company during further developments to the external environment in the UK and US. In the UK, regular updates were received on risks and opportunities posed by Brexit proposals and the potential for state ownership, and continued engagement activities with our stakeholders on the issue. In the US, the Board received regular updates on the gas supply constraint in downstate New York. Once an agreement has been reached with the Governor of New York, the focus for the US Business will be on executing the longer-term supply strategy and undertaking a major change in the way it engages with external stakeholders in New York.	• Board input on, support for and monitoring of the UK and US regulatory strategies; • Political sub-group of the Executive Committee continued to take a more hands-on approach to the evolving political and regulatory landscape and its implications for the Company; and • The Board agreed that a lessons learned exercise would be undertaken which would include an assessment of the Company stakeholder management at the US state political level. The reviews were conducted by external consultants. The Board received a comprehensive assessment of the lessons learned at the March 2020 meeting and the action plan to implement the reviews' recommendations was approved at the April 2020 meeting.	All: Investors Suppliers Customers Regulators Communities and governments Our colleagues

Key areas of activity	Matters considered	Key decisions made/link to purpose	Views of key stakeholder groups considered
RIIO-2 price control	The Board scrutinised and challenged the Company's UK regulatory strategy throughout the year, providing feedback, guidance and support for its ongoing development. The Board reviewed the financials of the business plans, noting that the majority of spend was associated with asset health and increased cyber security requirements. A strong stakeholder engagement strategy was adopted by the Transmission and System Operator Boards. This commitment was demonstrated by signing engagement charters to be stakeholder led and to be part of the User Group process. Our final business plans were submitted to Ofgem in December 2019 following extensive stakeholder engagement panels, challenge groups, and consideration against the 2050 net zero target.	• Draft business plans were reviewed, and the Board approved the creation of a sub-committee of the Board, chaired by the Chairman, to confirm the content for the business plans and accompanying assurance statements prior to the final submission to Ofgem; • the sub-committee considered how the comments from the Finance Committee on the Financeability Assurance Statements had been taken into account; and • stakeholder engagement consisting of 2,800 individuals, representing the full cross-section of our stakeholder segments, and 13,000+ consumers, shaped the plans to deliver a safe and reliable network while enabling the transition to a low carbon network. The Board reiterated that the plans had inbuilt mechanisms to cope with potential changes to the energy landscape without increasing consumer bills in real terms.	Investors Customers Regulators
Technology and innovation	The Board reviewed the performance and success of National Grid Partners against the Business Plan and heard about a number of proposed investments. The business continued to perform well and focus remained on disruptive innovation capabilities.	• The Board reviewed the overview of investment strategies and endorsed the growing portfolio noting the establishment of a positive reputation in the external market.	Our colleagues
Total societal impact	Focus has been on navigating expectations of various stakeholder groups as societal expectations have changed. National Grid is at the centre of the energy system in the UK and US, and we are uniquely positioned to drive societal impact in the energy sector and enable a clean, green energy system.	• The Board recommended the development and implementation of a new Responsible Business framework for the Company.	All: Investors Suppliers Customers Regulators Communities and governments Our colleagues

Looking forward, the Board's focus for next year is expected to include:
- management of threats and opportunities posed by the next phase of the COVID-19 pandemic;
- ensuring an acceptable outcome for RIIO-2;
- strategy, including the future of gas;
- organisation, culture, bench strength and talent;
- US reputation recovery;
- New York rate case filings; and
- net zero.

Corporate Governance overview continued

Our culture journey

We recognise that how we do things is as important as what we do.

The Board is responsible for influencing and monitoring culture throughout the organisation to ensure we are emulating desired beliefs and behaviours both in and outside the boardroom, and identifying areas where culture is embedded strongly and areas where shifts in culture are required. Our culture determines how we behave, how we make decisions and our attitude towards risk aligned with the Group's purpose, vision and values.

The Board has spent considerable time reviewing and determining the right culture for the organisation and recognises that there is still work to be done; the journey so far is outlined below.

Culture-themed internal Board and Committee evaluation assessed how the Board set the 'tone from the top' and how effectively this was cascaded throughout the Company.

The Board agreed culture-specific actions and a culture scorecard to be reported to the Board at least annually.

Re-established clear purpose, vision and values and agreed a common definition of culture as 'Our values, beliefs and behaviours that characterise our Company and guide our practice.'

Agreed areas for increased Board focus including visible leadership and agreed the approach to engaging most effectively with employees.

Approved format for culture scorecard to aid the Board in monitoring culture at Group level.

Annual employee survey results were considered, and areas of improvement augmented into the Board's behaviours including local engagement sessions in the UK and US.

The 2018 Corporate Governance Code was considered in depth by the Board, and key stakeholders were mapped out and discussed. The Board discussed its chosen approach to workforce engagement and an implementation plan was agreed.

A revised culture scorecard was considered against an overall status for each of the Company's values, bringing together data from teams including safety, ethics, compliance, supply chain management and customers. The Company committed to review how to evolve its approach to monitoring and measuring culture, along with how it could align the activity taking place to have a greater combined impact and make change happen at a faster pace.

Board culture evaluation

During the year the Board considered culture throughout its decision-making and the internal Board evaluation incorporated a review of culture. For more information see page 74.

Board review of culture scorecard

A new set of vision and values was agreed for the Company and the Board agreed to evolve its approach to measuring and monitoring culture across the Company with the aim of having a simplified approach. This would be based on the Company's externally benchmarked annual safety survey, external customer feedback and the modification of the Company's annual engagement survey to align around a more useful cultural diagnostic.

Culture diagnostic work throughout the year showed that the current culture was highly consistent across the Company, promoting a common identity across the organisation; areas of focus and change were also identified as part of the exercise and these have been considered.

Over the next year the Board will focus on the following culture-related activities:

- monitor the implementation of the Company's purpose, vision and values and the link to the Company's culture;
- review and monitor the culture actions of the internal Board evaluation to ensure that the 'tone from the top' is correct and the Board has a clear view of culture both at Board level and within the organisation;
- facilitate a culture session with the Chief Human Resources Officer and the Board to consider the results of the 2019/20 Board evaluation; and
- review and monitor the change in culture and ways of working in the Company during the COVID-19 pandemic.

Workforce engagement

Employee engagement sessions

In response to the Code we have implemented a range of Employee Voice on Board (EVOB) activities to ensure that there is appropriate meaningful engagement between the Board and our workforce. Activities seek to expose Board members to a broad cross section of employees and employee experiences across the Company and our locations. Using the employee input through the EVOB activity to feed Board decision-making is a core part of the Code and a discussion topic and action log has been maintained following each of the relevant activities.

During the year, the Non-executive Directors (NEDs) held three employee voice engagement sessions, in Boston, New York and London. Unfortunately the session scheduled for March 2020 in California was cancelled due to COVID-19. The employee engagement sessions provided an opportunity for employees and all NEDs to discuss topical subjects, including how successful employees felt the Company had been in embedding its values, beliefs and behaviours throughout the organisation, and shared their views on the gender pay gap. The two-way conversations were strongly encouraged and provided a great opportunity for the Directors and employees to engage more widely in a more informal environment. The Board allocates time directly after the sessions to discuss key outcomes and takeaways. Communications this year have increased to ensure our employees are kept informed about what was being heard in these sessions as well as progress against the actions taken from the meetings. The Board continues to receive updates on the actions taken from these sessions.

Eight non-exec board members hosted:

44 **face-to-face** sessions

across **27** **different sites**

meeting with over **240** **colleagues**

resulting in **27** **actions** captured

Colleagues' feedback has influenced the board's thinking in the following areas and actions are currently in progress:

Inclusion and diversity | Safety | Company brand | Onboarding | Change management | Silos | Line management | Culture | IT | Talent attraction and retention | Decision making | Communication

Employee Voice engagement sessions with NEDs

April 2019, Boston, US

Employees took the opportunity to discuss our corporate culture. The Board were pleased with the unanimous agreement of how important our safety culture was across the Company and the open discussions on wide-ranging topics which followed. Discussions focused on the requirement to positively reinforce the desired culture across all areas of the business and to ensure that communication channels and transparency of actions increased. Topics of concern were raised around the limitations of the existing processes and systems and the Board noted these challenges as areas for improvement.

September 2019, New York, US

These sessions focused on the ongoing communication strategy being implemented throughout the Company. Discussions centred on sharing information across jurisdictions and individual business areas to help 'find a better way' and to promote project successes and learn from any programme failures. The Board listened to concerns around technology and provided an update on the plan going forward.

December 2019, London, UK

The Board praised the active engagement at these sessions with topics focused on corporate identity, culture, diversity and the gender pay gap. Conversations highlighted the need to increase ethnic and gender diversity in senior roles and the NEDs informed the attendees of the latest initiatives (see table below). Positive conversations around reducing the gender pay gap also took place, which started with understanding the reasoning behind the difficulty experienced in recruiting women for some specific roles within the business. The Board encouraged discussions on ideas for programmes aimed at encouraging and enabling women to return from maternity leave.

Employee Resource Group (ERG) Non-executive Director Dinner

November 2019, London, UK

In November, a dinner was held to provide the opportunity for 16 UK ERG Chairs and leads to hold informal discussion with NEDs on the importance and impact of the ERG they support and lead. NEDs were able to discuss and gain feedback on inclusion and diversity related engagement topics. Following the positive feedback received from this session we have planned an equivalent US dinner for 2020.

What have we heard?	What have we done?
During the employee engagement sessions, some of the areas that we heard about were:	
• more needs to be done to create ethnic and gender diversity within the Company and to ensure that senior roles are representative	• appreciating cultural differences is valued by our ethnically diverse colleagues, so we have refreshed and simplified our Reverse Monitoring process to build on cultural awareness by 'walking in our shoes'; and • a new category for Inclusion has been created for the Chairman's Awards, which can be awarded to any individual or group that has contributed positively towards inclusion at National Grid. Examples include involvement in our employee resource groups and evidence of working towards our Group inclusion and diversity strategy.
• more visible support of and advocacy for the employee resource groups by the Board and Executive Committee	• the Executive Committee has joined the Board in supporting and advocating the work of the employee resource groups on a regular basis, including attendance at the twice-yearly Inclusion Forums. The full calendar of events has also been circulated.
• communication and cascading issues combined with process and system changes have caused problems	• a communications strategy has been developed to ensure stronger alignment between the Group narrative and local communications to create a clear line of sight from Group messages to regional entities.
• improvements needed in two-way communications to ensure priorities and focus areas are aligned and that all departments are working towards the overarching National Grid goal	• the UK business has implemented a comprehensive leadership communications programme which includes Q&A sessions, breakfast and lunches with Executive Directors and increased frequency of Town Halls to engage in conversations about the Company's direction, priorities and to give the Directors more opportunities to listen to issues and ideas from across the business.
• frustrations that there are no obvious changes following the annual employee engagement survey	• the US business is developing a communications plan to address any employee concerns more effectively and to ensure updates are communicated and cascaded successfully.
• conversations around gender pay and suggestions that more needs to be done to engage and enable women returning from maternity leave	• in response to gender pay gap concerns and that women require encouragement from the Company to return from maternity leave, we have compiled a list of leading senior examples who flex their work pattern. They have been interviewed by our communications team and their 'work story' will feature in our internal email bulletin every six weeks.
• concerns around technology and cyber threats	• a key focus for 2020/21 is to implement our updated information technology strategy in response to concerns raised by employees throughout the Group.

Corporate Governance overview continued

Performance evaluation

2019/20 Internal Board evaluation

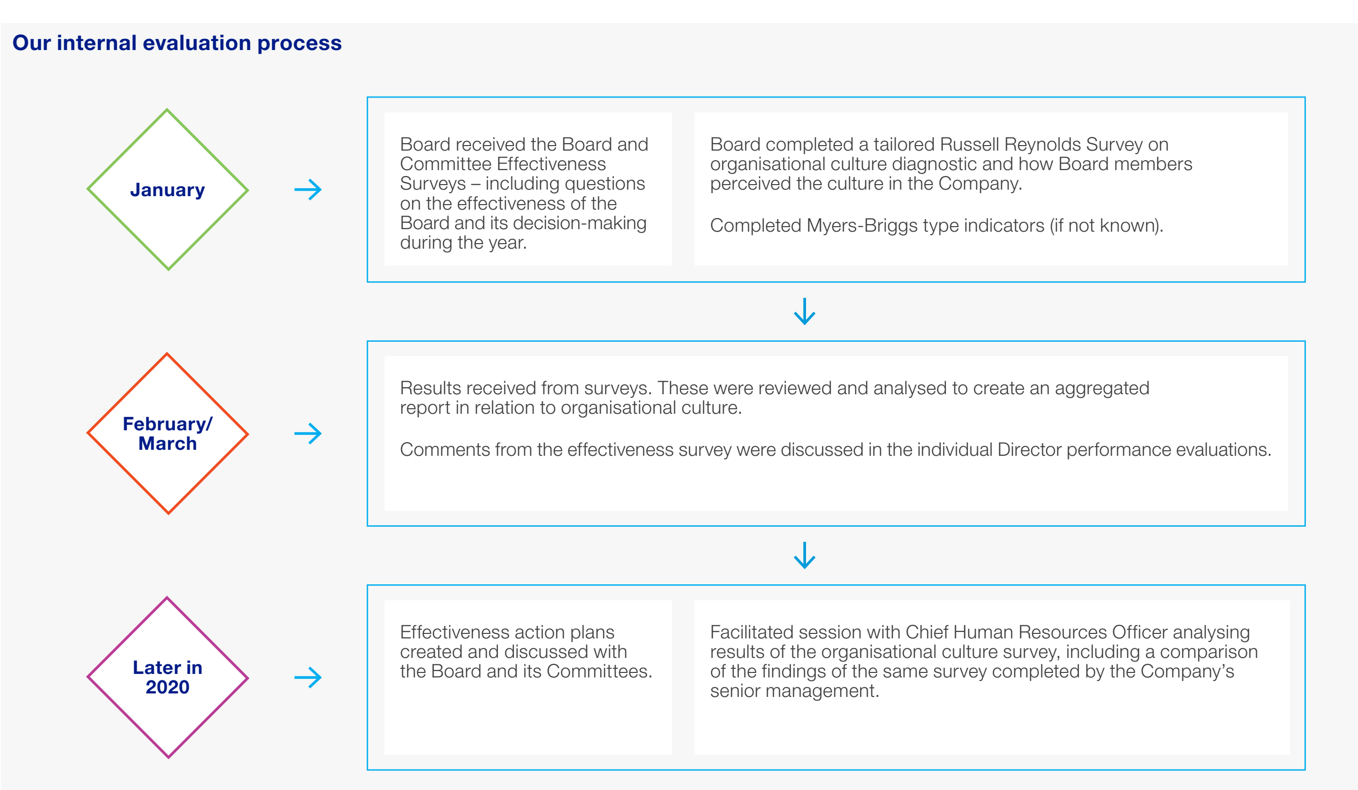
Following the external Board evaluation which was undertaken last year, this year, we undertook an internally facilitated Board and Committee evaluation.

The evaluation focused on Board development and the purpose of this review was to gain:

- insights into how Directors viewed the culture of the Company;
- an understanding of what constituted effective decisions made during the year and why; and
- a deeper understanding about our culture and how it aligned with the Company's ambitions.

The effectiveness of each of the Board Committees was taken into account in the evaluation. The results confirmed that there were minor areas for improvement in relation to Board effectiveness.

The process of the evaluation and the areas identified for further development are noted below.



Actions to enhance the Board's effectiveness for 2020/21

The Board discussed the results of the evaluation in April 2020 and in May 2020 the following actions were agreed:

Action	Responsibility
More effective discussion and decision-making through streamlined and targeted papers to the Board and its Committees.	Chief Executive and Group General Counsel and Company Secretary
External perspectives to be brought forward to the Board to bolster management expertise including in the areas of cyber, climate change, customer and developments in energy policy and energy technology.	Chief Executive and Group General Counsel and Company Secretary
Continue with and enhance the effectiveness of employee engagement sessions to ensure a clearer alignment between these sessions and discussions/decisions made by the Board and its Committees.	Chief Executive, Group General Counsel and Company Secretary and Chief Human Resources Officer
Devote more time to the discussion of strategic priorities at Board meetings.	Chairman, Group General Counsel and Company Secretary and Chief Human Resources Officer

Progress against actions for the Board agreed in 2018/19 external evaluation

Action	Progress made
Invite our customers into the boardroom to understand and directly hear their perspectives.	The Chairs of both our RIIO-2 Transmission and ESO Stakeholder Panels met with the Board in May and July 2019 respectively. This brought a valuable insight into how our RIIO teams were focusing on the needs of our customers during the regulatory review. We will keep the current situation under review and aim to invite additional customer groups into the boardroom later this year.
Continue to invite external speakers to Board meetings/ dinners on topical issues.	The Governor of Massachusetts and a member of the Governor's office met with the Board in March 2019. The Chair, CEO and incoming CEO of Ofgem met with the Board in November 2019. We had invited Pacific Gas and Electric to meet with the Board in March 2020; however, this has now been postponed due to COVID-19. We continue to monitor the topical issues and will keep under review prospective external attendees who could meet with the Board later in the year.
Use market research agencies to bring the voice of the customer and other stakeholders into the boardroom.	This has been undertaken this year through regular reports from the businesses who use these agencies to inform their views.
Facilitated session to be held to consider how to enhance the collective strengths of the Board in light of the individual strengths evidenced as part of the evaluation.	An all-inclusive facilitated session was due to take place in March 2020 in California which would have covered culture and the results of this year's internal Board evaluation. Due to COVID-19 this has been postponed.
Sponsor of each paper to consider why the Board is being asked to consider a particular paper. On strategic papers, the Chairman to ask the sponsor at the beginning of the meeting what they are hoping to achieve in the meeting.	We have continued to develop our Board and strategic papers with the assistance of a third party to ensure Board meeting effectiveness. The amendments to our paper templates have been made to encourage and guide the sponsor and the paper author to consider the end aim or action they require from the Board. A focus for this year is to ensure the strategic aim is re-communicated at the beginning of each item before Board discussion and input commences.
Add a Corporate Social Responsibility session annually to the Board agenda.	A deep dive into Corporate Social Responsibility took place at the January 2020 Board strategy session and will be discussed again later in the year.

Directors' induction and training

Directors' induction programme

Following appointment to the National Grid Board, each new Director receives a comprehensive induction programme tailored to their experience, background and the requirements of the role. Consideration is also given to Committee appointments, and the Group General Counsel and Company Secretary assists the Chairman in designing and facilitating the individual programmes. They are primarily designed with the purpose of onboarding and familiarising the new Directors with our business, vision, values, governance and people.

Both Earl Shipp and Jonathan Silver were provided with a formal, tailored induction programme upon joining the Board last year. A detailed summary can be found below.

The Board has also welcomed Liz Hewitt this year and we will report on progress against her induction plan next year.

Non-executive Director induction examples

Earl and Jonathan both underwent a tailored induction programme covering a range of areas of the business including governance, remuneration and stakeholder matters. Throughout the year they have both met with senior management from key business areas and functions as well as employees across the UK, US and NGV businesses. They also both separately received a briefing from our legal advisors which included: company law and directors' duties; corporate governance; the Market Abuse Regulation; and listing and disclosure obligations.

Both directors met key employees in our Reward team to understand our reward strategy, remuneration policy and current market practice necessary to assist with their appointment to the Remuneration Committee.

Earl Shipp

Focus was given to matters pertinent to his role on the Safety, Environment and Health Committee.

- Earl met with a number of employees throughout the business and in key safety roles including Paul Golby, the Committee Chair, to discuss National Grid's Safety Framework, including carbon reduction and climate change, wellbeing, sustainability and our 2050 net zero ambition.
- He undertook numerous site visits in both the UK and the US and attended a thorough and engaging safety roadshow in May 2019. This included a visit to our gas, electric and customer business units in New York and New Jersey where he was provided with a detailed end-to-end view of our smart grid approach and our Grid Modernisation Strategy. He also visited control rooms and contact centres in Boston and learnt more about our approach to personalisation and tailoring our customer experience journeys towards the electrification of vehicles and the clean energy future.

Jonathan Silver

Focus for Jonathan's induction was given to matters pertinent to his role on the Finance Committee.

- Jonathan met with the Group Treasurer and the Group Head of Tax who provided a summary of the financing strategy and an overview of the current financial risks faced by the Group, including the current risk appetite and management framework in relation to those risks. Discussions also included: treasury controls; processes and systems; National Grid's tax strategy; the impact of US tax reform; and an overview of pension schemes and pension strategy. He also met key employees throughout the business to discuss financial accounting and control issues, the statutory audit, the annual business planning process and other substantive topics involving pensions and insurance.
- Jonathan undertook a number of site visits across Rhode Island and Massachusetts. This included a tour of a liquefied natural gas facility, as well as visits to renewable energy projects across Rhode Island. He also received in-depth information briefings and undertook control centre tours across the customer, gas distribution and gas transmission functions.

Director development and training

The Chairman has overall responsibility for ensuring that our Non-executive Directors receive suitable ongoing training to enable them to remain an effective Board member. Individual training requirements are reviewed and agreed annually on a one-on-one basis. As our internal and external business environment continues to change, it is important to ensure that Directors' skills and knowledge are refreshed and updated regularly. In addition to individual tailored training, updates on corporate governance, legal and regulatory matters are also provided by way of briefing papers and presentations at Board meetings. Non-executive Directors receive details of training and development opportunities offered by external advisors on various topics including cyber security, operational resilience, climate change and technical updates on a regular basis and we encourage and monitor attendance. In light of COVID-19, training opportunities have continued virtually via webinars. Additionally, the Non-executive Directors are expected to visit at least one operational site annually, a target which is regularly exceeded. Examples of site visits undertaken this year include a visit to the Feeder 9 Project at Goxhill in the UK and South Street Substation Project in Providence, Rhode Island in the US.

Audit Committee

Mark Williamson
Committee Chair

Key areas of focus in 2019/20:
- Assessing and responding to the impact of COVID-19 on year-end financial reporting and internal controls;
- Internal controls;
- Overall framework for risk assurance;
- Cyber security and cyber audit;
- New UK system of financial record (Phase 1);
- Climate change related financial disclosures; and
- Finance leadership changes.

Key areas of focus in 2020/21:
- Ongoing review of the impact of COVID-19;
- Cyber security and cyber audit;
- Overall framework for risk assurance;
- New UK system of financial record (Phase 2);
- Climate change related financial disclosures and Responsible Business reporting; and
- The UK regulatory developments and impact on the Committee.

Composition of the Audit Committee
The Committee is made up of five independent Non-executive Directors:
- Mark Williamson (Committee Chair);
- Therese Esperdy;
- Paul Golby;
- Liz Hewitt; and
- Amanda Mesler.

The Board is satisfied that all members of the Committee have recent and relevant financial experience and that the Chair, as a chartered accountant, and with significant board level financial and audit experience, is suitably qualified. The Committee is deemed to have competence relevant to the sector in which the Company operates.

The Committee members' biographies are on pages 66 and 67 and contain details of each member's skills and experience.

Review of the year
The Committee met four times during the year to undertake its role in providing oversight and monitoring the integrity of financial reporting, the effectiveness of internal risk management, control and assurance processes, the Company's governance framework and the external audit. Following the decision to defer the Group's results announcement by a month in light of the COVID-19 pandemic, the Committee met in May 2020 with an additional meeting convened in June 2020.

A substantial proportion of the Committee's time from late March 2020 onwards was devoted to focusing on the year-end financial reporting, internal controls and related impacts arising from the COVID-19 pandemic in the UK and US.

Assessing and responding to the impact of COVID-19 on year-end financial reporting and internal controls
The Committee met as scheduled on 25 March, in the week following the stay at home notices being issued in both the UK and US. The Committee discussed management's evolving risk assessment relating to the impact of the pandemic on the year-end reporting and close process, as well as contingency plans. The Committee sought regular updates from management throughout the year-end close process as continuity plans were implemented.

As discussed on page 78, the key accounting, financial reporting and internal control related matters were discussed in the May 2020 and June 2020 meetings, and throughout this period I remained in close contact with the Chief Financial Officer, receiving regular updates as the situation evolved. I am pleased to report that the Group's close processes and Sarbanes-Oxley Act 2002 (SOX) controls operated as intended without significant deviation.

In light of the rapidly changing regulatory and economic circumstances throughout late March and early April 2020, a decision was taken to defer the Company's results announcement by one month to June 2020. This decision was consistent with those taken by many other companies, and in keeping with advice from the Financial Reporting Council (FRC), Financial Conduct Authority (FCA) and SEC to afford management and the Board more time to better understand the evolving situation. This has also allowed us to appropriately address the key disclosure requirements in this Annual Report, in a number of key areas including:
- accounting matters – and in particular the impact of the moratoriums on collections in the US on bad debt reserves and cash collection forecasts;
- going concern – focused on the appropriateness of the Group's analysis as regards reasonable downside scenarios;
- long-term viability statement – concerning the key assumptions and reassessment of viability from additional perspectives given the uncertainty and dynamic external factors and their cumulative effect in the medium and long term; and
- the consideration and assessment of a specific COVID-19 risk scenario or cluster scenario.

Continued focus on internal control over financial reporting and IT
The Committee considers these matters at each meeting as a matter of routine. The focus in the early part of the year was on monitoring progress reported by management to address IT control deficiencies highlighted in previous years, and in May 2020 we concluded that sufficient additional control activity had been implemented to allow us to judge the 'significant deficiency' previously reported in respect of US IT infrastructure controls to be remediated and closed.

During the second half of the year, time was spent understanding management's progress on enhancing control environments across all locations. In particular, in March and May 2020, the Committee considered management updates on the lessons learnt from the initial implementation of SAP S/4 HANA (as part of the MyFinance programme) for the ESO prior to the planned deployment of the technology as the financial system of record across the UK regulated business in mid-2021.

As we do annually, we considered the impact of these matters on the year-end attestation relating to the effectiveness of internal controls over financial reporting required under SOX.

Overall framework for risk assurance
During the year, we discussed the Company's control framework and its maturity and it was agreed that management would come back to the Committee regularly with updates on a number of improvements and enhancements to the Company's risk, control and assurance framework that was consistent across the Group. I was pleased to see the appointment of a new Chief Risk and Compliance Officer and the establishment of a central team to drive a more common approach to second line of assurance. In May 2020, we were updated on the number of actions that had already been executed and the plans that had been developed, including the appointment of respective leads in all businesses and functions and the creation of implementation plans to push the improvements forward.

Cyber security and cyber audit update
In September 2019, the Group Chief Information and Digital Officer and Chief Information and Security Officer joined for the delivery of the cyber-risk-related audit update to the Committee. The Committee noted the significant work being undertaken to remediate control weaknesses and that it was proceeding in line with expectations. Following this meeting, an update on digital was presented to the Board in December 2019 to provide a consistent view of risk within the Company's security framework. The Board confirmed it was comfortable with the Company's current cyber priorities and stressed the importance of engagement with regulators for future cyber upgrades. The Committee will consider cyber assurance again later in the year.

Climate change related financial disclosures

The Company has continued to make good progress towards providing disclosures consistent with the recommendations set out by the Task Force on Climate-related Financial Disclosures (TCFD). In the year, the Committee was presented with a roadmap to progress towards full compliance of TCFD and the current gap analysis. The Committee noted progress made in the year, including the identification of a principal risk relating to the threats and opportunities around climate change and the Company's first set of disclosures concerning longer-term scenario analysis.

In the context of the financial statements, the Committee also considered the impact of climate change on management's key judgements and estimates, in particular regarding gas asset lives as set out on page 78.

New UK system of financial record (MyFinance) – Phase 1

MyFinance became the financial system of record for the ESO at the point of legal separation on 1 April 2019.

The Committee received updates from management on a regular basis throughout the year, in anticipation of the planned technology roll out across the UK business in early 2021/22 (Phase 2).

The Committee discussed the programme leadership, governance and assurance model, and lessons learnt from Phase 1 that will be applicable to Phase 2.

Governance and regulatory changes

During the year, we received a detailed report on the outcomes and recommendations of the audit reforms in the UK following the publication of Sir Donald Brydon's review into the quality and effectiveness of audit in the UK, as well as those of the UK Competition and Markets Authority and the Kingman review concerning the UK regulatory landscape. We also received a number of updates from Internal Audit in relation to the new Chartered Institute of Internal Auditors (IIA) Code of Practice and later in the year we will review this and make the appropriate changes to the Internal Audit Charter and the Committee's Terms of Reference.

Finance leadership changes

The Committee also met privately with the Chief Financial Officer towards the end of his first full year in the role, to discuss succession planning within the Finance function during the coming year. We will continue these conversations in 2020/21.

Looking forward

Impact of COVID-19

The Committee expects a significant proportion of its time will remain focused on the impact of the pandemic for the foreseeable future – across accounting, financial reporting and internal control related matters. The Committee will continue to monitor developments and adapt its approach to best support the Group's stakeholders.

Other matters

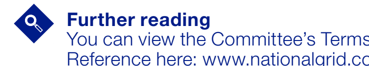
Cyber and internal control matters will remain high-priority areas as the Company seeks to embed improvements and efficiencies over the coming months.

In addition, the Committee will continue to take a close interest in the Company's evolving ESG-related reporting activities. It will also continue to monitor UK regulatory developments carefully, as the UK government responds to the findings of the Kingman and Brydon reports later in 2020.

Audit Committee Chair transition

Liz Hewitt was appointed as Non-executive Director and joined the Audit Committee as a member in January 2020. During 2019, Liz was identified as the right candidate to take over from me as Audit Committee Chair. Over the course of 2020/21 I will be working closely with the Nominations Committee and Board, as well as Liz, to ensure there is a seamless transition plan in place. As part of Liz's tailored induction she has had meetings with myself, Deloitte, the Global Head of Audit and other senior members of the Company's finance team and she will continue to work alongside me this year to ensure a smooth transition.

Mark Williamson
Committee Chair



Further reading
You can view the Committee's Terms of Reference here: www.nationalgrid.com

Statement of compliance with the Competition and Markets Authority (CMA) Order – the Company confirms that it has complied with The Statutory Audit Services for Large Companies Market Investigation (Mandatory Use of Competitive Tender Processes and Audit Committee Responsibilities) Order 2014 (Article 7.1), including with respect to the Audit Committee's responsibilities for agreeing the audit scope and fees and authorising non-audit services.

Audit Committee continued

Significant issues/judgements relating to the financial statements

In considering the financial results announcements and the financial results contained in the Annual Report and Accounts, the Committee reviewed the significant issues and judgements made by management in determining those results.

The significant issues and judgements considered for the year ending 31 March 2020 are set out in the following table.

In addition, the Committee and the external auditor discussed the significant issues addressed by the Committee during the year. You can read more in the Independent Auditor's Report on pages 110 – 120.

Matter considered	Factors and reasons considered, including financial outcomes
COVID-19 related matters	• The Committee considered the accounting, reporting and internal control implications of the COVID-19 pandemic extensively throughout the period from late March through to June 2020. • The Committee satisfied itself that management had adequately identified and considered all potentially significant accounting and disclosure matters in May 2020. Particular attention was devoted to understanding the implications of the moratoriums on collections of customer receivables issued by regulators in New York, Massachusetts and Rhode Island in March 2020. These events significantly impacted the business with immediate effect and contributed to a total bad debt charge of £234 million for the year, of which £117 million ($150 million) was considered incremental and due to the moratoriums. • The Committee also noted the other significant matters identified by management, being the additional uncertainty relating to determining the fair value of unquoted assets held by the Company's pension and other post-employment benefit schemes. The Committee accepted management's approach to delay finalising the financial statements until early June 2020 to allow for additional asset valuation data to be received and appropriate adjustments reflected over residual elements of specific asset classes. • Concerning internal control, in March 2020, the Committee discussed management's evolving risk assessment and contingency planning activities. The Committee noted, amongst other things, management's process to have a back-up individual identified in order to plan for an unforeseen absence by someone involved in a key part of the year-end, close and reporting process. The Committee received regular updates throughout the year-end and close process, and acknowledged that in the vast majority of cases, control-related activities took place on time and by the individual originally assigned. • In May and June 2020, the Committee was kept informed of the impacts of COVID-19 on the Company, including accounting matters, going concern and viability considerations, in light of continuing business developments as well as regulatory pronouncements, including from the UK FRC on the rapidly evolving corporate reporting landscape. • Details of the Committee's conclusions in relation to going concern and the long-term viability statement are set out on page 80.
Application of the Group's Exceptional Items Framework	• The Committee considered papers from management over the course of the year setting out how the exceptional items framework has been applied to certain events and transactions over the period, as set out in note 5 to the financial statements. • For each item, the Committee has considered the judgements made by management, considering both, each item in isolation, and the aggregate view of the impact on adjusted profit and adjusted earnings per share. • The Committee reached the conclusion that additional US environmental provisions, the impact of a 0.5% reduction in the discount rate applied to the Group's environmental provisions and the reversal of the change in the UK tax rate should all be treated as exceptional. • The Committee concluded in line with management's view that it was not appropriate to treat the incremental $150 million bad debt charge as an exceptional item this year. In addition, having considered the quantum and nature of the settlement in relation to the downstate New York gas moratorium and the additional COVID-19 related costs, it was deemed appropriate to include the impact of these items within adjusted profit.
Gas Transmission and Gas Distribution asset lives in the context of climate change	• Consideration was given to whether the developments in the UK and US towards binding carbon reduction targets should trigger any changes to our estimates, judgements or disclosures, especially regarding our gas asset lives. The Committee received various papers from management setting out an overview of the legislative changes in the period, analysis of the future pathways for the energy transition in the UK and US, and evaluation of the possible future use for our networks in these circumstances. • The Committee accepted management's view that on balance we believe there will be a role for our gas networks post 2050 under a range of possible scenarios, and there is nothing at present to suggest that the asset lives should be shortened at this point. The Committee also accepted management's view that in light of the evolving legislative developments and increasing investor attention, disclosure of a key judgement in relation to the impact of changes of legislation, disclosure of our gas asset lives as a key estimate, and appropriate sensitivity analysis were appropriate as set out in note 13 to this year's financial statements.
Going Concern	• The Committee evaluated papers prepared by management in May and June 2020, setting out management's analysis under a reasonable but severe 'worst-case' scenario, principally reflecting potential outcomes as regards the length and severity of lockdown conditions, US customer moratoriums and a significant level of employee absenteeism. The Committee evaluated management's analysis of the mitigating actions available to it to manage through such a situation, including the degree to which plans already existed and the likely challenges associated with implementing them. • The Committee considered the assumptions made by management regarding availability of debt financing, noting recent debt issuances but also contingency plans in the event that debt markets could close. Having considered the available evidence, the Committee considered that the analysis presented, in conjunction with the disclosures included in note 1 to the financial statements, was appropriate to the Company's circumstances.

Key matters considered by the Committee

The key matters considered by the Committee during the course of the year ended 31 March 2020 are set out below:

Matter considered	Factors and reasons considered, including financial outcomes
Financial reporting	• On an ongoing basis the Committee considered current IFRS financial reporting issues. In addition to the matters highlighted above assessed against the Group Exceptional Items Framework, we also considered the accounting as regards to the acquisition of Geronimo in accordance with IFRS 3 'Business Combinations', the position at Western Link as regards to liquidated damage claims, and the impact of the 9 August 2019 UK power outage. • Monitored and reviewed the integrity of the Group's financial information and other formal documents relating to its financial performance, including the appropriateness of accounting policies, going concern and viability. • Recommended to the Board the key accounting judgements and key sources of estimation uncertainty related to pensions and environmental provisions, made by management for the 2019/20 half and full-year financial statements, going concern and other reports filed with the SEC containing financial information.
Internal controls	• The Committee received regular updates on progress towards the Company's annual SOX attestation. • In March 2020, the Committee considered management's progress against its wider financial controls action plan, and further process improvements introduced ahead of the year-end, including relating to governance process and formalisation of documentation around non-IFRS performance measures.
Risk and viability statement	• In addition to its regular work monitoring internal control processes, and reviewing and challenging the draft viability statement, the Committee specifically focused its attention this year on how the Company had factored the COVID-19 pandemic into its annual risk assessment process and long-term viability testing.
External auditor	• Received an update report at each meeting, including updates on the status of, and results from the annual audit process. • Considered the external auditor's report on the 2019/20 half and full-year results. • Received and reviewed the management recommendations letter. • Ongoing consideration of the external audit plan, including monitoring the approach, scope and risk assessments contained therein. • Assessment of the effectiveness and independence of Deloitte, as well as review and update to the Group's policy on the provision of non-audit services from Deloitte following updated FRC guidance in the year. • Review and approval of all audit fees proposed by management and for non-audit services in the year. • Recommended to the Board the re-appointment of Deloitte at the upcoming AGM. • Received an update from Deloitte on workflows in relation to COVID-19 and received confirmation that the external audit team had been working well in new circumstances. • Discussed the results of the client survey assessment, noting results were broadly consistent with the prior year. Key themes were highlighted and it was ensured that any actions would be incorporated into the 2020 audit. • Continued to hold private meetings with Deloitte and maintained dialogue throughout the year.
Corporate audit	• The Committee received a review of the Corporate Audit Charter. Minor changes were made to reflect the SOX control testing transition and the Committee approved the updated Corporate Audit Charter. • Received an update on the 2019/20 audit plan and the significant findings, and reviewed the plan for 2020/21. • Received an update on cyber assurance and updates to the IT Risk Framework. • Reviewed PwC's key messages in the external quality assessment (EQA) of Corporate Audit, noting the improvements made since the last EQA. • Updated the Committee on the new IIA Code of Practice and confirmed a recommendation would be brought back to the Committee later in the year, which would also be reflected in the Corporate Audit Charter and the Committee's terms of reference.
Compliance, governance and disclosure matters	• Welcomed Liz Hewitt to her first Audit Committee meeting in March 2020. • Reviewed and approved the updated terms of reference for the Committee. • Received a detailed report on the outcomes and recommendations of the Brydon Review and other UK regulatory changes. • Considered the progress towards implementing the Financial Stability Board's TCFD recommendations. • Received updates on ethics and business conduct, including whistleblowing to help monitor the management and mitigation of business conduct issues as part of the wider controls framework. The Committee noted that there had not been any significant breaches of the Company's Code of Ethical Business Conduct; however, noted that some cases had highlighted opportunities for improved controls. The Committee was also pleased to hear that the whistleblowing procedures in place and internal procedures remained effective and a number of employee communications would take place in 2020 to improve the understanding of these procedures. • Received a bi-annual update of compliance with external laws and regulations, including updates on any non-compliance issues and steps being taken to improve compliance across the Company. The Committee discussed the controls and mitigating actions employed to reduce such instances of fraud and compliance breaches in support of the Group's overall strategy and culture. The Committee noted that the review of enhancements to the Company's risk, control and assurance framework would incorporate the improvement of assurance activities through culture, technology, organisation and reporting.

Audit Committee continued

Financial Reporting

Going Concern and Viability Statement

The Committee, in conjunction with the Finance Committee, reviewed the Group's going concern and viability statements (as set out on pages 26 and 27) and the supporting assessment reports prepared by management.

The Finance Committee met in May 2020 to discuss the implications of COVID-19 to the Group's going concern and viability statements.

The current COVID-19 situation has highlighted the interconnectivity between risks and the speed at which risks may materialise and during this uncertainty, significant work was undertaken to consider the Company's viability statement from additional perspectives. In May and June 2020, the Committee reviewed and challenged the viability statement and considered the period of assessment used, taking into account the COVID-19 events and other external factors in the fast-changing situation including benchmarking the approach adopted by other companies. It also considered individual risk testing, cluster testing and the impact of the Company's response to COVID-19 on business plans and financial models. After due consideration, these were recommended to the Board in June 2020. The financial statements are prepared on a going concern basis such that the Company and the Group have adequate resources to remain in operation as per National Grid's Group Treasury policy.

Statutory reporting framework policy

The Board has ultimate responsibility for effective management of risk for the Group including determining its risk appetite, identifying key strategic and emerging risks, and reviewing the risk management and internal control framework. The Committee, in supporting the Board to assess the effectiveness of risk management and internal control processes, relies on a number of Company-specific internal control mechanisms to support the preparation of the Annual Report and Accounts and the financial reporting process. This includes both the Board and Committees receiving regular management reports to include analysis of results, forecasts and comparisons against last year's results, and assurance from the external auditor. Members of the Executive Committee attend quarterly performance reviews to supplement this.

The Committee is kept fully informed of all new legislation, FRC advice and best practice and the requirements of the Code and Disclosure and Transparency Rules. Regular reviews in the drafting process support the development of an annual report and accounts that meets all requirements.

The Board receives, in advance of the full-year results, a periodic SOX report on management's opinion on the effectiveness of internal control over financial reporting. This report concerns the Group-wide programme to comply with the requirements of SOX and is received directly from the Group SOX and Controls Team and through the Audit Committee.

In relation to the financial statements, the Company has specific internal mechanisms that govern the financial reporting process and the preparation of the Annual Report and Accounts. The Committee ensures that the Company provides accurate, timely financial results and implements accounting standards and judgements effectively, including in relation to going concern and viability. Our financial processes include a range of system, transactional and management oversight controls. Also, our businesses prepare detailed monthly management reports that include analysis of their results, along with comparisons to relevant budgets, forecasts and the previous year's results. Quarterly performance reviews, attended by the Chief Executive and Chief Financial Officer, supplement these reviews. Each month, the Chief Financial Officer presents a consolidated financial report to the Board.

Fair, balanced and understandable

The Committee undertook a full and formal review of the content in the 2019/20 Annual Report and Accounts and recommended the approval of the half and full-year financial statements and the Annual Report and Accounts to the Board. The review is a well-established and documented process involving senior management and the core reporting team. To enable the Committee to make this recommendation, the Committee considered whether, taken as a whole, the Annual Report and Accounts is fair, balanced and understandable. The Committee also considered the Company's compliance with relevant regulatory frameworks and the validation of management's representations to Deloitte. Further, it provided oversight of the quality and integrity of the Group's financial reporting and accounting policies and practices.

As part of its review of the financial statements, the Committee considered, and challenged as appropriate, the accounting policies and significant judgements and estimates underpinning the financial statements.

This work enabled the Committee to be satisfied that the Annual Report and Accounts, taken as a whole, is fair, balanced and understandable and provides the necessary information for shareholders to assess the Company's position and performance, business model and strategy. This was reported to the Board at its meeting in June 2020.

Risk management and internal control

Risk management

The Committee has delegated responsibility from the Board for the oversight of the Group's system of internal control and risk management systems. This includes policies, compliance, legislation including compliance with SOX and the UK Bribery Act 2010, appropriateness of financial disclosures, procedures, business conduct and internal audit. As part of the framework across the Group, National Grid's values – "do the right thing", "find a better way" and "make it happen" – continue to communicate and promote a culture of integrity across the business.

During the year, the Board reviewed the principal risks facing the Group (as set out on pages 22 – 25). The Committee provided assurance and review of the risk management process to ensure that processes are in place to manage risk appropriately.

Internal Control and Risk Management effectiveness

We continually monitor the effectiveness of our internal controls and risk management processes to make sure they continue to be effective and assess them to make sure they remain fit for purpose. Following the review over the year the Committee confirmed that the processes had the correct authority, expertise and independence and provided sufficient assurance to the Company. As the business continues to evolve, systems and processes continue to be implemented to support this such as the recent deployment of new systems across finance, supported by the cyber team. The Committee was satisfied that the systems and processes are functioning effectively.

The effectiveness of internal controls and risk management processes is regularly monitored and assessed by the Committee and management to make sure they remain robust. This review includes financial, operational and compliance controls. The Committee also monitors and addresses any business conduct issues or compliance issues. The Certificate of Assurance (CoA) process operates via a cascade system and takes place annually in support of the Company's full-year results.

Corporate Audit supports the Group's risk management and internal controls processes. They deliver an independent and objective approach to evaluate and push forward processes. The Global Head of Audit has responsibility for the internal audit function and attends all Committee meetings, and has access to the Committee Chair when necessary.

At each of the Committee's meetings progress is reviewed including significant findings and how previous actions have been completed. The Committee notes timelines and where actions are overdue, these are challenged by the members. Corporate Audit is responsible for developing the Audit Plan including engaging in major change programmes across the business. The Committee approved the review of the Corporate Audit Charter in November 2019 following agreement from the Safety, Environment and Health Committee.

This year, the Committee continued to keep IT controls at the top of its agenda and focus, following the appointment of a new Chief Information Security Officer. In May 2020, the Committee was informed that the prior year significant deficiency in respect of IT controls was closed, following work to fully remediate the IT infrastructure environment in the US.

Audit Committee Chair Transition

As outlined in the report on page 84, the Nominations Committee discussed in 2019 the plan to recruit a Non-executive Director with suitable capabilities to replace Mark Williamson as Audit Committee Chair when he retires. Following a thorough process, Liz Hewitt was appointed to the Board and joined as a member of the Audit Committee.

Liz is a Chartered Accountant with significant experience in dealing with complex and challenging audit issues. She has extensive experience as chair of an audit committee previously holding the role with Synergy Health plc and Savills plc. Liz currently chairs the Audit Committees of Melrose Industries plc, Novo Nordisk A/S and the House of Lords. Further details on Liz's career experience and skills can be found on page 67.

External audit

The Committee is responsible for overseeing the relationship with the external auditor. Mark Williamson meets with the external auditor prior to each meeting and outside the meeting cycle on a regular basis.

- Deloitte is the external auditor to the Company.
- Appointed in 2017 following a formal tender process.
- Reappointed at the 2019 AGM for the year ended 31 March 2020.
- Audit Committee was authorised by shareholders to set Deloitte's remuneration at the 2019 AGM.
- Current lead Audit Partner is Doug King and 2019/20 was the third year of his term.

Following consideration of the auditor's independence and objectivity, the audit quality, and the auditor's performance, the Committee was satisfied with the effectiveness, independence and objectivity of Deloitte and recommended to the Board its reappointment for the year ended 31 March 2021.

A resolution to reappoint Deloitte and give authority to the Audit Committee to determine their remuneration will be submitted to shareholders at the 2020 AGM.

Effectiveness and performance

As part of the Committee's responsibilities, a review during the year was undertaken to consider the effectiveness of the external auditor and ensure that the quality, challenge and output of the external audit process is sufficient.

National Grid's management take an active engagement in the external audit process and recognise the importance of the process. The Committee also regularly receives the views of senior management and members of the finance team in forming conclusions on effectiveness.

During the year, the Committee:

- reviewed the quality of audit planning including approach, scope, progress and level of fees;
- reviewed the outcome of recommendations from the Deloitte Management Letter in 2018/19;
- received the Deloitte Management Letter for 2019/20;
- held private meetings with Deloitte where management was not present; and
- confirmed that the external audit process by Deloitte had been delivered effectively.

Auditor independence and objectivity

In addition to the review of effectiveness, the Committee is responsible for considering the independence and objectivity of Deloitte. The Committee has full oversight of the non-audit services policy and fees paid and enforces checks to ensure that employees of Deloitte are not appointed to roles in the financial reporting scope within the Company.

The Committee considered the safeguards in place, including the annual review by Corporate Audit, to protect the external auditor's independence. The external auditor reported to the Committee in June 2020 that it had considered its independence in relation to the audit and confirmed that it complies with UK regulatory and professional requirements, SEC regulations and Public Company Accounting Oversight Board (PCAOB) standards and that its objectivity is not compromised. The Committee took this into account when considering the external auditor's independence and concluded that Deloitte continued to be independent for the purposes of the external audit and confirmed that this recommendation was free from third-party influence and restrictive contractual clauses.

The independence of the external auditor is essential to the provision of an objective opinion on the true and fair view presented in the financial statements.

Audit quality

Regularly throughout the year, the Committee looks at the quality of the auditor's reports and considers its response to accounting, financial control and audit issues as they arise. To maintain audit quality, the Committee reviews and challenges the proposed external audit plan, including its scope and materiality, before approval, to satisfy itself that Deloitte has identified all key risks and has developed robust audit procedures and communication plans.

The Committee also meets with Deloitte twice a year without management present, providing the external auditor with the opportunity to raise any matters in confidence and have an opportunity for open dialogue. This meeting also gives the Committee a chance to monitor the performance of the lead Audit Partner both inside and outside Committee meetings.

Non-audit services

In line with the FRC's Ethical Standard and to help protect the external auditor's objectivity and independence, we have a policy governing Deloitte's provision of non-audit services. In March 2020, the Committee approved amendments to the policy in line with the mandatory FRC changes outlined in the Revised Ethical Standards, published in December 2019.

The cap on the total fees that may be paid to the external auditor for non-audit services in any given year is 70% of the average audit fees paid in the last three financial years. Following Deloitte's appointment in 2017 this is the first year that this is effective on the Company.

To help protect auditor objectivity and independence, the provision of any non-audit service by the external auditor requires prior approval. The policy allows for certain specified services to be undertaken under 'pre-approval' by the Audit Committee where we believe there is no threat to the auditor's independence and objectivity, the service has been reviewed by the CFO, and where fees do not exceed £50,000. These services are limited to:

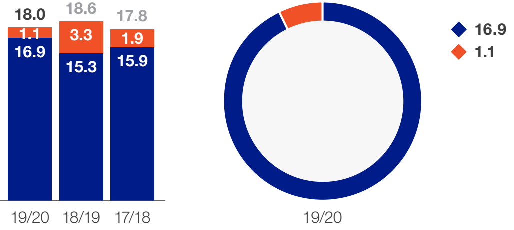
- audit, review or attest services. These are services that generally only the external auditor can provide, in connection with statutory and regulatory filings. They include comfort letters, statutory audits, attest services, consents and assistance with review of filing documents; and
- other areas, such as provision of access to technical publications.

Our policy requires management to present a list of all non-audit work requests to the Committee at each official meeting to ensure the Committee is monitoring all non-audit services provided. Non-audit service approvals during 2019/20 principally related to comfort letters associated with debt offerings. Work performed by Deloitte during the year (which necessarily also includes engagements approved by the Committee in 2018/19) included pre-implementation governance reviews associated with the new UK financial record system (MyFinance) and a final element of market-related advisory work with the UK property division.

External auditor fees

The amounts payable to the external auditor, Deloitte, in each of the past two years were:

Audit and non-audit services (£m)



◆ Audit services
◆ Non-audit services

Total billed non-audit services provided by Deloitte during the year ended 31 March 2020 were £1.1 million, representing 7% of total audit and audit-related fees. In 2018/19, non-audit services totalled £3.3 million (22% of total audit and audit-related fees).

Further information on the fees paid to Deloitte for audit, audit-related and other services is provided in Note 4 to the financial statements on page 136.

Total audit and audit-related fees include the statutory fee and fees paid to Deloitte for other services that the external auditor are required to perform, such as regulatory audits and SOX attestation. Non-audit fees represent all other services provided by Deloitte not included in the above.

Finance Committee

Therese Esperdy
Committee Chair

Key areas of focus in 2019/20:
- UK and US pension and investment strategy;
- Financial risk appetite;
- Treasury-related activities for the ESO separation;
- Bond issuance and hybrid bond refinancing;
- Financial implications of RIIO-2;
- Review of external regulatory and political environments and potential impact on credit ratings and any associated financial risk; and
- Green Financing Framework and first green bond issuances.

Key areas of focus in 2020/21:
- COVID-19 potential market, financial and balance sheet impact;
- Going Concern and Viability Statement;
- Financial implications of RIIO-2;
- Review of management of financial risk against the Company's financial risk appetite; and
- Continued oversight around Brexit-related financial risks and market reaction.

Review of the year and COVID-19

The Committee met on four scheduled occasions during the year to undertake its responsibility of monitoring the financial risk of the Group, focusing on key areas such as treasury, tax, pensions, insurance, investments and commodities. The Committee also convened for an additional presentation in May 2019 which focused on the financial impacts of the RIIO-2 business plans.

Towards the end of the year the impact to global markets of the COVID-19 pandemic became clearer and the Committee held additional COVID-19 focused meetings in April and May 2020. Significant consideration was given to the financial implications of the global pandemic on the Company. This included financial scenario planning and risk mitigation. At its May meeting the Committee considered the Going Concern assumption of the Company, considering the uncertainties posed by COVID-19 and the additional focus by regulators. This consideration included a range of cash flow outcomes, the Company's ability to access existing undrawn facilities alongside its ability to access long-term debt markets and short-term cash positioning.

The Committee will continue to receive regular updates on implications as the pandemic continues to progress.

Prior to the emergence of COVID-19 other key focuses for the Committee included the external regulatory and political environments, and significant time was spent considering the implications of Brexit and the resulting market impact following the UK's exit from the European Union on 31 January 2020.

In January 2020, the Committee members hosted an informal question and answer session with employees from the Tax, Pensions and Insurance teams in the UK, to further increase workforce engagement and to encourage a dialogue between the Committee and employees whom the Committee would not normally have the opportunity to engage with at meetings. Following the success of the January session, similar engagement sessions are planned to take place in 2020 and thought is being given as to how these can take place around COVID-19 restrictions.

Treasury

RIIO-2 was a key focus for the Committee over the year and regular updates on the financial implications of RIIO-2 were received including an additional presentation focused on the financial aspects of the RIIO-2 business plan. Discussions took place on the assumptions and parameters set by Ofgem and proposed financial frameworks, ahead of the RIIO-2 business plan submission in November 2019.

The Committee provided continued oversight over management decision-making and execution of financial risk. The Company reviewed the management of the Group's financial risk appetite; as a result, the Committee approved minor policy changes to funding risk, liquidity risk, counterparty credit risk, credit rating risk and foreign exchange translation risk.

Management provided regular updates on strategy formulation for the future, including investment requirements for the business, credit ratings, dividend policy and LIBOR transition. The Committee was pleased to receive details on the execution of new bonds during the year, approving the year's financing strategy and receiving regular updates as financing is executed. Approval was also given to a hybrid refinancing strategy with hybrid bonds issued across two tranches in NGG Finance plc.

A Green Financing Committee chaired by the Group Treasurer was established in December 2019 to support the Company's sustainability strategy and Green Financing Framework detailed on page 58 as the Group works towards its net zero ambition. In January 2020 the Company launched its first green bond, which was well received by the market.

In November, the Committee invited a credit rating agency to the Committee to provide an insight into methodologies used for ratings, the credit landscape in the UK and US for regulated utilities and the potential impact of Brexit.

Insurance

The Committee received regular insurance updates which considered the current shape of the insurance market and how the Company was benchmarked against other organisations in relation to the Company's approach to insurance renewals in April 2020.

The Committee monitored the evolution and efficiency of cyber insurance as part of our cyber insurance programme. This continues to be a fast-growing area of the global insurance market and external advisors are due to present to the Committee in July 2020 to provide additional external insight.

At its meeting in April, the Committee discussed the impact of COVID-19 on the insurance market and will be monitoring the insurance risk appetite closely throughout the year.

Tax

The Committee has continued to monitor the potential tax impacts of Brexit and received a focused update on implications from a tax perspective throughout the year. An update was also received concerning the UK Finance Bill 2019/20 and the potential impact on the Company, particularly around the impact of the changes to the IR35 rules. The Committee will continue to monitor developments in this area. In January 2020, external advisors presented to the Committee on the evolving Tax Transparency debate.

The Company also continues to give focus to the changing tax landscape, particularly in relation to the effect of digitisation, in line with the business-wide digitalisation ambition. The Tax team continue to inform the Committee of external developments in relation to tax authorities to enable continued best practice and how technology can be leveraged in this area.

Pensions

In 2018/19 the Committee commenced plans to consider de-risking the UK pension plans, to more closely match the assets and liabilities. Throughout this year, the Committee considered these plans further and approved appropriate solutions to de-risk the Company's pension arrangements, enabling the National Grid UK Pensions Scheme to enter into buy-in arrangements with both Legal & General and Rothesay, supporting the Company's long-term strategy to reduce the level of risk within its pension arrangements.

In July 2019, external advisors presented to the Committee on the UK pension landscape and trends in the market, including the increased decline in the defined benefit schemes across the market and the increase in utilisation of defined contribution schemes. The Committee received a further presentation from external advisors in April 2020 focusing on the US pension landscape and trends in the market alongside the impact of COVID-19 on the pensions market.

Looking forward

The Committee will remain focused on ensuring the Company is effectively managing financial risk, working closely with the Audit Committee with particular focus on impacts due to the COVID-19 pandemic as it continues to progress globally.

Thérèse Esperdy

Therese Esperdy
Committee Chair

Safety, Environment and Health Committee

Paul Golby
Committee Chair

Key areas of focus in 2019/20:
- Post-Massachusetts labour dispute and workforce re-integration;
- US regulatory safety changes;
- Liquefied Natural Gas (LNG) and Compressed Natural Gas (CNG);
- Monitoring the action plan to achieve long-term carbon reduction targets;
- Deep dive into employee wellbeing; and
- Continued focus on process safety improvements.

Key areas of focus in 2020/21:
- COVID-19 impact on our customers, employees and contractors;
- Gas safety and reliability;
- Group safety performance and safety culture;
- Sustainability and climate change;
- Business deep dives and process improvements;
- SEH risks and mitigation; and
- Mental health and wellbeing.

Further reading
For more information on the Company's work around Task Force on Climate-related Financial Disclosures (TCFD) requirements (see pages 57 – 62).

Review of the year and COVID-19

During the year, the Committee met six times to undertake its oversight responsibilities for reviewing the strategies, policies, initiatives, risk exposure, targets and performance of the Company in relation to safety, environment, health and wellbeing. Two of these meetings were scheduled specifically to monitor the potential safety issues surrounding the lifting of the downstate New York gas moratorium. The Committee considered the Company's contingency proposals to maintain security of supply throughout the winter, including the potential to add new CNG sites to meet demand, and challenged the associated risks.

Towards the end of the year we have seen the acceleration of the global COVID-19 pandemic; the health and wellbeing of all employees and contractors has been of paramount importance during these challenging and unprecedented times. The Committee has and will continue to focus on ensuring the strategies and policies being implemented across the business adequately protect the health, safety and wellbeing of everyone.

Committee member induction

Since joining the Committee in 2019, both Amanda Mesler and Earl Shipp have undertaken site visits in the UK and US as part of their induction. These site visits provided a useful insight into the Company and the opportunity to gain a wider perspective of National Grid and to meet and engage with a variety of employees to discuss their views on safety, environment and health on site and throughout the Company. The site visits are an important way of demonstrating Company safety, health and environment leadership and are a way to build Committee knowledge, skills and strengthen discussion around issues.

The Committee also welcomed Liz Hewitt as a member in January 2020. Liz brings excellent experience to the Committee and her wealth of knowledge in wide areas of business will add diversity and value to our discussions.

Safety

In line with the Company's key values, safety remains a top priority for the Company and the Committee. We have seen improvement in the Injury Frequency Rate in the UK, which remains world class; however, we must never become complacent and improvements still need to be made. The Committee was deeply saddened when in July 2019 a National Grid employee in the US was involved in a fatal traffic accident while working on behalf of the Company. The Committee has been kept up to date on the investigations surrounding this tragic incident and has strongly endorsed the Company's commitment to ensuring that key lessons learned have been communicated to all our workforce. As a result, the Company rolled out a Group-wide safety intervention to remind our workforce of the Company's Safety Ambition. The feedback from the intervention has been positive and has encouraged our workforce to continue the important conversation around safety by discussing within teams recent safety incidents and ways to prevent future occurrences. The Committee will continue to monitor the implementation of these lessons learned.

Further to my update last year about the employee safety culture survey, this year the Committee received an update on the results of the survey including the new plans built from the actions identified, which will help the Company to continue on its journey from a calculative safety culture to a more proactive safety culture.

Gas safety and reliability

A significant amount of the Committee's time this year has been spent on gas safety and reliability in the US. The post-work stoppage initiatives following the Massachusetts labour dispute were reviewed, including monitoring the closure of open work actions and the implementation of new processes to ensure regulatory compliance. Regular updates were provided which identified areas of focus and improvement and the Committee discussed and considered risks around these. The Committee also reviewed and challenged the proposed plan to improve the safety of US LNG plants. The Committee will continue to monitor progress of the gas safety and reliability initiatives over the coming year.

National Grid's net zero commitment

Sustainability is a key focus and the Committee has been pleased to see the increasing prominence of this issue internally and externally. The Company recognises it has a critical role to play in the decarbonisation of the energy system and the importance of setting a net zero ambition for the Company's own emissions, which aligns with its strategy of a cleaner future. In November 2019, the Committee endorsed the Company's new target to reduce its own direct greenhouse gas emissions to net zero by 2050. The Committee reviewed the Company's high-level plan to achieve this and in January 2020 approved ambitious interim targets to reduce its direct emissions by 80% by 2030 and 90% by 2040. The Committee will continue to closely monitor and challenge the Company's progress against the action plan and the implementation of the Company's wider strategy around sustainability to achieve long-term carbon reduction targets.

Employee health and wellbeing

In January 2020, the Committee received an update in relation to the Company's progress on its health and wellbeing strategy. It was noted that a transition had been made by the Company in its strategy from a disease-based campaign towards a more holistic approach, with a wider range of health and wellbeing factors facing the workforce being considered. As part of the strategy, the Committee has continued to track the impact of musculoskeletal injuries (MSK) and its effect on employees. The Committee was pleased to see that as a result of physiotherapy services being available to UK employees as well as holding 20 MSK workshops across 11 locations, the sickness absence risk, in relation to MSK, had dropped from the third to fifth highest days lost over the past calendar year. Progress continues to be made in relation to mental health awareness and prevention activities. With the ongoing COVID-19 pandemic the Committee will monitor the implementation of wellbeing policies and the impact on our workforce; this will be kept under review over the coming year to ensure that appropriate health and wellbeing campaigns and procedures are implemented.

Paul Golby
Committee Chair

Nominations Committee

Sir Peter Gershon
Chairman and Committee Chair

Key areas of focus in 2019/20:
- Board and Committee composition;
- Chairman succession; and
- Senior leadership succession.

Key areas of focus in 2020/21:
- Chairman succession and onboarding;
- Review of senior leadership succession policy; and
- Board and Committee composition.

Review of the year

The Committee met seven times during the year to undertake its responsibilities in reviewing the leadership needs of the Company, based on the structure, size and composition of the Board and its Committees. In addition, the Committee reviews and oversees succession planning for Directors and senior management and makes recommendations, as appropriate, to the Board.

Succession planning and Board composition

A key focus for the Committee this year has been succession planning. The Committee is responsible for ensuring that the Company is headed by a high-quality Board and senior management team and recognises that the process of building a strong and effective Board and senior management team requires a good balance of continuity and refreshment. During the year, Board members assessed the skills and areas of expertise that they brought to the boardroom to ensure effectiveness in providing good corporate governance and strategic oversight. This assessment will further aid in identifying gaps and areas of strengthening needed when appointing members in the future. The Committee has also borne the Code in mind in its deliberations throughout the year to ensure that we have in place a strong Board and senior management team with the breadth of skills, experience and perspectives necessary to reflect the changing demands of the business and Company strategy. The Committee will continue to monitor the skills and capabilities, and length of tenure of Board members to ensure that broad and relevant expertise is evident and will recommend further appointments if necessary. Further information on our individual Directors' skills and capabilities can be found on pages 66 and 67.

Senior leadership

Following Dean Seavers stepping down from his role as Executive Director in November 2019, Badar Khan (previously Group Director, Corporate Development and National Grid Ventures) stepped in as Interim President of the US business. Jon Butterworth (previously COO of National Grid Ventures) stepped in as Interim Managing Director of National Grid Ventures. Following success in their interim positions, the Committee approved the permanent appointment of Badar Khan as President of the US business and Jon Butterworth as permanent Managing Director of National Grid Ventures on 2 April 2020.

Non-executive Director – Jonathan Silver

The appointment of Jonathan Silver began in 2018 with the appointment of Korn Ferry, a search consultancy firm that does not have any other connection with the Company or individual directors. The Committee reviewed and agreed the Non-executive Director candidate profile which was formulated taking into account the current skills of the Board members and data analysis received from the 2018 external Board evaluation process. This highlighted the additional need to strengthen the Board's US regulatory, equity and financial experience. Having conducted an initial search, a list of potential candidates were selected for the first interview with the Chairman. It was agreed that a sub-group of the Committee (Nora Mead Brownell, Therese Esperdy and Mark Williamson), and John Pettigrew would interview the final candidates from the short list recommended by the Chairman. The Committee agreed the preferred candidate and made a recommendation to the Board in April 2019. On 16 May 2019, following a thorough and rigorous process, the Board welcomed Jonathan Silver as a Non-executive Director to the Board and as a member of the Finance, Remuneration and Nominations Committees.

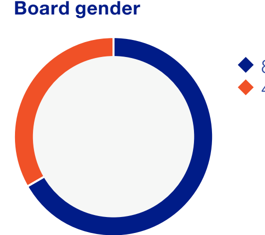
Non-executive Director – Liz Hewitt

In April 2019, the Committee discussed recruiting a further Non-executive Director with capabilities to succeed Mark Williamson as Audit Committee Chair once he retired. The Inzito Partnership, who do not have any other connection with the Company or individual directors, was appointed to support the recruitment of this role. The Committee agreed the Non-executive Director candidate profile and a short list of potential candidates was then drawn up. First-stage interviews were conducted by the Chairman and final interviews were conducted by a sub-group of the Committee (Therese Esperdy, Paul Golby and Mark Williamson), John Pettigrew and Andy Agg. In November 2019, the Committee agreed that Liz Hewitt was the preferred candidate and made a recommendation to the Board. Liz has a strong background in dealing with complex and challenging audit issues. The Board welcomed Liz Hewitt as a Non-executive Director and member of the Audit, Safety, Environment and Health, and Nominations Committees on 1 January 2020.

When considering the recruitment of new Directors, the Committee adopts a formal and transparent procedure which takes into account the skills, knowledge and level of experience required as well as diversity. For both appointments the candidate pool was as diverse as possible ensuring the Committee had options to balance the diversity on the Board. The effectiveness of the Board is also reviewed through the annual Board evaluation; see page 74 for further information.

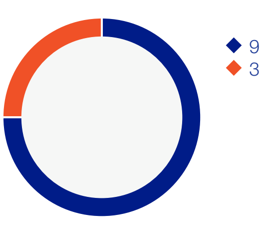
Our Board diversity

Board gender



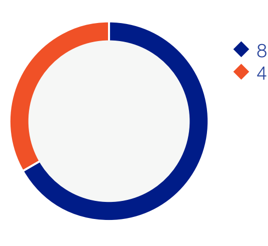
- Men
- Women

Executive and Non-executive Directors



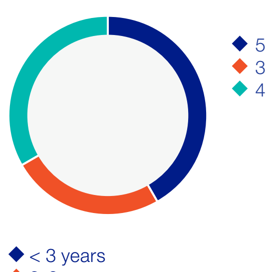
- Executive
- Non-executive (inc. Chairman)

Board members by nationality



- British
- American

Tenure



- < 3 years
- 3-6 years
- > 6 years

Charts as at 17 June 2020

Board diversity objectives

Objectives	Progress
The Board aspires to meet the target of 33% of Board and Executive Committee positions, and direct reports to the Executive Committee, to be held by women in 2020.	**Objective met:** there are currently 33.3% women on the Board, 33.3% women on the Executive Committee and 33.8% women direct reports to the Executive Committee. We continually aspire to exceed this target and we take gender diversity into consideration in all our Executive and Non-executive Directors searches. All appointments are however made on merit.
The Board aspires to meet the Parker Review target for FTSE 100 boards to have at least one director from a non-white ethnic minority by 2021.	**Objective met:** we currently have one Director from a non-white ethnic minority on the Board. Additionally, our mandatory requirement for a diverse candidate pool should facilitate the opportunity to recruit further from non-white ethnic minorities.

Director tenure

The Committee believes that Non-executive Directors should generally stay in role no longer than nine years, in line with the Code; however, the Committee may determine that on occasion it is in the Company's best interest for a Director with particular skills, knowledge and experience to stay beyond the nine-year term. It is proposed that Paul Golby stay for a limited extension beyond 1 February 2021 in order for the Board to maintain the knowledge and experience required to conclude the RIIO-2 process.

Talent pipeline – Senior leadership succession

The Board and Nominations Committee support and encourage initiatives that strengthen the talent pipeline within the Company. Over the last 12 months we have seen several changes within the Executive and senior leadership team as we refresh the skills and capabilities needed to achieve our long-term strategy. The Committee has considered whether the talent pipeline and the collective strength of the current leadership and senior management bench in the business is strong enough in its key positions, specifically in relation to handling crises and ensuring the business is fit for the future. It is an area of focus for the Committee to ensure that the required pace of change facilitates strong and effective succession across the Board and the wider business.

The Executive Committee continues to meet regularly to discuss the succession pipeline and health of the talent pool further down the organisation; as a result, a number of individuals have been identified as potential successors to key positions. Our senior leaders below the Board were invited to participate in the 'Energise Our Business' programme this year which combines flexible online development and peer learning with more traditional development activity. The Committee has developed a strong understanding of executive talent requirements and the capabilities we need for the future to fit with our purpose, vision and values. This has been evidenced by the appointment of Badar Khan as President of the US Business and Jon Butterworth as Managing Director of National Grid Ventures. The Committee regularly reviews the development plans of the high potential senior leaders below the Board. The Board has also met with high-potential employees both in the UK and the US on several occasions during the year.

Terms of reference

Following the introduction of the Code, the Committee terms of reference have been revised to align with the new requirements. These reflect the broadening of the Committee's responsibility for overseeing the development of a diverse pipeline of high-performing potential successors to senior management and keeping under review the leadership and succession needs of the Company.

Diversity and Board diversity policy

National Grid supports the creation of an inclusive and diverse culture which we believe supports the attraction and retention of talented people, improves effectiveness, delivers superior performance and enhances the success of the Company.

Our Board diversity policy (Policy) reflects our continued commitment to promote an inclusive and diverse culture and we value diversity of thought, skills, experience, knowledge and expertise including of educational and professional backgrounds, alongside diversity criteria such as gender, ethnicity and age.

The Policy applies to the Board, Executive Committee and direct reports to the Executive Committee.

As set out in the Policy:

- all Board appointments and succession plans are made on merit and objective criteria, in the context of the skills and experience that are needed for the Board to be effective and to guard against 'group think';
- we will only engage executive search firms who have signed up to the UK Voluntary Code of Conduct on Gender Diversity; and
- we will continue to make key diversity data, both about the Board and our wider employee population, available in the Annual Report and Accounts.

Chairman's succession

Mark Williamson
Senior Independent Director

Throughout the year I have chaired the Nominations Committee, without Sir Peter Gershon present, to discuss the Chairman's performance, tenure and succession. In last year's report I reported that Sir Peter's tenure may be extended beyond the recommended nine-year term in order to conclude the RIIO-2 process. This was agreed following discussion with 18 of our largest shareholders, who unanimously supported the extension. In January 2020, Sir Peter Gershon formally announced his intention to step down as Chairman and retire from the Board following the appointment of a suitable successor. To manage a smooth transition, we intend to appoint a Chairman designate to the Board. A search process for the next Chairman is currently underway, supported by Russell Reynolds, and the Committee considered a long-list of potential candidates at the January 2020 meeting. Over the next few months, the Committee will agree a shortlist of preferred candidates and a full explanation of the search and appointment process will be reported in next year's report.

We will continue to review our progress against the Policy and report on our objectives (set out above) annually in the Annual Report and Accounts. The Committee will be reviewing this Policy throughout the year to ensure it remains up to date and relevant.

Examples of the initiatives to promote and support inclusion and diversity throughout our Company are set out on page 53.

Sir Peter Gershon
Chairman and Committee Chair

Statement of application of and compliance with the UK Corporate Governance Code 2018

The statement below, together with the rest of the Corporate Governance report, explains the main aspects of the Company's governance structure to give a greater understanding of how the Company has applied the principles in the UK Corporate Governance Code 2018 (the Code). For the year ended 31 March 2020, the Board considers that it has complied in full with the provisions of the Code, available at www.frc.org.uk. The Corporate Governance report also explains compliance with the Disclosure Guidance and Transparency Sourcebook. The index on page 87 sets out where to find each of the disclosures required in the Directors' Report in respect of Listing Rule 9.8.4 R.

1. Board Leadership and Company Purpose

Our Board is collectively responsible for the effective oversight and long-term success of the Company and champions our purpose, vision, values and desired culture, ensuring consistency with our workforce policies and practices. It also determines the strategic direction, business plan, objectives, principal risks and viability of the Company and sets the governance structure that will help achieve the long-term success of the Company and deliver sustainable shareholder and stakeholder value.

The Board sets the risk appetite and principal risks for the Company and takes the lead in areas such as safeguarding the reputation of the Company and its financial policy, as well as making sure we maintain a sound and prudent system of internal control and risk management. Since the onset of the COVID-19 pandemic, we have received updates on the impact on our UK networks that are managing the rapid and unprecedented decrease in energy demand across all UK networks and in May 2020 it was agreed to add COVID-19 as a principal risk. The Board also agreed to add a new climate change principal risk in March 2020.

There is a clear schedule of matters reserved for the Board and schedule of delegation, which were both reviewed and updated in January 2020. The schedule of matters reserved for the Board is available on our website, together with other governance documentation.

The Board actively engages with shareholders and stakeholders, including employees, on a regular basis. Further information on how the Board has effectively discharged this responsibility can be found on pages 44 – 47.

2. Division of Responsibilities

The Chairman, who was independent on appointment, is responsible for the leadership and management of the Board and its governance. He makes sure the Board is effective in its role by promoting a culture of openness and debate, facilitating the effective contribution of all Directors and helping to maintain constructive relations between Executive and Non-executive Directors. The Chairman sets the Board's agenda making sure consideration is given to the main challenges and opportunities facing the Company, and adequate time is available to discuss all agenda items, including strategic issues. This particular area was reviewed as part of the internal Board evaluation. For further information on the Chairman's independence and tenure, please see page 85.

The annual evaluation of our Board considers the composition, including the combination of Executive and independent Non-executive Directors, to ensure there is no dominant decision-making. The Board supports the separation of the roles of the Chairman and Chief Executive. The key responsibilities are clearly documented and reviewed when appropriate. See our website for more details.

Non-executive Directors are advised of the time commitment and travel expected from them on appointment. External commitments, which may impact existing time commitments, must be agreed with the Chairman prior to appointment and during their time on the Board. As part of the Chairman's succession, potential candidates are notified of the expected time commitment at the beginning of the process. Details of external appointments are set out in the biographies on pages 66 and 67 and on our website. Independent of management, our Non-executive Directors bring diverse skills and experience vital to providing strategic guidance, constructive challenge and debate. See our website for the matters reserved for the Board schedule.

The Group General Counsel and Company Secretary makes sure that the Board has access to the necessary policies, processes and resources required to operate effectively and efficiently. She is also responsible for ensuring that timely information is provided and advises and supports the Chairman and the Board on all governance matters.

3. Composition, Succession and Evaluation

Composition

The Board believes it operates effectively with an appropriate balance of independent Non-executive and Executive Directors who have the right balance of skills, experience, independence and knowledge of the Company. Details of our Board, their biographies and Committee membership are set out on pages 66 and 67 and fuller biographies are available on our website. Board and Committee attendance during the year to 31 March 2020 is set out on page 69. The size and composition of the Board and its Committees is kept under review by the Nominations Committee to ensure the appropriate balance of skills, experience, independence and knowledge. The Committee also monitors the expertise of the Board and will recommend further appointments if desirable. The appointment of Liz Hewitt in January 2020 ensures the Board has a Non-executive Director with the required capabilities and expertise to succeed as Audit Committee Chair. The independence of the Non-executive Directors is considered at least annually along with their character, judgement, commitment and performance on the Board and Board Committees. The Board took into consideration the Code and indicators of potential non-independence, including length of service. Following due consideration, the Board determined that all Non-executive Directors were independent in character and judgement.

Succession

The Nominations Committee, which comprises the Chairman and Non-executive Directors, leads the process for Board appointments and makes recommendations to the Board. The Nominations Committee also has responsibility for ensuring that plans are in place for orderly succession to both the Board and senior management positions as well as overseeing the development of the talent pipeline to ensure that the future leadership needs of the Company are considered and these fit the culture and forward-looking strategy of the Company.

Each Director is subject to election at the first AGM following their appointment, and re-election at each subsequent AGM. Following recommendations from the Nominations Committee, the Board considers whether all Directors continue to be effective, committed to their roles and have sufficient time available to perform their duties. In April 2020 the Nominations Committee confirmed to the Board that all Directors continued to perform their duties in accordance with the principles above. Succession planning is ongoing for those members of the Board who are approaching the nine-year tenure recommendation.

Evaluation

The 2019/20 performance evaluations of the Board, Board Committees and individual Directors were carried out internally with consideration given to composition, diversity, how effectively members work together to achieve objectives and effectiveness of decision-making. You can read more about this on page 74.

Chairman's Performance

As part of our annual evaluation process, Mark Williamson, as Senior Independent Director, led a review of the Chairman's performance. At a private meeting, the Non-executive Directors, with input from the Executive Directors, assessed his ability to fulfil his role as Chairman and considered the arrangements he has in place to fulfil his role. They concluded that the Chairman showed effective leadership of the Board and his actions continued to influence the Board and wider organisation positively. They also confirmed it would be in the Company's best interest for Sir Peter Gershon to continue in his role as Chairman during the conclusion of the RIIO-2 regulatory process.

At the end of the year, the Chairman held performance meetings with each Board member to discuss their contribution and performance over the prior year, including how effectively they worked together to achieve objectives and any training and development needs. Following these meetings, the Chairman confirmed to the Nominations Committee that he considered each Director to have demonstrated a commitment to the role and that their contribution continued to be effective.

4. Audit, Risk and Internal Control

Under the Disclosure and Transparency Rules and the Code, the composition and competence of the Audit Committee was considered by the Nominations Committee at its April meeting. The Board confirmed the recommendations of the Nominations Committee: that all members of the Committee are independent (including the Chair of the Committee), that Mark Williamson, as a chartered accountant, is considered to have competence in accounting, and that the Committee, as a whole, has competence relevant to the sector in which it operates.

The requirement for Directors to state that they consider the Annual Report and Accounts, taken as a whole, is fair, balanced and understandable remains a key consideration in the drafting and review process. The coordination and review of the Annual Report and Accounts is conducted in parallel with the formal audit process undertaken by the external auditors and the review by the Board and its Committees. The Board is satisfied that the current policies and procedures in place ensure the independence and effectiveness of the internal and external audit functions. Further details can be found on page 81.

The drafting and assurance process support the Audit Committee's and Board's assessment of the overall fairness, balance and clarity of the Company's position and prospects as detailed in the Annual Report and Accounts, and the statement of Directors' responsibilities as set out on page 109.

The Board has carried out a robust assessment of the nature and extent of the principal and emerging risks facing the Company in achieving its long-term strategic objectives, including those that would threaten the business model, future performance, solvency or liquidity. Further details can be found on pages 22 – 27.

The Board also sets the Company's risk appetite, internal controls and risk management processes. The Board monitors the Company's risk management, internal control systems and framework and undertakes a review of their effectiveness annually. The activities of the Audit Committee, which assists the Board with its responsibilities relating to risk and assurance, are set out on pages 76 – 81.

5. Remuneration

The Remuneration Committee, comprised entirely of Independent Non-executive Directors, is responsible for recommending to the Board the remuneration policy for Executive Directors, the Chairman and senior management, and the implementation of this policy. The aim is to align the remuneration policy to the long-term Company strategy and key business objectives that will promote long-term sustainable success. Our policy is reviewed against workforce remuneration and performance, and is designed to reflect our shareholders', customers' and regulators' interests.

The Directors' Remuneration Report on pages 88 – 107, sets out the work of the Remuneration Committee, its activities during the year and further details on how our Remuneration Policy is implemented including the remuneration of Non-executive Directors. Executive Remuneration, including alignment to broader workforce pay policies has been discussed at employee voice engagement sessions, along with gender pay reporting. These topics will remain key areas for discussion as we continue our programme of engagement into 2020/21.

For more information regarding our policy on the Executive Directors pension contribution/allowance and the alignment to the workforce, please see page 89 of the Directors' Remuneration Report.

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Directors' Remuneration Report

Annual statement from the Remuneration Committee Chair

Jonathan Dawson
Committee Chair

Key areas of focus in 2019/20:
- Items relating to the appointment of new Executive Committee members and leaving arrangements for former Executive Director, US; and
- Reviewed impact of evolving corporate governance standards, including pension arrangement for UK-based new hires.

Key areas of focus in 2020/21:
- COVID-19 related remuneration decisions;
- RIIO-2 impact on future LTPP awards; and
- Directors' Remuneration Policy review and shareholder consultation.

Introduction

Last year, our shareholders approved the new Directors' Remuneration Policy for the period from 2019, with 97.03% votes in favour. At the same time, the Directors' Remuneration Report received 96.53% votes in favour. The Remuneration Committee and the whole Board are grateful to shareholders for their support for our Policy and our implementation of it. As a company, our aim is to ensure transparency with our shareholders and all stakeholders in what we do, particularly with regard to governance and remuneration. The Committee fully recognises the central importance of these areas for National Grid's reputation, and the strong interest of shareholders in our standards and performance. Last year's vote followed extensive consultation with our major institutional shareholders in light of which we put forward proposals that were approved at the AGM. This year we are not seeking approval of a new Policy, although through the annual advisory vote we are seeking your support for our implementation of the Policy during 2019/20. We are planning to seek your approval of a new Policy next year in light of decisions to be made by Ofgem during the year regarding the next regulatory period (RIIO-2) commencing April 2021. As we have done previously, we will consult with major institutional shareholders before putting forward our proposals.

Review of decisions made during the year

Annual Performance Plan (APP)

National Grid again delivered good financial performance for the year, with Group underlying Profit before Tax of £2,493 million, Underlying Earnings per Share of 58.2 pence and Group Return on Equity of 11.70%; and the Directors have recommended an increase in the final dividend in line with our stated policy. Against this background, the Group financial metrics for the APP (impacting the CEO and CFO) represented 79.4%, a little over half way between target and stretch performance. The financial outcome for the Executive Director, UK was 58.3%, just ahead of target performance, reflecting lower UK-specific financials versus Group particularly on RoE. The financial performance metrics for the APP are based on financial results, with technical adjustments made in line with past practice in respect of currency adjustments, unbudgeted pension costs, scrip dividend dilution and storm damage repair costs.

The final APP outcomes (which incorporate assessments against individual objectives and financial performance) have, however, had one adjustment affecting all staff eligible for APP awards. With the bulk of colleagues working remotely due to COVID-19 restrictions, and heavily focused on maintaining continuity of service and supply to our customers, it would have been difficult for in-depth annual personal performance reviews to be undertaken in the normal way. The Committee therefore agreed with senior management that, across the Group, the individual component under the APP would be capped at the lower of actual and target, which is equal to 50% of maximum. The Committee has also applied this principle to the Executive Directors and other senior executives; the unadjusted individual scores for the Executive Directors are shown on pages 98 and 99, from which it can be seen that the outturn for the individual objectives of all current Executive Directors has been reduced in light of this approach.

Coupled with the financial measures for the APP, the overall outcome for the CEO and CFO is 88.3% of salary, and for the Executive Director, UK 69.8% of salary, in each case out of a maximum potential of 125% of salary. In its assessment of the overall performance of John Pettigrew and the level of APP outcome for him for the year, the Committee gave careful consideration to the issues arising from the decision to impose a moratorium on new gas supply connections in National Grid's service territory in downstate New York (KEDNY/KEDLI). Although this was an operational decision taken by the Group's US leadership in response to a potential shortfall in gas supplies coming into the region, the Committee and John agreed that, as CEO, he was ultimately accountable for the adverse financial and reputational consequences suffered by the Company. The Committee also recognised the subsequent outstanding leadership that John had given in reaching a settlement with the New York authorities and in actions taken to address the situation. Accordingly, the Committee and John agreed that it would be appropriate for John to donate 20% of his APP award (net of tax) when it is paid in July to a charity involved in the emergency COVID-19 response in our US service territories.

In reaching its overall decisions on the APP, the Committee took account of Environmental, Social and Governance (ESG) considerations, including those related to COVID-19, noting in particular that no employees have been furloughed, no compulsory redundancies or pay reductions have been made, and trade union agreements have been honoured.

Annual statement from the Remuneration Committee Chair continued

Long Term Performance Plan (LTPP)

The performance period for the 2017 LTPP ended on 31 March 2020, with a vesting outcome of 84.9% of the maximum potential (350% for the CEO and 300% for other Executive Directors). This outturn was based on our performance measures of Group Return on Equity and Group Value Growth, with adjustments in respect of inclusion of the value created from the sale of the residual interest in the UK Gas Distribution business and revised timing of UK tax payments. More details on the performance measures are set out on page 100. The Committee reviewed whether there were any factors which might cause it to reduce the vesting levels, including compliance with the dividend policy, but concluded after careful consideration that the vesting levels fairly reflected performance over the performance period, and that the additional two-year holding period and significant shareholding requirements appropriately align interests with shareholders, particularly through COVID-19 uncertainty.

Annual salary review

Against the background of the pandemic and its impact on wider society and the economies of the territories where National Grid operates, the Committee agreed that, whilst most managers and all those covered by trade union agreements would receive increases, it would exercise restraint and not award annual salary increases to the Group Executive Committee members at this time. The Committee however felt that an exception should be made in respect of Andy Agg, the CFO. Andy was appointed to his role in January 2019 and, as we have done for other appointments, his starting salary was set significantly below the assessed market rate for the job with the publicly stated intention to increase his salary, subject to his performance and progression in the role, toward the assessed market rate. In line with this plan Andy would have received a salary increase of 9% from 1 June 2020. However, in the context of the other senior executives not receiving a salary increase this year, the Committee decided to restrict Andy's increase to 6.5%. In approving this increase, the Committee considered that Andy had made a very good contribution to the Group in his first full year as CFO, with a particular focus on strengthening his senior financial team as well as focusing on the financial preparations for RIIO-2. The Committee will again review Andy's salary next year and may, as previously, award him an increase in excess of other senior executives, subject to continuing good performance, to bring his salary in line with the market rate.

The Remuneration Committee will continue to consider the current and potential impact of COVID-19 on the Company and its stakeholders in determining if and when any salary increases are awarded. Consistent with this decision, there will be no increases in fees for the Board Chairman or other Non-executive Directors at this time.

I would also like to note and thank John Pettigrew and Andy Agg for their generous donations of £50,000 and £20,000, respectively, to the Prince's Trust to support the Trust's work with young people giving them a lifeline and increased social mobility despite the challenges created by the COVID-19 pandemic. The £20,000 donation from Andy Agg represents some 50% of the salary increase he will receive for 2020.

Leaving arrangements for Dean Seavers

Dean Seavers, Executive Director, US, stepped down for personal reasons from the Board on 5 November 2019. His employment with National Grid subsequently terminated on 31 December 2019, following a handover period with his successor as President of National Grid's US business. The Committee concluded that 'good leaver' remuneration provisions should apply under our Directors' Remuneration Policy. Details of his leaving arrangements are provided on page 102.

The Board decided that this position will no longer sit on the Main Board. Badar Khan was appointed Interim President of the US Business and then was made permanent in this role from 1 April 2020.

Pension

Under the new Policy approved last year, any new UK-based Executive Directors will receive a pension contribution/allowance of up to 20% of base salary (reduced from 30% previously). To further align with the evolving shareholder expectations and market practice, the Committee decided that, from November 2019 onwards, any new UK-based Executive Directors will receive a pension contribution/allowance of up to 12% of base salary, which is in line with the defined contribution rate available to the majority of the UK-based wider workforce. The Company has also cascaded this change so that it applies to all new UK hires regardless of level. The current average pension contribution across the various pension schemes for the wider UK workforce has decreased from 18% last year to 17% this year due to natural attrition.

I noted last year that our recently appointed CFO's pension allowance was already set at 20% of base salary at the time of his appointment. Also, as reported last year, our previously appointed UK-based Executive Directors agreed to reduce their pension allowance from 30% of base salary to 20% by the end of 2022, without compensation.

We recognise recent governance and remuneration statements from major institutions to the effect that companies are expected to develop a credible plan to align incumbent directors' pension contribution rates with the majority of the wider UK workforce by the end of 2022. The Committee has been thinking carefully about this issue, particularly in the context of the variety of legacy pension plans in operation and the tiered structure of pension contributions throughout the Company which I described last year. This matter is under active review, and we shall incorporate our longer-term pension proposals as part of our consultation for the Directors' Remuneration Policy binding vote in 2021.

What is our remuneration policy seeking to achieve?

Although we have regularly stated our remuneration policy objectives, it is important to set out again what we are seeking to achieve in the way we structure senior executives' remuneration. Our policy aim is to ensure that how we structure remuneration and how we make decisions on annual and long-term reward plans are compatible with and fully support:

- attracting, motivating and retaining senior executives while not over-paying;
- ensuring we pay our senior executives in a way that incentivises stretching financial and operational performance, within the risk appetite set by the Board;
- being fully aligned to the way National Grid earns its returns for shareholders; and
- actively supporting our strategy, ethics, values and contribution to society in the territories where we operate.

In addition, in order to ensure internal alignment and common purpose, we apply the same broad architecture to the remuneration of our senior management team below the Executive Directors.

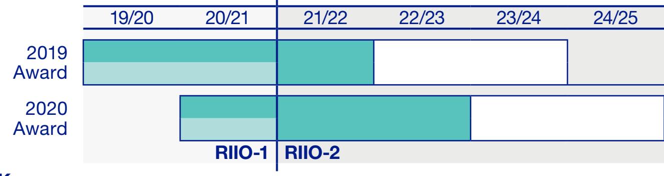
The key components of our approach are:

1. Significant weighting towards long-term value creation and alignment with shareholder interests

Nearly three quarters of John Pettigrew's variable pay opportunity is represented by the LTPP. We continue to put a much higher weight on this element compared with the APP because National Grid is a long-term business with long-life assets. We want to make sure investment decisions are made, and operating efficiencies achieved, against this background. Moreover, for Executive Directors, some 85% of their variable pay opportunity (both annual and long-term) is delivered in National Grid's shares. Consistent with our approach for aligning executive interests to the long term, LTPP awards have a three-year performance period and a further two-year post-vesting holding period. Our LTPP measures for 2020 will continue to be fully aligned with long-term value creation and shareholder interests. Figure 1 below illustrates how performance measures are structured for 2019 and 2020 LTPP awards, taking account of the impact of the transition from RIIO-1 to RIIO-2.

Impact of RIIO-2 on our Long Term Performance Plan

Figure 1: LTPP measures



Key:
Group Value Growth Group RoE Holding period

2. We require senior executives to maintain very high shareholdings in National Grid

As CEO, John Pettigrew has to hold at least five times his pre-tax salary in National Grid's shares, which is equivalent to around nine times his post-tax salary. Other UK-based Executive Directors must hold at least four times their pre-tax salary in National Grid's shares (equivalent to around seven times their post-tax salary). This requirement ensures that

Directors' Remuneration Report continued

executives necessarily have a longer-term view in their decision-making, are rewarded for achieving success progressively over the long term, and have interests aligned to our private and institutional shareholders – gaining if the share price increases, and sharing in the consequences of share price falls. Moreover, we believe our senior management, not just Executive Directors, should view the dividends paid on shares they earn as part of their overall remuneration arising from National Grid, rather than focusing on the annual capital value. An important characteristic of our high shareholding requirement is that a newly appointed Executive Director who owns no National Grid shares should expect to take some six to seven years (assuming target payout levels) to have earned the minimum shareholding requirement and will be unable to sell shares (other than to pay income tax arising on vesting) prior to that point. Our post-employment shareholding requirement further enhances the alignment of interests between executives and shareholders. Our current post-employment shareholding policy requires Executive Directors to hold 200% of salary for two years. We have noted recent governance developments and shareholder expectations that the post-employment shareholding requirement should be at the same level as the in-employment shareholding requirement, although balanced against that our in-employment shareholding requirement is at the top end of market practice. We will review this matter as part of our consultation for the Directors' Remuneration Policy vote in 2021.

3. Achievement of short-term (APP) and long-term (LTPP) incentive opportunities is linked to National Grid's performance

A key principle of our remuneration policy, and how it operates, is that reward should be aligned to the financial and operational performance of the Company and to shareholder interests. As set out in the Strategic Report, a number of our financial KPIs directly align to our APP and LTPP rewards. In addition, non-financial KPIs and wider business performance (for example, safety and environmental performance) are also taken into account, and discretion applied if appropriate, when determining an executive's performance against their individual objectives and in confirming the overall final payouts (APP) and/or vesting outcomes (LTPP). Our approach, illustrating how variable pay is linked to performance, is illustrated below in Figure 2.

4. Discretion and independent judgement is applied. Achievement of short-term (APP) and long-term (LTPP) incentive opportunities is linked to National Grid's performance

As I stated last year, as a committee we consider whether to apply discretion when assessing remuneration outcomes for Executive Directors. Before approving any payments under either the APP or LTPP, we reflect with great care first on both the underlying financial and wider business performance of the Company; we then assess the wider performance of the Company in terms of its societal contribution, its relations with regulators, and its overall reputational standing with stakeholders. We also undertake a careful appraisal of the performance of each Executive Director and members of the Executive Committee against their individual objectives set for them at the start of the year and their demonstration of leadership qualities and our values. Whilst the underlying financial performance of the Company is a material factor in our assessments, the Committee has shown and will continue to demonstrate a willingness to apply discretion to adjust final payments in light of all factors considered relevant by the Committee.

In addition to applying discretion to final payment levels, the Committee considers whether there might be any basis for applying malus and/or clawback to awards made and/or payments already received by an individual where subsequent events or factors justify taking such steps.

Figure 2: How our variable pay is determined and linked to performance

	Financial measures	+	Individual objectives	+	Committee discretion	+	Malus/clawback
APP 1-year performance period (up to 125% of salary)	Group/Business Return on Equity Business Value Added Business Underlying Profit Earnings per Share		Objectives are set on an individual basis, dependent on role, remit and requirements. Includes wider business measures as appropriate		Committee considers wider financial and business performance as well as individual demonstration of leadership qualities and values, and will adjust as appropriate		Committee has discretion to apply malus/clawback in exceptional circumstances
LTPP 3-year performance period (up to 350% of salary for CEO, 300% for other Executive Directors)	Group Return on Equity Group Value Growth		n/a				

Fair and Appropriate

When making remuneration decisions for the Executive Directors and other senior leaders, the Remuneration Committee takes account of the remuneration arrangements and outcomes for the wider workforce, statistical information, such as the CEO pay ratio and gender pay gap data, employee views on executive pay as part of our employee voice process, and our Company values. Last year, we voluntarily reported our CEO pay ratio one year early, with a median ratio of 76:1 for UK-based employees. This year, the median ratio for UK-based employees is 86:1. Our Group-wide median ratio was 48:1 last year and 53:1 this year. The increases in both ratios are largely due to the increase in LTPP vesting. The lower Group-wide ratio reflects the higher general level of wages in the US compared with the UK, and especially in the regions of the US where the Company operates. It is also important to recognise that around three quarters of our employees are in the US. In terms of UK gender pay gap, there has been an improvement from the median of 4.4% last year to 2.6% this year.

Changes to the Committee membership

Nora Mead Brownell resigned from the Board on 8 April 2019. Jonathan Silver joined the Board and was appointed to the Committee on 16 May 2019.

Developments for 2020/21

Looking ahead, and as already mentioned, the Committee's work will be dominated by considering the impact of RIIO-2 on our remuneration structure. In addition, we will also be mindful of the evolving practice on executive pension levels (where we have already taken steps to align different employee levels). We will also be considering how best to build into our remuneration arrangements consideration of key non-financial objectives, such as environmental issues and the Company's performance in reducing emissions and enabling the wider societal evolution towards new and renewable energy sources and networks. In our review of policy for 2021, we will consult on all of these matters during the year ahead.

Conclusion

The Committee has carefully reviewed the performance of the senior executive team during the year and the prior three years to assess whether the level of APP and LTPP payments/vesting were aligned with the Company's performance over the period and concluded that the arrangements set out in this Remuneration Report were a fair reflection of their individual and collective performance. Accordingly, on behalf of the Committee, I commend this Directors' Remuneration Report to you and ask for your support at the Annual General Meeting.

Jonathan Dawson

Jonathan Dawson
Remuneration Committee Chair

At a glance – 2019/20

Our 'At a glance' highlights the performance and remuneration outcomes for our Executive Directors for the year ended 31 March 2020. Further detail is provided in the Statement of implementation of remuneration policy in 2019/20.

Annual Report on Remuneration

A comparison of the 2019/20 single total figure of remuneration, with the maximum remuneration if variable pay had vested in full, is set out below for the Executive Directors. Andy Agg, John Pettigrew and Nicola Shaw were each in office for the full year. Dean Seavers was in office for part of the year.

Total remuneration

Executive Director	Maximum if variable pay vested in full £'000	2019/20 total single figure of remuneration £'000	Split by component (%)
Andy Agg	2,015	1,716	43.0% / 30.6% / 23.2% / 3.2%
John Pettigrew	6,227	5,322	27.0% / 16.9% / 50.2% / 5.9%
Dean Seavers	2,905	2,502	24.4% / 69.3% / 6.3%
Nicola Shaw	3,074	2,520	29.3% / 15.3% / 49.6% / 5.8%

Key: ◆ Fixed ◆ APP ◆ 2017 LTPP – face value ◆ 2017 LTPP – share appreciation/depreciation and dividend equivalent values

Notes:
1. Dean Seavers stepped down from the Board for personal reasons on 5 November 2019 and left the Company on 31 December 2019. In the above table, the maximum if variable pay vested in full relates to the period 1 April to 31 December 2019 and includes base salary, benefits in kind, pension, 2019/20 APP and 2017 LTPP vesting.
2. For each UK-based Executive Director the share price has increased between grant date of the LTPP awards in 2017 and the estimated share price value at vesting, being the three months' average preceding 31 March 2020. Comparing the share price at grant of 973.80p for Andy Agg, John Pettigrew and Nicola Shaw versus the estimated average share price for the period 1 January 2020 to 31 March 2020 (978.75p), there is an increase of 4.95p (0.5%) per share. Andy Agg received a second 2017 LTPP tranche and comparing the share price at grant of 941.50 versus the estimated average share price for the period 1 January 2020 to 31 March 2020 (978.75p), there is an increase of 37.25p (4.0%) per share. This results in an estimated increase in value (net of dividend equivalents) of £10,554 in total for Andy Agg, £15,107 for John Pettigrew, and £7,063 for Nicola Shaw. For the former US-based Executive Director, Dean Seavers, the ADS price has decreased between grant date and the estimated average ADS price for the period 1 January 2020 to 31 March 2020 ($62.48). Comparing the ADS price at grant of $63.94 versus the estimated ADS price of $62.48 there is a reduction of $1.46 (2.0%) per ADS. This results in an estimated reduction in value (net of dividend equivalents) of $56,810 for Dean Seavers. Overall, the percentage growth in value over the three-year period due to dividend income per share/ADS is at least 11%, and this will increase further subject to a final dividend to be included on the vesting date.

	Key features of remuneration policy (adopted 2019)	Implementation of policy in 2019/20
Salary	• Target broadly mid-market against FTSE 11-40 for UK-based Executive Directors and general industry and energy services companies with similar revenue for US-based Executive Directors.	• Salary increases of 8.0% (comprising the UK budget of 2.9% and a further 5.1%) for each of John Pettigrew and Nicola Shaw (June 2019). These increases were awarded in line with remuneration policy and given their strong individual performance and to align their pay to the appropriate market levels for their roles; • Salary increase of 3.1% for Dean Seavers (June 2019). This increase was in line with the budget for US managerial employees; and • Andy Agg was not eligible for a June 2019 salary increase because he was internally promoted on 1 January 2019.
Annual Performance Plan (APP)	• Maximum opportunity is 125% of salary; • 50% paid in cash, 50% paid in shares which must be retained until the later of two years and meeting the shareholding requirement; and • Subject to both malus and clawback.	• 70% based on financial measures and 30% based on individual objectives; • Financial measures for CEO and CFO comprise 35% underlying EPS and 35% Group RoE; • Financial measures for Executive Director, US, and Executive Director, UK, comprise 23.3% US/UK Value Added respectively, 23.3% US/UK RoE respectively and 23.3% US/UK Underlying Operating Profit respectively; and • Individual objectives cover driving efficiency, delivering value for investors, stakeholder engagement including regulatory and government, our workforce/ talent and culture agenda, corporate social responsibility and customer. • 2019/20 APP payouts as a percentage of maximum opportunity: 71% for each of Andy Agg and John Pettigrew, 0% for Dean Seavers and 56% for Nicola Shaw.
Long Term Performance Plan (LTPP)	• Maximum award level is 350% of salary for CEO and 300% for other Executive Directors; • Vesting is subject to long-term performance conditions over a three-year performance period; • Shares must be retained until the later of two years from vesting and meeting the shareholding requirement; and • Subject to both malus and clawback.	• 2019 LTPP award: 33.33% Group RoE and 66.67% Group Value Growth; and • Overall the 2017 LTPP vested at 84.9% of the maximum and is based on the performance of two equally weighted measures of Group RoE and Group Value Growth achieving 69.8% and 100.0% respectively.
Pension and other benefits	• Eligible to participate in a defined contribution plan (or defined benefit if already a member); • Pensionable pay is salary only in UK and salary and APP in US in alignment with market; and • Other benefits as appropriate.	• UK cash allowance for John Pettigrew and Nicola Shaw, 30% of pensionable pay (reducing to 26.7% at 1 April 2020, 23.4% at 1 April 2021 and 20% at 1 April 2022) and for Andy Agg, 20% of pensionable pay; • US-defined contribution for Dean Seavers, 9% of pensionable pay with additional match of up to 4%; and • Other benefits include private medical insurance, life assurance, and for UK-based Executive Directors either a fully expensed car or a cash alternative, and a car and driver when required. • The Committee agreed in November 2019 that newly appointed UK-based Executive Directors will receive pension contributions of up to 12% of base salary for the DC plan (or cash supplement in lieu); this is in line with the level for new joiners across the rest of the UK-based workforce.
Shareholding requirement	• 500% of salary for CEO; • 400% of salary for other Executive Directors; and • Post-employment shareholding requirement, 200% of salary for two years.	• Shareholdings for Andy Agg, John Pettigrew and Nicola Shaw are 195%, 609% and 175% respectively and for Dean Seavers (at 5 November 2019) 423%; and • John Pettigrew has met his shareholding requirement. Andy Agg and Nicola Shaw have not yet met their shareholding requirements due to relatively shorter tenure in role and in company, respectively. • Andrew Bonfield and Dean Seavers have each met their post-employment shareholding requirement as at 31 March 2020.

Directors' Remuneration Report continued

Directors' remuneration policy – approved by shareholders in 2019

Key aspects of the current Director's remuneration policy, along with elements particularly applicable to the 2019/20 financial year, are shown on pages 92 – 95 for ease of reference only. The current policy was approved for three years from the date of the 2019 AGM, held on 29 July 2019. A shareholder vote on the remuneration policy is not required in 2020. A copy of the full remuneration policy is available within the 2018/19 Annual Report and Accounts on the Company's investor website (investors.nationalgrid.com).

From time to time, the Committee may consider it appropriate to apply some judgement and discretion in respect of the approved policy. This is highlighted where relevant in the policy, and the use of discretion will always be in the spirit of the approved policy.

Our peer group

The Committee reviews its remuneration policy against appropriate peer groups annually to make sure we remain competitive in the relevant markets. The primary focus for reward market comparisons is the FTSE 11-40 for UK-based Executive Directors and general industry and energy services companies with similar levels of revenue for US-based Executive Directors. These peer groups are considered appropriate for a large, complex, international and predominantly regulated business.

The Committee reviews annually the overall appropriateness and relevance of the remuneration policy and whether any changes should be put to shareholders. Decisions on the levels of measures and targets for performance related pay (APP and LTPP) and payouts are made taking account of overall financial and business performance. A member of the Audit Committee is required to be a member of the Committee and this ensures the Committee receives knowledgeable input on setting financial measures and assessing outturns including any adjustments and judgements considered by the Audit Committee. The Committee also works closely with the Nominations Committee in respect of pay and conditions of newly appointed executives to ensure their remuneration is within policy. The Committee will interface with the Share Schemes Sub-Committee as required. Consistent with the UK Corporate Governance Code, members of the Remuneration Committee are independent Non-executive Directors who do not receive any variable remuneration and do not participate in decisions about their own remuneration.

Approved policy tables – Executive Directors

Salary

Purpose and link to business strategy: to attract, motivate and retain high-calibre individuals, while not overpaying.

Operation	Maximum levels	Performance metrics, weighting and time period applicable
Salaries are generally reviewed annually and are targeted broadly at mid-market of our peer group. However a number of other factors are also taken into account: • business performance and individual contribution; • the individual's skills and experience; • scope of the role, including any changes in responsibility; and • market data, including base pay and total remuneration opportunity in the relevant comparator group.	No prescribed maximum annual increase, although increases are generally aligned to salary increases received by other Company employees and to market movement. Increases in excess of this may be made at the Committee's discretion in circumstances such as a significant change in responsibility, progression if more recently appointed in the role and broad alignment to mid-market.	Not applicable.

Benefits

Purpose and link to business strategy: to provide competitive and cost-effective benefits to attract and retain high-calibre individuals.

Operation	Maximum levels	Performance metrics, weighting and time period applicable
Benefits provided include: • company car or a cash alternative (UK only); • use of a car and driver when required; • private medical insurance; • life assurance; • personal accident insurance (UK only); • opportunity to purchase additional benefits (including personal accident insurance for US) under flexible benefit schemes available to all employees; and • opportunity to participate in HMRC (UK) or Internal Revenue Service (US) tax-advantaged all-employee share plans, currently: Sharesave: UK employees may make monthly contributions from net salary for a period of three or five years. The savings can be used to purchase shares at a discounted price, set at the launch of each plan period. Share Incentive Plan (SIP): UK employees may use their gross salary to purchase shares. These shares are placed in trust. Employee Stock Purchase Plan (ESPP) (423(b) plan): eligible US employees may purchase ADSs on a monthly basis at a discounted price. Other benefits may be offered at the discretion of the Committee.	The cost of providing benefits will vary from year to year in line with market. Participation in tax-approved all-employee share plans is subject to limits set by the relevant tax authorities from time to time.	Not applicable.

Directors' remuneration policy – approved by shareholders in 2019 continued

Pension

Purpose and link to business strategy: to reward sustained contribution and assist attraction and retention.

Operation	Maximum levels	Performance metrics, weighting and time period applicable
Externally hired Executive Directors will participate in a Defined Contribution (DC) arrangement. UK-based Executive Directors may alternatively choose to receive cash in lieu. In cases of internal promotion to the Board, the Company will recognise legacy Defined Benefit (DB) pension arrangements of existing employees in both the UK and US where these have been provided under an existing arrangement. In line with market practice, pensionable pay for UK-based Executive Directors includes basic salary only and for US-based Executive Directors it includes basic salary and APP award.	UK DC: annual contributions for new appointments of up to 20% of basic salary. Existing Executive Directors may receive annual contributions of up to 30% of basic salary. Executive Directors may take a full or partial cash supplement in lieu. Life assurance of four times basic salary and a dependant's pension of one third of basic salary is provided. Executives with HMRC pension protection may be offered lump sum life assurance only, equal to four times basic salary. UK DB: a pension generally payable from age 60 or 63. DB benefits are subject to capped increases in pensionable salary. No enhancement is provided on promotion to the Board. Funded DB benefits are subject to HMRC maximum allowances and limits. On death in service, a lump sum of four times pensionable salary and dependant's pension of two-thirds of the Executive Directors' pension is provided. DB pension plans were closed to new members by April 2006. US DC: annual contributions of up to 9% of basic salary plus APP award with additional 401(k) plan match of up to 4%. US DB: an Executive Supplemental Retirement Plan provides for an unreduced pension benefit at age 62 (this plan is closed to new participants from 1 January 2015). For retirements at age 62 with 35 years of service, the pension benefit would be approximately two thirds of pensionable salary. DB final average pay plan is subject to capped increases in pensionable pay. Upon death in service, the spouse would receive 50% of the pension benefit (100% if the participant died while an active employee after the age of 55).	Not applicable. None of the current Executive Directors are active members of a DB plan.

Pension footnote: The Remuneration Committee agreed in November 2019 (i.e. after the July 2019 AGM Policy vote) that newly appointed Executive Directors will receive annual contributions of up to 12% of basic salary for the DC pension scheme, or cash supplement in lieu.

Annual Performance Plan (APP)

Purpose and link to business strategy: to incentivise and reward the achievement of annual financial measures and strategic non-financial measures including the delivery of annual individual objectives and demonstration of our Company leadership qualities and values.

Operation	Maximum levels	Performance metrics, weighting and time period applicable
The APP comprises reward for achievement against financial measures and achievement against individual objectives. Financial performance measures and targets are normally agreed at the start of each financial year and are aligned with strategic business priorities. Targets are set with reference to the budget. Individual objectives and associated targets are normally agreed also at the start of the year. APP awards are paid in June. 50% of the APP award is paid in shares, which (after any sales to pay-associated income tax) must be retained until the shareholding requirement is met, and in any event for two years after receipt. Awards are subject to malus and clawback provisions as set out in the paragraph overleaf.	The maximum award is 125% of basic salary in respect of a financial year.	At least 50% of the APP is based on performance against financial measures. The Committee may use its discretion to set financial measures that it considers appropriate in each financial year and has the flexibility to modify the amount payable, to reflect wider financial and business performance, demonstration of leadership qualities and our values, or to take account of a significant event. The payout levels at threshold, target and stretch performance levels are 0%, 50% and 100%, respectively.

Directors' Remuneration Report continued

Long Term Performance Plan

Purpose and link to business strategy: to drive long-term business performance, aligning Executive Director incentives to key strategic objectives and shareholder interests over the longer term.

Operation	Maximum levels	Performance metrics, weighting and time period applicable
Awards of shares may be granted each year, with vesting subject to long-term performance conditions. The performance measures have been chosen as the Committee believes they reflect the Executive Directors' creation of long-term value within the business. Targets are set for each award with reference to the business plan. Participants may receive ordinary dividend equivalent shares on vested shares, from the time the award was made, at the discretion of the Committee. Participants must retain vested shares (after any sales to pay tax) until the shareholding requirement is met, and in any event for a further two years after vesting. Awards are subject to malus and clawback provisions as set out in the paragraph below.	The maximum award for the CEO is 350% of salary and it is 300% of salary for the other Executive Directors based on salary at the time of the award.	The performance measures are Group Value Growth and Group RoE for all Executive Directors. For awards made in financial year 2019/20: Group Value Growth measured over three years (2019/20, 2020/21 and 2021/22) and Group RoE measured over two years (2019/20 and 2020/21) such that Group Value Growth represents two thirds and Group RoE represents one third of the total vesting outcome. For awards made in financial year 2020/21: Group Value Growth measured over three years (2020/21, 2021/22 and 2022/23) and Group RoE measured over one year (2020/21) such that Group Value Growth represents five sixths and Group RoE represents one sixth of the total vesting outcome. For awards made in 2016 which will vest in 2019, the performance measures and percentage weightings are: Group Value Growth (50%) and Group RoE (50%) for the CEO and CFO; Group Value Growth (50%), Group RoE (25%) and UK or US RoE (25%) for the UK and US Executive Directors respectively. For awards made in 2017 and 2018 which will vest in 2020 and 2021 respectively, the performance measures were Group Value Growth and Group RoE, equally weighted, for all Executive Directors. All awards have a three-year performance period. For each performance measure, threshold performance will trigger only 20% of the award to vest; 100% will vest if maximum performance is attained. Notwithstanding the level of award achieved against the performance conditions, the Committee may use its discretion to modify the amount vesting to reflect wider financial and business performance and take account of a significant event and/or compliance with the dividend policy.

Malus and clawback

The Committee has discretion to determine whether exceptional circumstances exist which justify whether any or all of an award should be forfeited, even if already paid. Examples of exceptional circumstances include, but are not limited to, material misstatement, misconduct of the participant, a significant environmental, health and safety or customer issue or failure of risk management, and if certain other facts emerge after termination of employment. The Committee also has a prescribed process to follow when determining whether and how to apply this discretion.

Approved policy table – Non-executive Directors (NEDs)

Fees for NEDs

Purpose and link to business strategy: to attract NEDs who have a broad range of experience and skills to oversee the implementation of our strategy.

Operation	Maximum levels	Performance metrics, weighting and time period applicable
NED fees (excluding those of the Chairman) are set by the Executive Committee in conjunction with the Chairman. The Chairman's fees are set by the Committee. **Fee structure:** • Chairman fee (all inclusive); • basic fee, which differs for UK- and US-based NEDs; • Committee chair fee; • Committee membership fee; and • Senior Independent Director fee. No additional fees are paid for membership/chair of the Nominations Committee. Fees are reviewed every year taking into account those in companies of similar scale and complexity. The Chairman is covered by the Company's private medical and personal accident insurance plans, and has the use of a car and driver, when required. NEDs do not participate in incentives, pension or any other benefits. However, they are eligible for reimbursement for all Company-related travel expenses. In instances where these costs are treated by HMRC as taxable benefits, the Company also meets the associated tax cost to the Non-executive Directors through a PAYE settlement agreement with HMRC. NEDs who also sit on National Grid subsidiary boards may receive additional fees related to service on those boards.	There are no prescribed maximum fee levels although fees are generally aligned to salary increases received by other Company employees and market movement for NEDs of companies of similar scale and complexity. The cost of benefits provided to the Chairman is not subject to a predetermined maximum since the purchase cost will vary from year to year.	Not applicable.

Directors' remuneration policy – approved by shareholders in 2019 continued

Shareholding requirement – in employment

The requirement of Executive Directors to build up and hold a significant value of National Grid shares ensures they share a significant level of risk with shareholders and aims to align their interests. Executive Directors are required to build up and retain shares in the Company. The level of holding required is 500% of salary for the CEO and 400% of salary for the other Executive Directors. Unless the shareholding requirement is met, Executive Directors will not be permitted to sell shares, other than to pay income tax liabilities on shares just vested or in exceptional circumstances approved by the Remuneration Committee.

Shareholding requirement – post employment

The requirement of Executive Directors to continue to hold National Grid shares after leaving ensures they continue to share a risk with shareholders and maintain alignment with shareholders' interests. Executive Directors will be required to hold 200% of base salary calculated at their leave date, or maintain their actual holding percentage if lower, expressed as a number of shares and held for a period of two years. This calculation excludes the value of any awards not yet vested for 'good leavers' that will vest according to the normal schedule and which in any event must be held for a two-year period. The calculation will include recently vested LTPP awards or APP awards paid as shares which are subject to respective two-year holding periods, even after employment. Unless the post-employment shareholding requirement is met, Executive Directors will not be permitted to sell shares, other than to pay income tax liabilities on shares just vested or in exceptional circumstances approved by the Remuneration Committee.

Consideration of remuneration policy elsewhere in the Company

Our remuneration policy is generally aligned to the policies for our non-unionised workforce. All employees are entitled to base salary, benefits and pension contributions. In setting the remuneration policy the Committee considers the remuneration packages offered to employees across the Company. As a point of principle, salaries, benefits, pensions and other elements of remuneration are assessed regularly to ensure they remain competitive in the markets in which we operate. In undertaking such assessment our aim is to be at mid-market for all job bands, including those subject to union negotiation. As would be expected, we have differences in pay and benefits across the business which reflect specific accountabilities and labour markets. There are elements of remuneration policy which apply to all, for example, flexible benefits and share plans.

When considering annual salary increases, the Committee reviews the proposals for salary increases for the employee population generally, as it does for any other changes to remuneration being considered.

All employees are eligible for an annual performance-based award. Eligibility and the maximum opportunity available is based on market practice for incentives for the employee's job band. In addition, around 400 senior management employees are awarded LTPPs annually, which include the same performance measures as those for Executive Directors.

The Company has a number of all-employee share plans that provide employees with the opportunity to become, and to think like, a shareholder. These plans include Sharesave and the Share Incentive Plan (SIP) in the UK and the 401(k) and 423(b) plans in the US. Further information is provided on page 92.

The Company issues an employee engagement survey each year, which includes remuneration as a topic. It does not specifically invite employees to comment on the Directors' remuneration policy but any comments made by employees are noted. The Board also regularly engages with employees on a variety of topics, including remuneration.

Policy on payment for loss of office

The contracts contain provisions for payment in lieu of notice, at the sole and absolute discretion of the Company. Such contractual payments are limited to payment of salary only for the remainder of the notice period. In the UK such payments would be phased on a monthly basis, over a period not greater than 12 months, and the Executive Director would be expected to mitigate any losses where employment is taken up during the notice period. In the US, for tax compliance purposes, the policy is to make any payment in lieu of notice as soon as reasonably practicable, and in any event within two and a half months of the later of 31 December and 31 March immediately following the notice date.

In the event of a UK Director's role becoming redundant, statutory compensation would apply and the relevant pension plan rules may result in the early payment of an unreduced pension.

On termination of employment, no APP award would generally be payable. However, the Committee has the discretion to deem an individual to be a 'good leaver', in which case a pro-rata discretionary payment could be paid, based on financial performance (as measured at the end of the financial year) and the achievement of individual objectives during the financial year up to termination. In the UK the discretionary payment would generally be paid at the normal time. In the US the payment would be made earlier if required for tax compliance purposes, in which case the Committee would apply discretion to determine an appropriate level of financial performance. Examples of circumstances, whilst not exhaustive, which could trigger 'good leaver' treatment include redundancy, retirement, illness, injury, disability and death. The Committee will apply discretion to determine if the pro-rata discretionary payment should be made sooner than it would normally be paid, for example, in the case of death.

On termination of employment, outstanding awards under the share plans will be treated in accordance with the relevant plan rules approved by shareholders. Unvested share awards would normally lapse. 'Good leaver' provisions apply at the Committee's discretion and in specified circumstances. Examples of circumstances, whilst not exhaustive, which could trigger 'good leaver', include: redundancy, retirement, illness, injury, disability and death, where awards will be released to the departing Executive Director or, in the case of death, to their estate. Long-term share plan awards held by 'good leavers' will normally vest subject to performance measured at the normal vesting date and will be reduced pro-rata for each completed month starting on the date of grant. Such awards would vest at the same time as for other participants, apart from circumstances in which the award recipient has died, in which case the awards vest as soon as practicable (based on a forecast of performance).

At the Committee's discretion, the Company may also agree other payments such as an agreed amount for legal fees associated with the departure of the Executive Director and outplacement support.

Service contracts/letters of appointment

In line with our policy, all Executive Directors have service contracts which are terminable by either party with 12 months' notice. Non-executive Directors are subject to letters of appointment. The Chairman's appointment is subject to six months' notice by either party; for other Non-executive Directors, notice is one month. Both Executive Directors and Non-executive Directors are required to be re-elected at each AGM.

Please refer to the full remuneration policy within the 2018/19 Annual Report and Accounts on the Company's investor website (http://investors.nationalgrid.com) for our remuneration policy on Directors' recruitment, external appointments, total remuneration opportunity and corporate and share capital events.

Directors' Remuneration Report continued

Statement of implementation of remuneration policy in 2019/20

Key

AUDITED

Audited Information
Content contained within a blue box highlighted with an 'Audited' tab indicates that all the information in the panel is audited.

Role of Remuneration Committee

The Committee is responsible for recommending to the Board the remuneration policy for Executive Directors, the other members of the Executive Committee and the Chairman, and for implementing this policy. The aim is to align the remuneration policy to Company strategy and key business objectives, and ensure it reflects our shareholders', customers' and regulators' interests. The members of the Remuneration Committee in 2019/20 were Nora Mead Brownell (until 8 April 2019), Jonathan Dawson (Chair), Earl Shipp, Jonathan Silver (from 16 May 2019) and Mark Williamson.

The Committee's activities during the year – activities of the Committee during the year can be found at page 106.

AUDITED

Single Total Figure of Remuneration – Executive Directors

The following table shows a single total figure in respect of qualifying service for 2019/20, together with comparative figures for 2018/19:

		Salary £'000	Benefits in kind £'000	Pension	Total fixed pay	APP	LTPP	Total variable pay	Total remuneration
Andy Agg	**19/20**	**595**	**23**	**119**	**737**	**525**	**454**	**979**	**1,716**
	18/19	149	4	30	183	158	20	178	361
John Pettigrew	**19/20**	**1,017**	**116**	**305**	**1,438**	**897**	**2,987**	**3,884**	**5,322**
	18/19	944	94	283	1,321	994	2,336	3,330	4,651
Dean Seavers	**19/20**	**512**	**27**	**74**	**613**	**0**	**1,889**	**1,889**	**2,502**
	18/19	825	30	138	993	457	1,551	2,008	3,001
Nicola Shaw	**19/20**	**555**	**15**	**166**	**736**	**387**	**1,397**	**1,784**	**2,520**
	18/19	515	15	155	685	552	997	1,549	2,234

Notes:
Dean Seavers: 2019/20 fixed pay components in the table above are for the period he served as a Director during the year, from 1 April to 5 November 2019; 2019/20 variable pay components in the table above are for the period during which he was employed, from 1 April to 31 December 2019.
Andy Agg: 2018/19 figures in the table above are for the period he served as a Director during the year, from 1 January to 31 March 2019.
Salary: Base salaries were last increased on 1 June 2019 other than for Andy Agg, who was not eligible to receive a salary increase due to being appointed CFO on 1 January 2019.
Benefits in kind: Benefits in kind (BIK) include private medical insurance, life assurance and, for UK-based Executive Directors, either a fully expensed car or a cash alternative to a car and the use of a car and a driver when required and which, for John Pettigrew, amounted to approximately £86,000 for 2019/20 (and approximately £75,000 for 2018/19). A Sharesave option award was granted to John Pettigrew on 27 December 2019 and the benefit (approximately £8,000) of this award is included. There were no Sharesave options granted to any of the other Executive Directors during 2019/20.
APP: John Pettigrew will donate 20% of his 2019/20 APP (net of tax) to a charity involved in the emergency COVID-19 response in our US service territories. Dean Seavers received a nil payout for the individual portion of the APP. Consistent with Company policy for all colleagues not covered by a trade union agreement, this results in a nil payout overall. Information relating to amounts paid for the loss of office can be found on page 102.
LTPP: The 2017 LTPP is due to vest in July 2020. The average share price over the three months from 1 January 2020 to 31 March 2020 of 978.75p ($62.48 per ADS) has been applied and estimated dividend equivalents are included. The 2018/19 LTPP figures have been restated because last year they were estimated using the average share price (January–March 2019) and they now include the actual share price on vesting at 1 July 2019 and all dividend equivalent shares. Due to a higher share price at vesting of 842.10p versus the estimate of 837.34p (and the additional dividend equivalent shares added for the dividend with a record date of 31 May 2019 with a dividend rate of 31.26p per share), the actual value at vesting was £770, £89,005 and £37,991 higher than for the estimate last year for Andy Agg, John Pettigrew, and Nicola Shaw, respectively. Despite a lower ADS price at vesting of $52.736 versus the estimate of $54.73, the actual value at vesting was £539 higher than for the estimate last year for Dean Seavers. This is because the change in ADS price was offset by the additional dividend equivalent ADSs for the dividend with a record date of 31 May 2019 with a dividend rate of $2.0256 per ADS.
Impact of share price change: The impact of share price appreciation/depreciation, comparing share/ADS prices at grant versus the estimated share/ADS prices upon vesting is set out in the notes to the 2017 LTPP (vesting) table on page 101.
Exchange rate: $1.2868:£1.

AUDITED

Total pension benefits

Andy Agg, John Pettigrew and Nicola Shaw received a cash allowance in lieu of participation in a pension arrangement. Dean Seavers participated in a defined contribution pension arrangement in the US until he left the business at 31 December 2019. There are no additional benefits on early retirement. The values of these benefits, received during this year, are shown in the single total figure of remuneration table.

John Pettigrew has, in addition, accrued defined benefit (DB) entitlements. He opted out of the DB scheme on 31 March 2016 with a deferred pension and lump sum payable at his normal retirement date of 26 October 2031. At 31 March 2020, John Pettigrew's accrued DB pension was £165,031 per annum and his accrued lump sum was £495,092. No additional DB entitlements have been earned over the financial year, other than an increase for price inflation due under the pension scheme rules and legislation. Under the terms of the pension scheme, if he satisfies the ill health requirements, or he is made redundant, a pension may be payable earlier than his normal retirement date. A lump sum death in service benefit is also provided in respect of these DB entitlements.

Statement of implementation of remuneration policy in 2019/20 continued

AUDITED

Annual Performance Plan (APP)

Performance against targets for APP 2019/20

APP awards are earned by reference to the financial year and this year will be paid in July 2020. Financial measures determine 70% of the APP, and individual objectives determine 30% of the APP.

Payment of the APP award is made in shares (50% of the award) and cash (50%). Shares (after any sales to pay income tax) must be retained until the shareholding requirement is met, and in any event for two years after receipt.

For financial measures, threshold, target and stretch performance levels are predetermined by the Committee and pay out at 0%, 50% and 100% of the maximum potential for each part and on a straight-line basis in between threshold and stretch performance.

Target and stretch performance levels for the individual objectives are also predetermined by the Committee, and an assessment of the performance relative to the target and stretch performance levels is made at the end of the performance year on each objective.

The outcomes of APP awards earned for financial performance are summarised in the table immediately below. Performance against individual objectives is set out in the tables which follow.

Performance measure	Proportion of max opportunity	Threshold	Target	Stretch	Actual	Proportion of max achieved
CEO and CFO						
Underlying EPS (p/share) (A)	35%	54.0	57.5	61.0	58.2	60.0%
Group RoE (%) (A)	35%	10.91	11.31	11.71	11.70	98.8%
Executive Director, UK						
UK Value Added (£m)	23.3%	1,655	1,715	1,775	1,734	65.8%
UK RoE (%) (A) (Percentage points above average allowed regulatory return)	23.3%	2.01	2.26	2.51	2.34	66.0%
Underlying UK Operating Profit (£m) (A)	23.3%	1,533	1,583	1,633	1,576	43.0%
Executive Director, US						
US Value Added (£m)	23.3%	1,276	1,327	1,387	1,344	64.2%
US RoE (%) (A)	23.3%	8.96	9.16	9.36	9.25	72.5%
Underlying US Operating Profit (£m) (A)	23.3%	1,725	1,785	1,845	1,645	0.0%
All Executive Directors						
Individual objectives (%)	30%	Detail expanded in tables below				60–65%

Notes:
Underlying EPS: Technical adjustments have been made reducing the target by 2.5p to reflect the net effect of currency adjustments, the impact of deferrable storm costs, certain actuarial assumptions on pensions and scrip dividend uptake.
Group RoE: A technical adjustment has been made reducing the target by 0.33% to reflect the true-up of opening equity.
UK financial measures: Technical adjustments have been made reducing the underlying UK Operating Profit target to reflect the net effect of certain actuarial assumptions on pensions (£5m reduction) and normalisation to reflect the impact of RPI (£11m reduction) and reducing the UK Value Added target by £14m to ensure consistency of accounting treatment.
US financial measures: Technical adjustments have been made reducing the underlying US Operating Profit target by £70m to reflect the net effect of currency adjustments, deferrable storm costs and certain actuarial assumptions on pensions. Technical adjustments have been made reducing the US Value Added target by £33m to reflect the net effect of currency adjustments and the impact of deferred tax movements.
Individual Objectives: For 2019/20 the Committee has applied discretion to cap the payout for overall individual achievement against individual objectives at the lower of target and actual achievement to reflect restraint in the context of COVID-19 and to be consistent with decisions made for the wider managerial population. This discretion is not incorporated above.

Directors' Remuneration Report continued

Individual Objectives

The individual objectives of the Executive Directors when taken together were designed to deliver against each of our 2019/20 business priorities. The Committee adopts a two-stage process to agree individual objectives. First it reviews and provides feedback on the objectives including consideration of the weighting based on business criticality of the objective and then, at a second meeting, it completes a final review and approves the objectives. At the end of the year an overall assessment is made which takes account of the weighting and achievement of the respective individual objectives for each Director and the degree to which each element of the objective was met against specific target and stretch targets. As with the financial measures, the achievement of 'stretch' performance and 'target' performance overall results in 100% and 50% respectively of the maximum payout.

For 2019/20 the Committee has applied discretion to cap the payout for overall achievement against individual objectives at the lower of target and actual achievement to reflect restraint in the context of COVID-19 and to be consistent with decisions made for the wider managerial population. This discretion is not incorporated in the percentage outcomes below.

Andy Agg

Individual objective & performance commentary	Weighting	Outcome
Drive operating efficiency of the business and finance function • Delivered targeted UK cost efficiencies of £50 million and on track to deliver a further £100 million in 2020/21 • Delivered US cost efficiencies, but was short of target • Made good progress on the digital transformation of the Finance function, including the successful implementation of SAP improvements and strong leadership of a Finance transformation programme, with more work to be done to crystallise cost reductions	25%	64%
Support financial aspects of regulatory negotiations • Provided effective support on the Hinkley-Seabank agreements and in continuing RIIO-2 discussions with Ofgem in the UK, enabling financial parameters that are viewed as positive by shareholders • Enabled positive outcome on Massachusetts Electric (MECO) rate case • Maximum not awarded due to regulatory outcomes not fully at stretch levels	25%	80%
Support in updated investor proposition review and Total Societal Impact initiative • Established and gained agreement from the Board for an appropriate investor proposition • Completed sale of minority stake in Cadent in line with agreed timing • More opportunities remain in identifying additional financeable growth opportunities for sustained outperformance	25%	80%
Drive the talent agenda • Made positive progress on development and succession planning deeper in the Finance function • Increased the Colleague Enablement score and workforce diversity in the Finance function, though fell short of targeted aspirations	25%	36%
Summary		
Andy had a good year and has firmly established himself in the CFO role. He provided good leadership on the investment proposition, started to transform the Finance function and strengthened talent capabilities. Outside of his core objectives he has also made strong contributions in articulating National Grid's contributions as a corporate entity in the State Ownership debate, introducing GAAP reporting. More work is needed in driving the talent agenda in the US and progressing additional risk and control measures.	100%	65%

John Pettigrew

Individual objective & performance commentary	Weighting	Outcome
Optimise regulatory/government agreements and relationships • Led a successful response to the near simultaneous tripping of two large power stations in August 2019 leading to power outages in various parts of England and Wales, including re-establishing power within the timeframes required by Ofgem, and engaging with Ofgem in the investigation and learnings reviews which confirmed that the outage was not caused by National Grid infrastructure • Continued dialogue with Ofgem and stakeholders on the proposed parameters for RIIO-2 although there remain differences on certain issues • Achieved a successful outcome for the Hinkley-Seabank project in the UK and the MECO rate case in Massachusetts • Continued positive engagement with key regulatory and government stakeholders, including a new UK government, and administrations in Massachusetts and Rhode Island, though there is more work to be done in New York to rebuild our reputation following the issues arising from the downstate New York Gas moratorium	40%	50%
Develop external National Grid value proposition • Established and gained agreement from the Board for an appropriate investor proposition • Additionally, established and gained agreement from the Board for a new framework for defining National Grid's Total Societal Impact to support our aspirations as we continue to emphasise the importance of being a purpose-led organisation	20%	100%
Continue work to ensure National Grid is well placed for growth and innovation • Continued to build an effective platform for growth through National Grid Ventures, particularly with the purchase of renewables developer Geronimo Energy • Delivered the digital strategy in both the UK and US • Responded appropriately to innovation and disruptive technologies, particularly through National Grid Partners, though there remains more work to be done to achieve our ambitions	20%	75%

Statement of implementation of remuneration policy in 2019/20 continued

John Pettigrew continued

Individual objective & performance commentary continued	Weighting	Outcome
Drive the talent and culture agenda • Increased the colleague engagement score by 6% and articulated clear aspirations on culture, which now need to be embedded in the organisation • Demonstrated enhancements in the capabilities and strength of succession of the National Grid leadership team, including the successful appointments of a President of the US business, and Managing Director, National Grid Ventures; there remains more work to be done on succession planning and further investment in leadership capability • Made strides in inclusion and diversity, though success of I&D initiatives still needs to be evidenced with increased proportion of women and minorities in leadership and managerial positions	20%	50%
Summary		
John Pettigrew's performance in his role as CEO continues to be strong, with particular highlights in the areas of the value proposition for our investors and communities, stakeholder engagement and outcomes in the UK and Massachusetts, and growth and innovation. More work is to be done on completing agreements on downstate NY and in the succession planning and diversity of our workforce.	100%	65%

Nicola Shaw

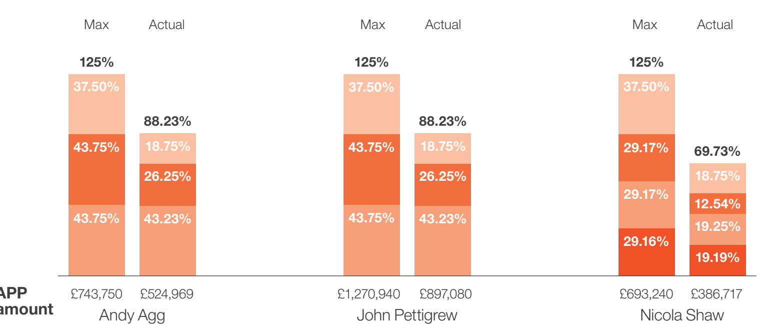
Individual objective & performance commentary	Weighting	Outcome
Deliver a step change improvement in the performance of customer service as measured by Net Promoter Score and Customer Satisfaction (CSAT) • Met Net Promoter Score stretch target • Met Customer Satisfaction score target, and was very close to stretch target • Demonstrated strong focus on customer service during the year, including positive personal engagement with customers	25%	80%
Deliver a step change in Operational Performance • Delivered cost reductions as part of the UK transformation programme whilst successfully managing all key risks • Successfully managed implications of Brexit, with no interruption to business • Made progress on digital transformation, with some further implementation work to be done • More work to be done on risk and control measures	25%	45%
Deliver successful regulatory outcomes • Delivered RIIO-2 business plans with stakeholder support, with some items posed by independent challenge group to be addressed, although there remain differences on certain issues • Positive engagement with UK regulator, including on Hinkley-Seabank activities which led to a positive outcome • Led a successful response to the August 2019 power outage, although external communications response times could have been better	25%	55%
Drive the talent agenda • Made positive progress on succession planning but more work to be done • Increased the Colleague Enablement and Engagement scores in the Core UK business • Improved workforce diversity in the Core UK business	25%	60%
Summary		
Overall Nicola Shaw has had a good year with delivering on cost reduction commitments, strong progress in improving customer service, positive engagement with our stakeholders, particularly with RIIO-2 and Hinkley-Seabank, and excellent Colleague Enablement and Engagement scores. There remains work to be done on risk and control measures and certain issues regarding RIIO-2.	100%	60%

Directors' Remuneration Report continued

2019/20 APP as a proportion of base salary

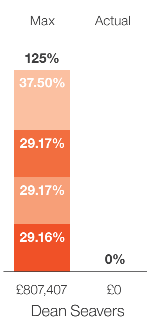
The overall APP award and its composition based on financial performance and individual performance for each Executive Director is shown as a proportion of salary.

Executive Directors at 31 March 2020



Key:
- Individual
- Underlying EPS or UK/US Underlying Operating Profit
- Group/UK/US RoE
- UK/US Value Added

Former Executive Director, US



Notes:
1. Underlying EPS and Group RoE pertain to Andy Agg, CFO and John Pettigrew, CEO.
2. Underlying UK Operating Profit, UK RoE and UK Value Added pertain to Nicola Shaw, Executive Director, UK.
3. Underlying US Operating Profit, US RoE and US Value Added pertain to Dean Seavers, Executive Director, US. The APP maximum opportunity and actual award for Dean Seavers are for the period during which he was employed, from 1 April to 31 December 2019.
4. For 2019/20 the Committee has applied discretion to cap the payout for overall achievement against individual objectives for Andy Agg, John Pettigrew and Nicola Shaw, at the lower of target and actual achievement to reflect restraint in the context of COVID-19 and to be consistent with decisions made for the wider managerial population. This discretion is incorporated in the actual payouts above.
5. John Pettigrew will donate 20% of his 2019/20 APP (net of tax) to a charity involved in the emergency COVID-19 response in our US service territories.

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LTPP performance

The LTPP value included in the 2019/20 single total figure relates to anticipated vesting in July 2020 of the conditional LTPP awards granted in 2017.

2017 LTPP

The 2017 award is determined by performance over the three years ended 31 March 2020 of Group RoE (50% weighting) and Group Value Growth (50% weighting), which is expected to vest on 27 July 2020. The financial components and weightings for this year's vesting, i.e., the 2017 LTPP awards, are the same for all Executive Directors. The Group Value Growth outturn includes an amount to reflect the value added from the sale of the residual interest in the UK Gas Distribution business and to adjust for revised timing of UK tax payments in 2019/20.

The Committee has decided not to apply any discretion following consideration of wider financial performance during the 3-year performance period.

Performance measure	Threshold – 20% vesting	Maximum – 100% vesting	Actual/expected vesting	Actual/expected proportion of maximum achieved
Group RoE (50% weighting) (A)	11.0%	12.5% or more	11.9%	69.8%
Group Value Growth (50% weighting)	10.0%	12.0% or more	12.8%	100.0%

Statement of implementation of remuneration policy in 2019/20 continued

AUDITED

2017 LTPP (vesting)

The 2017 LTPP is expected to vest on 27 July 2020. The amounts expected to vest under the 2017 LTPP for the performance period ended on 31 March 2020 and included in the 2019/20 single total figure are shown in the table below. The share price valuation is an estimate based on the average share price over the three months from 1 January 2020 to 31 March 2020 of 978.75p ($62.48 per ADS); the final dividend to be paid in August 2020 is excluded.

	Original number of share awards in 2017 LTPP	Overall vesting percentage (as % of max.)	Number of awards vesting	Number of dividend equivalent shares	Total value of awards vesting and dividend equivalent shares (£'000)
Andy Agg	49,080	84.9%	41,668	4,675	454
John Pettigrew	323,205	84.9%	274,401	30,794	2,987
Dean Seavers (ADSs) (prorated)	41,078	84.9%	34,875	4,036	1,889
Nicola Shaw	151,109	84.9%	128,291	14,397	1,397

Notes:
The total value of awards vesting and dividend equivalent shares are subject to a two-year holding period.
Andy Agg: Andy Agg's award of 49,080 shares was granted in two tranches. The first tranche of 21,996 shares was granted on 28 June 2017 followed by a second tranche of 27,084 shares granted on 24 July 2017. Both awards are subject to the same performance conditions, performance period and vesting percentage/dividend equivalents estimates.
Dean Seavers: Dean Seavers' original award of 49,294 ADSs has been prorated to 41,078 ADSs on the basis of completed months employed between the grant date and 31 December 2019.
Impact of share price change: The impact of share price change for the 2017 LTPP, comparing share price at grant versus the average share price for the period 1 January 2020 to 31 March 2020 of 978.75p ($62.48 per ADS), for each Executive Director: for John Pettigrew and Nicola Shaw the share price at grant was 973.80p resulting in an increase per share of 4.95p (0.5%) and this results in an estimated increase in value (including dividend equivalents) of £15,107 for John Pettigrew and £7,063 for Nicola Shaw; Andy Agg received his 2017 LTPP award in two tranches and the share prices at grant for his awards were 973.80p and 941.50p resulting in increases per share of 4.95p (0.5%) and 37.25p (4%) respectively and this results in estimated increases in value (including dividend equivalents) of £1,028 and £9,526 respectively; for Dean Seavers the ADS price at grant was $63.94 resulting in a decrease per ADS of $1.46 (2%) and this results in an estimated reduction in value (including dividend equivalents) of $56,810. The impact of share price change is not included in the expected amounts to vest shown in the above table.

AUDITED

Single total figure of remuneration – Non-executive Directors

The following table shows a single total figure in respect of qualifying service for 2019/20, together with comparative figures for 2018/19:

	Fees £'000		Other emoluments £'000		Total £'000	
	2019/20	**2018/19**	**2019/20**	**2018/19**	**2019/20**	**2018/19**
Nora Mead Brownell	**2**	100	–	8	**2**	108
Jonathan Dawson	**111**	108	**0**	2	**111**	110
Therese Esperdy	**141**	138	**19**	15	**160**	153
Sir Peter Gershon	**538**	523	**86**	83	**624**	606
Paul Golby	**104**	101	**5**	5	**109**	106
Liz Hewitt	**23**	n/a	**1**	n/a	**24**	n/a
Amanda Mesler	**91**	77	**2**	–	**93**	77
Earl Shipp	**103**	25	**17**	3	**120**	28
Jonathan Silver	**91**	n/a	**11**	n/a	**102**	n/a
Mark Williamson	**134**	130	**6**	6	**140**	136
Total	**1,338**	1,202	**147**	122	**1,485**	1,324

Notes:
Receiving the US-based Board fee: Nora Mead Brownell, Therese Esperdy, Earl Shipp and Jonathan Silver.
Receiving the UK-based Board fee: Jonathan Dawson, Paul Golby, Liz Hewitt, Amanda Mesler and Mark Williamson.
Nora Mead Brownell: Nora Mead Brownell stepped down from the Board on 8 April 2019.
Therese Esperdy: Fees for 2019/20 include £25,000 in fees for serving on the National Grid USA Board.
Sir Peter Gershon: Other emoluments comprise private medical insurance and the use of a car and driver when required and this amounted to approximately £85,000 for 2019/20 (and approximately £81,000 for 2018/19).
Jonathan Silver: Jonathan Silver joined the Board on 16 May 2019.
Other emoluments: In accordance with the Company's expenses policies, Non-executive Directors receive reimbursement for their reasonable expenses for attending Board meetings. In instances where these costs are treated by HMRC as taxable benefits, the Company also meets the associated tax cost to the Non-executive Directors through a PAYE settlement agreement with HMRC and these costs are included in the table above.

The total emoluments paid to Executive and Non-executive Directors in the year was £13.5 million (2018/19: £11.6 million).

Directors' Remuneration Report continued

AUDITED

Other Remuneration Disclosures

2019 LTPP (conditional award) granted during the financial year

The face values of the awards are calculated using the volume weighted average share price at the date of grant (28 June 2019) (£8.341132 per share and $53.0487 per ADS) and are used to determine the value of the awards granted.

	Basis of award	Face value '000	Proportion vesting at threshold performance	Number of shares	Performance period end date
Andy Agg	300% of salary	£1,785	20%	213,999	31 March 2022
John Pettigrew	350% of salary	£3,603	20%	431,969	31 March 2022
Dean Seavers (ADSs)	300% of salary	$3,347	20%	63,094 (ADSs)	31 March 2022
Nicola Shaw	300% of salary	£1,677	20%	201,059	31 March 2022

Notes:
The 2019 LTPP grant will vest on 1 July 2022. The total value of awards vesting and dividend equivalent shares are subject to a two-year holding period.
Dean Seavers: Dean Seavers' 2019 LTPP award of 63,094 ADSs will be prorated to 10,515 ADSs to reflect the time served between the award date and 31 December 2019 when he left the Company.

AUDITED

Performance conditions for 2019 LTPP awards granted during the financial year

	Conditional share awards granted – 2019		
Performance measure	Weighting for all Executive Directors	Threshold 20% vesting	Maximum 100% vesting
Group RoE Ⓐ	33.33%	11.0%	12.5% or more
Group Value Growth	66.67%	10.0%	12.0% or more

Notes:
Group RoE: Group RoE is measured during the first two years of the three-year performance period and will contribute one-third of the total vesting outcome (at the end of three years).
Group Value Growth: Group Value Growth is measured over the entire three-year performance period and will contribute two-thirds of the total vesting outcome.

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Payments for loss of office and payments to past Directors

Leaving arrangements for Dean Seavers

Dean Seavers stepped down from the Board for personal reasons on 5 November 2019 and remained employed by the Company until 31 December 2019 to support a smooth leadership transition and handover.

Mr Seavers' remuneration in relation to his fixed pay for the period 1 April 2019 to 5 November 2019, his 2019/20 APP and his 2017 LTPP is disclosed in the Single Total Figure of Remuneration table on page 96. For the period from 6 November 2019 to 31 March 2020, Mr Seavers received remuneration totalling £1.1 million which predominantly includes his fixed pay (salary, benefits and pension) until 31 December 2019, his pay in lieu of notice of approximately £732,000 and his accrued holiday of approximately £133,000. All payments are in accordance with his service agreement and the Directors' Remuneration Policy and subject to applicable tax withholdings. As part of Mr Seavers' agreed leaver arrangements the Company will fund limited costs for security arrangements until 31 December 2020. These costs are expected to be no more than $35,000.

The Committee agreed to grant good leaver treatment for Mr Seavers' outstanding LTPP awards given his overall long-term strong performance and contribution to the business. Mr Seavers' outstanding ADS awards under the 2018 and 2019 Long Term Performance Plan (LTPP) will be prorated for completed months held since the award date until 31 December 2019, as set out in the table below. These awards will vest at the same time as other participants, subject to performance measured at the vesting date and any discretion the Committee may decide to exercise at the time of vesting, in line with our Directors' Remuneration Policy. These shares will be subject to the two-year post-vesting holding requirement and post-employment shareholding requirement, if not already met.

LTPP Awards

Award	ADSs awarded	Pro-rata ADSs	Vesting Date
2018 LTPP	58,786	29,393	July 2021
2019 LTPP	63,094	10,515	July 2022
Total	**121,880**	**39,908**	

Mr Seavers is subject to the Company's post-employment shareholding requirement of 200% of base salary for two years after leaving the Company.

Statement of implementation of remuneration policy in 2019/20 continued

Payments to past Directors and post-employment shareholdings

There have been no payments to any other past Director during 2019/20. Past Directors are required to continue to hold their shares/ADSs with the Company's third-party share scheme administrator in order to audit compliance; at 31 March 2020 Andrew Bonfield and Dean Seavers have each continued to meet their post-employment share-holding requirements.

Shareholder dilution

Where shares may be issued or treasury shares reissued to satisfy incentives, the aggregate dilution resulting from executive share-based incentives will not exceed 5% in any 10-year period. Dilution resulting from all incentives, including all-employee incentives, will not exceed 10% in any 10-year period. The Committee reviews dilution against these limits regularly and under these limits the Company, as at 31 March 2020, had headroom of 3.89% and 7.86% respectively.

AUDITED

Statement of Directors' shareholdings and share interests

The Executive Directors are required to build up and hold a shareholding from vested share plan awards. The following table shows how each Executive Director complies with the shareholding requirement and also the number of shares owned by the Non-executive Directors, including connected persons. The shareholding is as at 31 March 2020 and the salary used to calculate the value of the shareholding is the gross annual salary as at 31 March 2020.

John Pettigrew has met his shareholding requirement. As Andy Agg and Nicola Shaw are still relatively new in post and to the Company, respectively, they have not yet met their requirement, but each are expected to do so in 2023 assuming on-target performance/vesting outturns. They will not be allowed to sell shares, except for covering associated tax liabilities, until this requirement is met. Dean Seavers had met his shareholding requirement before he stepped down from the Board. Non-executive Directors do not have a shareholding requirement.

A further 50 shares have been purchased between April and June on behalf of each of Andy Agg, John Pettigrew and Nicola Shaw via the Share Incentive Plan (an HMRC tax-advantaged all-employee share plan), thereby increasing their beneficial interests. There have been no other changes in Directors' shareholdings between 1 April 2020 and 17 June 2020.

The normal vesting dates for the conditional share awards subject to performance conditions are 1 July 2020, 1 July 2021 and 1 July 2022 for the 2017 LTPP, 2018 LTPP and 2019 LTPP respectively.

Directors	Share ownership requirements (multiple of salary)	Number of shares owned outright (including connected persons)	Value of shares held as multiple of current salary	Number of options held under the Sharesave Plan	Conditional share awards subject to performance conditions (LTPP 2017, 2018 & 2019)
Executive Directors					
Andy Agg	400%	122,351	195%	4,045	372,965
John Pettigrew	500%	662,828	609%	7,253	1,153,572
Dean Seavers (ADSs) (at 5 November 2019)	400%	81,817	420%	–	80,986
Nicola Shaw	400%	103,897	175%	4,070	539,331
Non-executive Directors					
Nora Mead Brownell (ADSs) (at 8 April 2019)	–	4,583	–	–	–
Jonathan Dawson	–	41,077	–	–	–
Therese Esperdy (ADSs)	–	1,587	–	–	–
Sir Peter Gershon	–	107,215	–	–	–
Paul Golby	–	2,291	–	–	–
Liz Hewitt	–	0	–	–	–
Amanda Mesler	–	1,500	–	–	–
Earl Shipp (ADSs)	–	1,000	–	–	–
Jonathan Silver (ADSs)	–	0	–	–	–
Mark Williamson	–	47,460	–	–	–

Notes:
Andy Agg: On 31 March 2020 Andy Agg held 4,045 options granted under the Sharesave Plan. 4,045 options were granted with an exercise price of 749 pence and these have since been exercised at 749 pence per share in April 2020. The number of conditional share awards subject to performance conditions is as follows: 2017 LTPP: 49,080; 2018 LTPP: 109,886; 2019 LTPP: 213,999.
John Pettigrew: On 31 March 2020 John Pettigrew held 7,253 options granted under the Sharesave Plan. 3,034 options were granted with an exercise price of 749 pence per share and these have since been exercised at 749 pence per share in April 2020. 4,219 options were granted with an exercise price of 711 pence per share and they can, subject to their terms, be exercised at 711 pence per share between 1 April 2025 and 30 September 2025. The number of conditional share awards subject to performance conditions is as follows: 2017 LTPP: 323,205; 2018 LTPP: 398,398; 2019 LTPP: 431,969.
Dean Seavers: The number of conditional share awards (ADSs), subject to performance conditions, has been prorated (from 171,174 ADSs) for completed months served since the grant date until his last day of employment (31 December 2019) and is made up as follows: 2017 LTPP: 41,078 (the original award of 49,294 ADSs prorated for 30/36 months); 2018 LTPP: 29,393 (the original award of 58,786 ADSs prorated for 18/36 months); 2019 LTPP: 10,515 (the original award of 63,094 ADSs prorated for 6/36 months).
Nicola Shaw: On 31 March 2020 Nicola Shaw held 4,070 options granted under the Sharesave Plan. 4,070 options were granted with an exercise price of 737 pence per share and they can, subject to their terms, be exercised at 737 pence per share between 1 April 2022 and 30 September 2022. The number of conditional share awards subject to performance conditions is as follows: 2017 LTPP: 151,109; 2018 LTPP: 186,263; 2019 LTPP: 201,959.
Nora Mead Brownell: stepped down from the Board on 8 April 2019.
Dean Seavers, Therese Esperdy, Earl Shipp and Jonathan Silver: Holdings and awards are shown as ADSs and each ADS represents five ordinary shares.

Directors' Remuneration Report continued

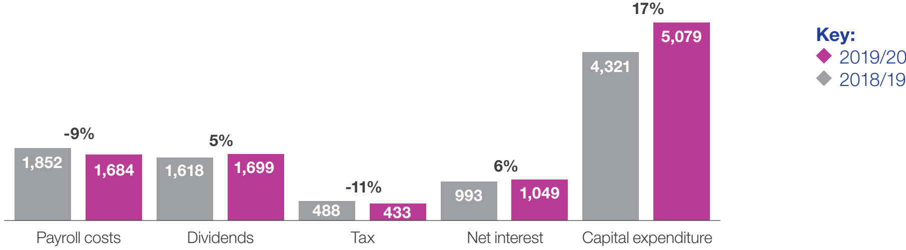
External appointments and retention of fees

Experience as a board member of another company is considered to be valuable personal development, which in turn is of benefit to the Company. The table below details the Executive Directors (at 31 March 2020) who served as Non-executive Directors in other companies during the year ended 31 March 2020:

	Company	Retained fees
John Pettigrew	Rentokil Initial plc	£68,986
Nicola Shaw	International Consolidated Airlines Group S.A.	£107,042 (€120,000)

Relative importance of spend on pay

The chart below shows the relative importance of spend on pay compared with other costs and disbursements (dividends, tax, net interest and capital expenditure). Given the capital-intensive nature of our business and the scale of our operations, these costs were chosen as the most relevant for comparison purposes. All amounts exclude exceptional items and remeasurements.

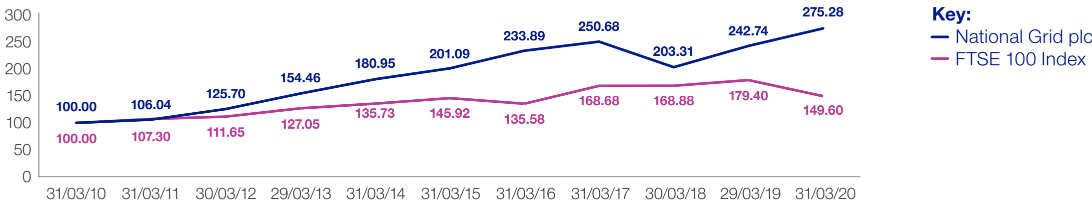


Notes:
1. The Dividends figure for 2018/19 has been restated at £1,618 million (from £1,610 million) to reflect the actual value of dividends paid.
2. Percentage increase/decrease of the costs between years is shown.

Performance graph

This chart shows National Grid plc's 10-year annual Total Shareholder Return (TSR) performance against the FTSE 100 Index since 31 March 2010 and illustrates the growth in value of a notional £100 holding invested in National Grid on 31 March 2010, compared with the same invested in the FTSE 100 index. The FTSE 100 Index has been chosen because it is the widely recognised performance benchmark for large companies in the UK. The TSR level shown at 31 March each year is the average of the closing daily TSR levels for the 30-day period up to and including that date. It assumes dividends are reinvested.

Total shareholder return



Data source: DataStream

Chief Executive's pay in the last ten financial years

Steve Holliday was CEO throughout the six-year period from 2010/11 to 2015/16. John Pettigrew became CEO on 1 April 2016.

	Steve Holliday						John Pettigrew			
	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Single total figure of remuneration (£'000)	3,738	3,539	3,170	4,801	4,845	5,151	4,623	3,648	4,651	5,322
Single total figure of remuneration including only 2014 LTPP (£'000)							3,931			
APP (proportion of maximum awarded)	81.33%	68.67%	55.65%	77.94%	94.80%	94.60%	73.86%	82.90%	84.20%	70.58%
PSP/LTPP (proportion of maximum vesting)	65.15%	49.50%	25.15%	76.20%	55.81%	63.45%	90.41%	85.20%	84.20%	84.90%

Notes:
Single total figure 2019/20: The figure for 2019/20 for John Pettigrew is explained in the single total figure of remuneration table for Executive Directors.
Single total figure 2018/19: The figure for 2018/19 has been restated to reflect actual share price at 1 July 2019, consistent with comparative figures shown in this year's single total figure of remuneration table.
2014 LTPP: The 2016/17 single total figure of remuneration includes both the 2013 LTPP award and the 2014 LTPP award due to a change in the vesting period of three years to four years between the 2013 LTPP and 2014 LTPP.
PSP/LTPP plans: Prior to 2014, LTPP awards were made under a different LTI framework which incorporated a four-year performance period for the RoE element of the awards. The last award under this framework was made in 2013 and was fully vested in 2017. Awards made from 2014 are subject to a three-year performance period. The first of these awards vested in 2017.

Statement of implementation of remuneration policy in 2019/20 continued

Percentage change in CEO's remuneration

The table below shows how the percentage change in the CEO's salary, benefits and APP between 2018/19 and 2019/20 compares with the percentage change in the average of each of those components of remuneration for non-union employees in the UK and the US. The Committee views this group as the most appropriate comparator group, as this group excludes employees represented by trade unions whose pay and benefits are negotiated with each individual union, each with their own pay structure.

	Salary			Taxable benefits			APP		
	2019/20 £'000	2018/19 £'000	Change	2019/20 £'000	2018/19 £'000	Change	2019/20 £'000	2018/19 £'000	Change
John Pettigrew	1,017	944	7.7%	116	94	23.4%	897	994	-9.8%
Non-union employees (average increase/decrease)			3.6%			-1.3%			-5.9%

Notes:
Non-union employees: The population is not a constant comparator group due to external hires, promotions and attrition between years. Calculating the APP change comparing employees that were employed throughout the period results in a 0.35% change. The result is impacted also by the proportion of new employees that have not accrued a 'full year' of APP payout and changes in business results which this year drive in particular a lower APP payout for our US business versus last year.
Pay data for US employees have been converted at $1.2868:£1.

CEO pay ratio

We have disclosed our CEO pay ratios comparing the CEO single total figure of remuneration to the equivalent pay for the lower quartile, median and upper quartile UK employees (calculated on a full-time equivalent basis) in accordance with the Companies (Miscellaneous Reporting) Regulations 2018 (as amended), which formally apply to National Grid from this reporting year, 2019/20. We disclosed these ratios on a voluntary basis last year for 2018/19.

		UK			Group-wide
Year	**Method**	**25th percentile pay ratio**	**Median pay ratio**	**75th percentile pay ratio**	**Median pay ratio**
2018/19 – voluntary	Option A	96:1	76:1	58:1	48:1
2019/20	Option A	111:1	86:1	66:1	53:1

The comparison with UK employees is specified by the regulations. US employees represent approximately 73% of our total employees. Our median pay ratio on a Group-wide basis is 53:1, calculated on the same basis as the UK pay ratios and an exchange rate of $1.2868:£1.

Salaries at 31 March 2020 and estimated performance-based annual payments for 2019/20 have been annualised to reflect full-time equivalents. Performance payments have not been further adjusted to compensate where new employees have not completed a full performance year.

The CEO pay ratio has increased from 76:1 to 86:1 at the median. The CEO single total figure of remuneration has increased by approximately 17% versus last year and this increase is driven predominantly by an approximate 25% increase in estimated LTPP vesting value. Increases in salary, benefits in kind and pensions as a result of the increase to base salary are broadly offset by an approximate reduction of 11% in 2019/20 APP payout for the CEO. Excluding LTPP the total pay and benefits for the CEO has increased by 0.8% whilst the total pay and benefits for the reference employee at the median has increased by 2.4%, compared with last year.

Excluding estimated 2017 LTPP vesting, our UK median pay ratio is the same as last year at 38:1 and on a Group basis has marginally reduced to 23:1 this year compared with 24:1 last year. The lower Group median pay ratio versus the UK reflects the higher labour cost in the US versus the UK, which is further influenced by the US locations in which we operate which have even higher labour costs than the US on average. The ratio of the pay of our Executive Director, UK, to the median UK employee is 41:1 and excluding the estimated 2017 LTPP vesting is 18:1.

This year the 2017 LTPP vesting represents some 56% of the CEO's single total figure of remuneration. However, only 2% of UK-based employees will receive an estimated 2017 LTPP vest in our pay ratio calculations, and all of these employees are in the upper quartile of our ranked list and so are not selected as a 75th percentile (or below) reference employee. Removing the impact of 2017 LTPP vesting in our calculations results in lower ratios, for the reference employees of 49:1, 38:1 and 29:1 at the 25th, 50th and 75th percentiles respectively and these ratios are the same as last year. As employees advance through the Group, there will be the opportunity to receive higher rewards commensurate with increased accountability and market practice.

The regulations require the total pay and benefits and the salary component of total pay and benefits for this year to be set out as follows:

Pay data 2019/20	**Base salary**	**Total pay & benefits**
CEO remuneration	£1,016,752	£5,321,735
UK employee 25th percentile	£34,521	£47,849
UK employee 50th percentile	£51,149	£61,842
UK employee 75th percentile	£60,913	£80,614

Flexibility is provided to adopt one of three methods for calculating the ratios. We have chosen Option A, which is a calculation based on the pay of all UK employees on a full-time equivalent basis, as this option is considered to be more statistically robust. The ratios are based on total pay and benefits inclusive of short-term and long-term incentives applicable for the respective financial year 1 April – 31 March. The reference employees at the 25th, 50th and 75th percentile have been determined by reference to pay and benefits as at the last day of the respective financial year, 31 March, though estimates have been used for the respective APP payouts and performance outturns of the LTPP and dividend equivalents.

Directors' Remuneration Report continued

Statement of implementation of remuneration policy in 2019/20 continued

All employees are eligible for a performance-based annual payment. Our principles for pay setting and progression in our wider workforce are the same as for our executives – mid-market approach to total reward, being sufficiently competitive to attract and retain high-calibre individuals without over-paying and providing the opportunity for individual development and career progression. The pay ratios reflect how remuneration arrangements differ, as accountability increases for more senior roles within the organisation, and in particular the ratios reflect the weighting towards long-term value creation and alignment with shareholder interests for the CEO.

We are satisfied that the median pay ratio reported this year is consistent with our wider pay, reward and progression policies for employees. The median reference employee falls within our collectively bargained employee population and has the opportunity for annual pay increases, annual performance payments and career progression and development opportunities.

The Committee's activities during the year

Meeting	Main areas of discussion
April	2018/19 individual objectives scoring for Executive Committee Approval of 2019/20 Objectives for Executive Committee Discussion on 2018/19 expected incentive plan outturns
May	2018/19 APP financial outturns and confirmation of awards for Executive Committee Discussion on expected 2016 LTPP outturns Annual salary review and LTPP proposals for Executive Committee Approval of 2019/20 APP financial metrics Review and approval of Chairman's fees
November (two meetings)	Performance update for outstanding LTPP awards Review of gender and ethnicity pay gaps Items related to Executive Committee appointments Leaving arrangements for Executive Director, US Debrief of AGM season and remuneration trends Review of pensions arrangements for Executive Committee
March	Market data review for Executive Committee remuneration and initial proposals for base salary increases First review of 2019/20 individual objectives of Executive Committee Item related to new Executive Committee appointment

Advisors to the Remuneration Committee

The Committee received advice during 2019/20 from independent consultants Willis Towers Watson. Willis Towers Watson was selected by the Committee to become its independent advisor from 23 October 2017 following a competitive tendering process. Willis Towers Watson is a member of the Remuneration Consultants Group and has signed up to that group's code of conduct. The Committee is satisfied that any potential conflicts were appropriately managed.

Work undertaken by Willis Towers Watson in its role as independent advisor to the Committee has included providing market information for the Executive Directors and other senior employees and for governance matters. This work has incurred fees of £57,488 incurred on the basis of time charged to perform services and deliverables. The Committee reviews the objectivity and independence of the advice it receives from its advisors each year. It is satisfied that Willis Towers Watson provided credible and professional advice. Willis Towers Watson also provided general and technical remuneration services in relation to employees below Board and Group Executive Committee level.

The Committee considers the views of the Chairman on the performance and remuneration of the CEO, and of the CEO on the performance and remuneration of the other members of the Executive Committee. The Committee is also supported by the Group General Counsel and Company Secretary, who acts as Secretary to the Committee, the Chief Human Resources Officer, the HR Director – Reward; and, as required, the Group Head of Pensions and Group Financial Controller. No other advisors have provided significant services to the Committee in the year.

Voting on Directors' Remuneration Policy adopted at the 2019 AGM

The voting figures shown refer to votes cast at the 2019 AGM and represent 63.86% of the issued share capital. In addition, shareholders holding 28.6 million shares abstained.

	For	Against
Number of votes	2,116,131,831	64,718,198
Proportion of votes	97.03%	2.97%

Voting on 2018/19 Directors' Remuneration Report at the 2019 AGM

The voting figures shown refer to votes cast at the 2019 AGM (in respect of the prior remuneration policy adopted in 2017) and represent 63.71% of the issued share capital. In addition, shareholders holding 33.8 million shares abstained.

	For	Against
Number of votes	2,100,158,370	75,482,807
Proportion of votes	96.53%	3.47%

How our remuneration policy will be implemented in 2020/21

The remuneration policy adopted at the 2019 AGM will be implemented during 2020/21 as described below.

Salary

Salary increases will normally be in line with the increase awarded to other employees in the UK and US, subject to performance. Higher salary increases may also be awarded for a change in responsibility. Additionally, in line with the policy on recruitment remuneration, salaries for new directors may be set below market level initially and aligned to market level over time (provided the increase is merited by the individual's contribution and performance).

As explained in the Remuneration Committee Chair's Statement, for 2020/21 a salary increase for Andy Agg will be awarded and this will be effective from July in line with the rest of the workforce. Salary increases for John Pettigrew and Nicola Shaw will not be awarded at this time.

	From 1 July 2020	From 1 June 2019	Increase
Andy Agg	£633,675	£595,000	6.5%
John Pettigrew	£1,029,461	£1,029,461	0%
Nicola Shaw	£561,524	£561,524	0%

Pensions

The remuneration policy approved at the July 2019 AGM stated that new appointments would receive contributions of up to 20% of base salary. In addition to this, John Pettigrew and Nicola Shaw agreed progressive reductions from 30% to 20% of base salary. Implementation of this agreement is now underway and effective 1 April 2020, cash in lieu of pension contributions for each of John Pettigrew and Nicola Shaw have reduced to 26.7% and further reductions to 23.4% and then 20.0% will take place at 1 April 2021 and 1 April 2022 respectively. Andy Agg already receives the approved policy maximum of 20%. Further to the 2019 AGM the Committee agreed in November 2019 that newly appointed Executive Directors will receive annual contributions of up to 12% of basic salary for the DC pension scheme, or cash supplement in lieu. Further discussions on pension contributions will be conducted as part of the 2021 Directors' Remuneration Policy review.

APP measures for 2020/21

Due to the uncertainty in the context of COVID-19, the Committee has opted not to finalise financial measures, associated weightings or targets at this time but intends to do so as soon as practicable. APP targets are considered commercially sensitive and consequently will be disclosed in the 2020/21 Directors' Remuneration Report.

Performance measures for LTPP to be awarded in 2020

Due to the uncertainty in the context of COVID-19, the Committee has opted not to finalise the targets for the 2020 LTPP financial measures. The weightings for these measure are Group RoE (16.67%) and Group Value Growth (83.33%). Group RoE will be measured over the first year of the three-year performance period and Group Value Growth will be measured over the entire three-year performance period, determining 1/6th and 5/6ths of the total vesting outcome for the 2020 LTPP, respectively. LTPP awards are expected to be made later in the year and will be based on 1 July 2020 salaries.

Fees for NEDs

Therese Esperdy was appointed as Non-executive Director to the National Grid USA Board in 2015 with an annual fee of £25,000 in addition to her current NED fees. We will not be increasing the Chairman's fee or other NED fees at this time. Fees effective from 1 June 2019 remain unchanged and are set out in the table below.

Role	From 1 June 2019 £'000
Chairman	540.2
Senior Independent Director	23.1
Board fee (UK-based)	69.5
Board fee (US-based)	82.1

Role	From 1 June 2019 £'000
Committee membership fee	10.8
Chair Audit Committee	31.2
Chair Remuneration Committee	31.2
Chair (other Board Committees)	23.9

The Directors' Remuneration Report has been approved by the Board and signed on its behalf by:

Jonathan Dawson

Jonathan Dawson
Committee Chairman
17 June 2020

3. Financial Statements

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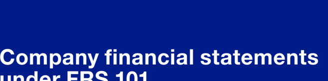

Statement of Directors' responsibilities

The Directors are responsible for preparing the Annual Report and Accounts, including the Group financial statements and the Parent Company financial statements in accordance with applicable law and regulations.

Company law requires the Directors to prepare financial statements for each financial year. Under that law the Directors are required to prepare the Group financial statements in accordance with International Financial Reporting Standards (IFRSs) as adopted by the European Union and Article 4 of the IAS Regulation and have elected to prepare the Parent Company financial statements in accordance with United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards and applicable law), including FRS 101 'Reduced Disclosure Framework'. Under company law, the Directors must not approve the accounts unless they are satisfied that they give a true and fair view of the state of affairs of the Group and Parent Company and of the profit or loss of the Group and Parent Company for that period.

In preparing the Group financial statements, International Accounting Standard 1 requires that Directors:

- properly select and apply accounting policies;
- present information, including accounting policies, in a manner that provides relevant, reliable, comparable and understandable information;
- provide additional disclosures when compliance with the specific requirements in IFRSs are insufficient to enable users to understand the impact of particular transactions, other events and conditions on the entity's financial position and financial performance; and
- make an assessment of the Group's ability to continue as a going concern.

In preparing the Parent Company financial statements, the Directors are required to:

- select suitable accounting policies and then apply them consistently;
- make judgments and accounting estimates that are reasonable and prudent;
- state whether applicable UK Accounting Standards have been followed, subject to any material departures disclosed and explained in the financial statements; and
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Company will continue in business.

The Directors are responsible for keeping adequate accounting records that are sufficient to show and explain the Group and Parent Company's transactions and disclose with reasonable accuracy at any time the financial position of the Group and Parent Company on a consolidated and individual basis, and to enable them to ensure that the Group financial statements comply with the Companies Act 2006. They are also responsible for safeguarding the assets of the Parent Company and its subsidiaries and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The Directors are responsible for the maintenance and integrity of the Company's website. Legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

Having made the requisite enquiries, so far as the Directors in office at the date of the approval of this Report are aware, there is no relevant audit information of which the auditors are unaware and each Director has taken all reasonable steps to make themselves aware of any relevant audit information and to establish that the auditors are aware of that information.

Each of the Directors, whose names and functions are listed on pages 66 – 67, confirms that:

- to the best of their knowledge, the Group financial statements and the Parent Company financial statements, which have been prepared in accordance with IFRSs as issued by the IASB and IFRS as adopted by the European Union and UK GAAP FRS 101 respectively, give a true and fair view of the assets, liabilities, financial position and profit of the Company on a consolidated and individual basis;
- to the best of their knowledge, the Strategic Report contained in the Annual Report and Accounts includes a fair review of the development and performance of the business and the position of the Company on a consolidated and individual basis, together with a description of the principal risks and uncertainties that it faces; and
- they consider that the Annual Report and Accounts, taken as a whole, are fair, balanced and understandable and provides the information necessary for shareholders to assess the Company's position and performance, business model and strategy.

This Responsibilities Statement was approved by the Board and signed on its behalf.

Directors' Report

The Directors' Report, prepared in accordance with the requirements of the Companies Act 2006 and the UK Listing Authority's Listing Rules, and Disclosure Rules and Transparency Rules, comprising pages 1 – 107 and 216 – 252, was approved by the Board and signed on its behalf.

Strategic Report

The Strategic Report, comprising pages 1 – 62, was approved by the Board and signed on its behalf.

By order of the Board

Alison Kay
Group General Counsel
& Company Secretary

17 June 2020

Company number: 4031152

Independent auditor's report
to the members of National Grid plc

Report on the audit of the financial statements

1. Opinion

In our opinion:

- the financial statements of National Grid plc (the 'parent company') and its subsidiaries (the 'Group') give a true and fair view of the state of the Group's and of the parent company's affairs as at 31 March 2020 and of the Group's profit for the year then ended;
- the Group financial statements have been properly prepared in accordance with International Financial Reporting Standards (IFRSs) as adopted by the European Union and IFRSs as issued by the International Accounting Standards Board (IASB);
- the parent company financial statements have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice, including Financial Reporting Standard 101 "Reduced Disclosure Framework"; and
- the financial statements have been prepared in accordance with the requirements of the Companies Act 2006 and, as regards the Group financial statements, Article 4 of the IAS Regulation.

We have audited the financial statements, which comprise:

Group:
- the consolidated income statement;
- the consolidated statement of comprehensive income;
- the consolidated statement of changes in equity;
- the consolidated statement of financial position;
- the consolidated cash flow statement; and
- the related notes 1 to 39 to the consolidated financial statements.

Parent Company:
- the parent company accounting policies;
- the parent company balance sheet;
- the parent company statement of changes in equity; and
- the related notes 1 to 10 to the parent company financial statements.

The financial reporting framework that has been applied in the preparation of the Group financial statements is applicable law, IFRSs as adopted by the European Union and IFRSs as issued by the IASB. The financial reporting framework that has been applied in the preparation of the parent company financial statements is applicable law and United Kingdom Accounting Standards, including FRS 101 "Reduced Disclosure Framework" (United Kingdom Generally Accepted Accounting Practice).

2. Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the auditor's responsibilities for the audit of the financial statements section of our report.

We are independent of the Group and the parent company in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the Financial Reporting Council's (the 'FRC's') Ethical Standard as applied to listed public interest entities, and we have fulfilled our other ethical responsibilities in accordance with these requirements. The non-audit services provided to the Group and parent company for the year are disclosed in note 4 to the financial statements. We confirm that the non-audit services prohibited by the FRC's Ethical Standard were not provided to the Group or the parent company.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

3. Summary of our audit approach

Key audit matters	The key audit matters that we identified in the current year were: • Impact of COVID-19; • Impact of climate change on property, plant and equipment; • Environmental provisions; • Classification of exceptional items; • Net pension obligations; • Treasury derivative transactions; and • IT user access controls.
Changes in our key audit matters since the prior year	These key audit matters are consistent with those we identified in the prior year except that: • As a consequence of the COVID-19 outbreak, which has severely affected the UK and US economies, there are financial reporting impacts particularly with respect to key judgments, estimates and disclosures within the financial statements. In addition, there are potential financial control impacts as a consequence of remote working. This caused us to perform an updated audit risk assessment. Accordingly we have identified this as a key audit matter; and • The impact of climate change on property, plant and equipment has been identified as a new key audit matter due to the increase in shareholder focus and legislation enacted during the year in relation to "net-zero" carbon by 2050 commitments by the UK government and certain US states (specifically New York and Massachusetts) in which the Group operates. This has a potentially significant impact on the Group's gas businesses and accordingly the estimated useful lives of its assets.
Materiality	The materiality that we used for the Group financial statements was £120 million, which represents 5.1% of adjusted profit before tax (profit before tax excluding the impact of reported exceptional items and remeasurements) and 6.8% of statutory profit before tax.
Scoping	Our scope covered six components of the Group in addition to procedures performed at the Group level. Of these, three were subjected to a full-scope audit whilst the remaining three were subject to specific procedures on certain account balances. Our scoping covered 99% of the Group's revenue; 97% of the Group's gross assets; and 99% of the Group's gross liabilities.

4. Conclusions relating to going concern, principal risks and viability statement

4.1. Going concern

We have reviewed the directors' statement in note 1A to the financial statements about whether they considered it appropriate to adopt the going concern basis of accounting in preparing them and their identification of any material uncertainties to the Group's and company's ability to continue to operate as a going concern for a period of at least twelve months from the date of approval of the financial statements.

We considered as part of our risk assessment the nature of the Group, its business model and related risks including where relevant the impact of the COVID-19 pandemic and Brexit, the requirements of the applicable financial reporting framework and the system of internal control. We evaluated the directors' assessment of the Group's ability to continue as a going concern, including challenging the underlying data and key assumptions used to make the assessment, and evaluated the directors' plans for future actions in relation to their going concern assessment.

We are required to state whether we have anything material to add or draw attention to in relation to the directors' statement required by Listing Rule 9.8.6R(3) and report if the statement is materially inconsistent with our knowledge obtained in the audit.

Going concern is the basis of preparation of the financial statements that assumes an entity will remain in operation for a period of at least twelve months from the date of approval of the financial statements.

We confirm that we have nothing material to report, add or draw attention to in respect of these matters.

4.2. Principal risks and viability statement

Based solely on reading the directors' statements and considering whether they were consistent with the knowledge we obtained in the course of the audit, including the knowledge obtained in the evaluation of the directors' assessment of the Group's and the company's ability to continue as a going concern, we are required to state whether we have anything material to add or draw attention to in relation to:

- the disclosures on pages 23 – 25 that describe the principal risks, procedures to identify emerging risks, and an explanation of how these are being managed or mitigated;
- the directors' confirmation on page 26 that they have carried out a robust assessment of the principal and emerging risks facing the Group, including those that would threaten its business model, future performance, solvency or liquidity; or
- the directors' explanation on page 26 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 are also required to report whether the directors' statement relating to the prospects of the Group required by Listing Rule 9.8.6R(3) is materially inconsistent with our knowledge obtained in the audit.

Viability means the ability of the Group to continue over the time horizon considered appropriate by the directors, which for National Grid is 5 years.

We confirm that we have nothing material to report, add or draw attention to in respect of these matters.

5. Key audit matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our 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) that we identified. These matters included 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.

Throughout the course of our audit we identify risks of material misstatement ('risks'). We consider both the likelihood of a risk and the potential magnitude of a misstatement in making the assessment. Certain risks are classified as 'significant' or 'higher' depending on their severity. The category of the risk determines the level of evidence we seek in providing assurance that the associated financial statement item is not materially misstated.

These matters 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.

5.1. Impact of COVID-19

Key audit matter description

Account balances: Trade and other receivables. Refer to note 19 to the financial statements. Pensions and other post-retirement benefits. Refer to note 25 to the financial statements.

The COVID-19 pandemic has had a significant impact on the UK and US economies with consequences to the judgements and estimates made by the Group, principally in relation to the recoverability of US customer receivables and the valuation of certain pension assets. Refer to note 1E to the financial statements and the Audit Committee's discussion on pages 76 – 78.

In March 2020 the COVID-19 pandemic resulted in the UK government and several US states in which the Group operates imposing lockdowns of their populations in order to stop the spread of the disease. This had a direct and severe impact on those economies as consumer spending decreased and unemployment rose at unprecedented rates, in turn severely impacting global demand and world financial markets. This has impacted the results of the Group for the 2020 financial year and is expected to continue to impact the Group for the remainder of FY21.

Management reassessed their controls framework, which encompassed a review of the ability to operate existing controls remotely and consideration of whether existing controls were suitable for addressing areas of new or increased risk. As a result of this assessment, a new COVID-19 entity-level control was implemented to assess the completeness of accounting considerations across the Group. Further, whilst there could be a potential impact upon a number of financial statement line items, management's assessment determined that the primary risks that arose from the COVID-19 pandemic related to the valuation of:

- provisions for bad and doubtful debts in the US due to the increased uncertainty over customers' ability to settle amounts when they fall due; and
- unquoted pension assets, particularly certain assets in the property and alternative investment portfolios which are subject to increased valuation uncertainties.

In calculating bad and doubtful debts, the key judgement relates to the requirement to incorporate 'expected credit losses' into the provision. This requires management to make forward-looking estimates of the expected level of losses which will be incurred on any outstanding trade receivables. In the US, unlike in the UK, the Group has retail customers. The regulatory moratorium in the US requiring the suspension of certain debt collection and customer termination activities has increased the level of estimation uncertainty related to the bad debt calculation in respect of US trade receivables. Management has considered relevant forward-looking macroeconomic data in the US, as well as the effect on incurred losses experienced in the aftermath of the financial crisis of 2008 and Superstorm Sandy in 2012 to inform their estimation. Accordingly, we have identified this as an area of 'higher' audit risk.

The key judgements related to the valuation of certain unquoted pension assets are discussed in the 'net pension obligations' key audit matter.

Independent auditor's report
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5. Key audit matters continued

5.1. Impact of COVID-19 continued

Key audit matter description continued

A risk was also identified in relation to the impact of the pandemic on the Group's cash flows and liquidity and accordingly its going concern analysis. Management performed a detailed analysis of the potential impact of the COVID-19 pandemic on revenue, profit and cash flows, in particular the impact on US customer collections. Possible cost mitigations were also considered. This detailed analysis also included consideration of a number of downside scenarios as to the duration of the lockdown measures, and concluded that no reasonably possible downside scenario existed wherein the Group would be unable to continue as a going concern.

Related disclosure of management's and the Board's assessment of the ability to continue as a going concern, inclusive of the impact of the pandemic as a principal risk has been made in the Annual Report on page 25, and has been included as a consideration in the viability statement on page 26.

How the scope of our audit responded to the key audit matter

We performed controls testing at year end on areas of heightened risk, including the incremental COVID-19 specific control, and assessed whether management appropriately considered the related impact on existing controls.

Further, we held discussions within the Group and component engagement teams, with management, with our internal treasury, pensions and tax specialists and within the wider Deloitte network to identify the areas of risk to the financial statements as a result of the wider impacts of the pandemic. We used the outcome of these discussions to update our audit risk assessment and challenge management's impact assessment. Our responses in respect of specific areas identified as risks related to COVID-19 are outlined below. For these areas we also reviewed management's disclosures in relation to the key judgements and estimates made in assessing the impact of COVID-19, inclusive of sensitivity disclosures related to the areas of estimation uncertainty.

Provisions for bad and doubtful debts in the US: In challenging management's assumptions related to the impact of the COVID-19 pandemic on the provision for bad and doubtful debts on US retail customers, we considered the extent to which the 2008 financial crisis and impact of Superstorm Sandy were reasonable data points to use in informing those estimates. We challenged management's judgement in respect of the point in the range of calculated possible outcomes which management determined to be their best estimate.

Valuation of unquoted pension assets: We have described the procedures performed on the valuation of these pension assets in our 'net pension obligation' key audit matter.

Liquidity and ability to continue as a going concern: We have assessed the going concern model prepared by management, which considered the impact of COVID-19. We assessed the underlying assumptions, inclusive of mitigating cost actions being taken based on our understanding of the business and knowledge of the industry in which the Group operates. Where impacts were significant, our component audit teams were also involved in a more granular challenge of local management's forecasts. Further, we assessed management's evaluation of liquidity and loan covenant compliance over the period of assessment to confirm no breaches are anticipated over this timeframe.

Key observations

Our testing confirmed the incremental COVID-19 specific control operated effectively.

We concluded that management's judgements and estimates made in determining the incremental level of expected credit losses as a consequence of the COVID-19 pandemic are reasonable.

Our conclusion on the valuation of certain pension assets is set out in our 'net pension obligation' key audit matter.

Our conclusion on going concern is set out in the 'Conclusions relating to going concern, principal risks and viability statement' section of this report.

We concluded that management's disclosures included in note 1E to the financial statements in respect of the key judgements and areas of estimation uncertainty are appropriate.

5.2. The impact of climate change on property, plant and equipment

Key audit matter description

Account balance: Property, plant and equipment. Refer to notes 1E and 13 to the financial statements and the Audit Committee's discussion on pages 76 – 78.

The UK government and certain of the US states in which the Group operates have enacted legislation and established targets in respect of net zero carbon emissions by 2050. Accordingly climate change represents a strategic challenge for the Group, which has also set targets for reducing direct greenhouse gas emissions by the same date.

Natural gas, when burned, emits carbon dioxide and is considered a greenhouse gas. Therefore, the strategic challenge relates to the potential future use of the Group's assets used to facilitate gas transmission services in the UK and gas distribution services in the US in the period approaching 2050 and beyond. The remaining useful economic life of the Group's gas assets is up to 50 years in the UK and 80 in the US, extending well beyond the 2050 "net zero" commitment date. As described in note 13 to the financial statements, the impact of changing the useful economic lives of all of the Group's gas assets, such that they would be fully depreciated by 2050, would be an increase in the annual depreciation expense of £188 million, and such that they would be fully depreciated by 2060, would be an increase in the annual depreciation expense of £79 million.

As the continued use of natural gas as a primary energy source beyond 2050 appears to be in conflict with net zero targets and the impact of shortening the useful lives of the gas assets to 2050 has a material impact on annual depreciation, we identified a 'higher' risk related to the financial statement impact of those commitments, specifically pinpointed to management's judgement in determining the useful lives of gas assets in the context of the net zero commitments.

As described in note 13 to the financial statements and in the Audit Committee Report (page 78), management performed a detailed assessment of the potential uses for the Group's gas assets as part of their consideration around whether developments in the UK and US towards binding carbon reduction targets should trigger any changes to National Grid's estimates, judgements or disclosures, especially regarding gas asset lives. Management's assessment included an overview of the legislative changes in the UK and US, and an evaluation of the possible future use of National Grid's networks in a net zero energy system.

Management's best estimate of the useful economic lives of US gas assets, across all states in which it operates, is based on the depreciable life identified through depreciation studies for each asset and are approved by the respective state regulator. Accordingly, in the US, the IFRS asset depreciable lives are identical to those agreed by the Group's regulators for regulatory purposes. Management concluded it is probable that there will be a role for its US gas networks post 2050 under a range of possible scenarios, and there is nothing at present to suggest that asset lives should be shortened at this point.

In the UK, National Grid Gas Transmission (NGGT) owns and operates the UK gas transmission network (NTS). Pipelines represent the vast majority of the value that will be undepreciated by 2050. Having analysed the potential decarbonisation pathways, management has identified numerous potential uses for the Group's UK gas pipeline assets in a net zero energy system including for the continued transmission of natural gas as a back-up fuel or in order for blue hydrogen to be produced alongside carbon capture and storage; and the transmission of hydrogen or other low or zero carbon gases.

5.2. The impact of climate change on property, plant and equipment continued

Key audit matter description continued	Management concluded that their best estimate for the useful economic life of the National Transmission System (NTS) pipeline assets in the UK is 50 years (or until 2070) as this best represents when the assets will continue to support business operations in the UK. Management and the Audit Committee determined that in light of the evolving legislative developments and increasing investor attention, disclosure of a key judgement in relation to the potential future use of the Group's gas assets post-2050 and disclosure of the gas asset lives as a key estimate (note 1E to the financial statements), with appropriate sensitivity analysis (note 13 to the financial statements) were appropriate.
How the scope of our audit responded to the key audit matter	We tested management's internal control over the accounting for and disclosure of the potential impacts associated with the energy transition and climate change. We challenged management's judgement that the useful lives of the Group's gas assets extend beyond 2050 in light of the different goals, commitments and legislation relating to net zero in the UK and the US states in which the Group operates by: • reviewing potential strategic pathways to achieve net zero targets; • obtaining and reviewing government plans in the US and UK for achieving net zero which we compared to the potential strategic pathways; • reviewing information from the Group's regulators, including price controls in the UK and rate cases in the US, to consider whether they presented any contradictory evidence; • performing an assessment of the likelihood of occurrence of alternative scenarios for achieving net zero targets; • considering the potential for re-purposing the Group's gas networks for alternative uses, and in particular for transporting hydrogen; and • reviewing a number of external reports including: *Hydrogen in a low-carbon economy and Net Zero – Technical report*, produced by the Committee on Climate Change; *the UK's draft integrated National Energy and Climate Plan (NECP)* produced by the Department for Business, Energy & Industrial Strategy; and searching for contradictory evidence in respect of management's judgements. We utilised our sustainability specialists to review management's key assumptions and to challenge the viability of some of the technological advances presented within the strategic pathways. We also consulted with Deloitte specialists in other countries regarding the suitability of existing gas infrastructure for transporting hydrogen. We also reviewed the disclosures set out in note 1 to the financial statements and the sensitivity analysis set out in note 13 to the financial statements regarding the carrying value of the useful economic lives of the Group's gas assets.
Key observations	Our testing confirmed that the relevant controls over management's assessment of the impact of the energy transition and climate change operated effectively. We observe that whilst some indicators do exist suggesting that the useful economic lives of the Group's gas assets may be limited to 2050, these are mitigated by other statements by governments and advisory bodies which suggest gas, and therefore gas transmission and distribution assets, will continue to have a role beyond 2050. Furthermore, the emergence of a substantial hydrogen infrastructure could introduce a longer term role for National Grid gas assets past 2050, if technological developments allow the utilisation of existing assets in this infrastructure. Whilst the targets, goals and ambitions in respect of net zero have now been formalised in legislation in the jurisdictions in which the Group operates, there is widespread recognition that work needs to be done to define the possible future decarbonisation pathways. We note that whilst state energy policy in the US states in which the Group operates is codified by the legislature, it is the regulators who are charged with implementing state energy policies. We concluded it was reasonable to assume that there will be a valuable use for the Group's US gas assets beyond 2050 and that in the absence of any determination by the Group's regulators, it continues to be reasonable to use the regulatory asset lives for the calculation of depreciation in accordance with IFRS. In the UK, we note that there is no alignment between the useful lives of the Group's gas assets for IFRS depreciation purposes, and the period of recovery of the regulatory asset value under regulation. Nevertheless, we conclude that it is reasonable to assume that there will be a valuable use for these assets until 2070. We consider the disclosures in note 1 to the financial statements and the sensitivity analysis in note 13 to the financial statements to be appropriate. We are satisfied that management's other disclosures in the Annual Report relating to the uncertainty surrounding the future use of the Group's gas assets are consistent with the financial statements and our understanding of the business.

5.3. Environmental provisions

Key audit matter description	**Account balance: Provisions. Refer to notes 1E, 26 and 35 to the financial statements and the Audit Committee's discussion on pages 76 – 78.** At 31 March 2020 the Group has £2,071 million (2019: £1,639 million) of environmental provisions, of which £175 million (2019: £189 million) are in the UK and £1,896 million (2019: £1,450 million) in the US. The Group's environmental provisions relate to a number of sites owned and managed by the Group together with certain US sites which are no longer owned. In the US the provision is in respect of 257 sites which vary in the level of clean-up required. Of the total US environmental provisions of £1,896 million, more than half relates to three former sites which were identified by the Environmental Protection Agency (EPA) as sites of significant contamination (Superfund sites). The EPA has the authority to force the parties responsible for the contamination of these sites either to perform clean-ups or reimburse the government for work led by the EPA. There are a number of estimation uncertainties across all of the sites. We identified a 'higher' risk in relation to certain sites which are complicated because of their size, the number of parties involved and/or the stage of remediation the project is at. The uncertainties that exist in relation to these sites include: the impact of regulation; the form, timing, extent and associated cost of remediation needed; the methods and technologies used in remediation; the allocation of responsibility; and the discount rates applied to the forecast cash flows. There were significant increases in the provisions recorded for two US Superfund sites in the year and a small reduction at the third. We determined that the estimation of the undiscounted cash outflows specific to these sites was the most significant and sensitive to a change in reasonably possible outcomes. In respect of the US Superfund site with the most significant increase in provision, there were two reasons for management's reassessment of the estimated cash outflows. An updated design report was received in the year which indicated that the work required to remediate the site was more extensive than had previously been expected, resulting in a higher estimated total cost. In addition, following an EPA order management increased its estimate of the share of the costs the Group would bear amongst the Potentially Responsible Parties (PRPs).

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5. Key audit matters continued

5.3. Environmental provisions continued

Key audit matter description continued	Regarding the other Superfund site with a significantly increased provision, an updated survey clarified the extent of remediation work which needs to be performed, leading to an increase in the Group's share of the expected costs. Management are required to make judgements in selecting an appropriate discount rate which reflects changes in UK gilt and US treasury rates as current market assessments of the time value of money. The Group decreased the real discount rates applied to the undiscounted cash flows from 1% in the prior year to 0.5% for both the UK and the US provisions.
How the scope of our audit responded to the key audit matter	We tested the controls over the compilation of forecast cash flows and the determination of the discount rate. We performed detailed risk assessments to categorise US sites based on size and the level of estimation uncertainty, determined by the stage of the remediation and the extent of work required. In respect of US sites other than the Superfund sites, we worked with our internal environmental specialists to assess cash flow estimates across a sample of sites. In order to assess the completeness of the year end liabilities we also completed public domain searches on Federal databases across all Group subsidiaries to determine whether any relevant costs or applicable sites were omitted. With respect to the US Superfund sites, we agreed underlying cost assumptions to third-party build information, approved engineering design reports and other benchmarks and utilised our internal environmental provision specialists to assist us in evaluating managements' key assumptions. We also considered information obtained from the Group's legal advisors and relevant EPA correspondence in our evaluation of the recorded provisions. We performed additional procedures on the site with the most significant increase in provision. Specifically relating to the judgement over the estimated allocation of total remediation costs, we made enquiries of the Group's internal legal counsel and obtained analysis directly from external legal counsel. With the assistance of our internal environmental specialists, we used this additional information to determine independently a range of potential outcomes and allocations of remediation costs at the site, and used this to assess management's estimate. We challenged the methodology that management has adopted for calculating the discount rate with the support of our internal valuation specialists. In addition, we independently calculated an appropriate discount rate range and used this to assess management's rate.
Key observations	Our testing confirmed that the relevant controls over the compilation of forecast cash flows and the determination of the discount rate were operating effectively. We found the total cost assumptions associated with all of the tested sites to be reasonable, including the US Superfund sites. In respect of the US Superfund sites we are satisfied that management's estimate of the proportion of costs expected to be allocated to the Group are within our independently calculated range. We consider the decrease in real discount rates from 1% to 0.5% applied in the UK and US to be reasonable based on the movement in gilts and treasury yields. We noted that the assumptions and judgments that are required to formulate the provisions mean that the range of possible outcomes is broad. In respect of the Superfund site with the most significant increase in provision, as a consequence of the developments in the year, the level of uncertainty regarding the Group's share of final costs has reduced. However, there continues to be a risk of further increases and we note that the remediation at the other two Superfund sites is less advanced and accordingly at risk of future increases. We are satisfied with the Group's disclosures of environmental provisions in light of the underlying assumptions and accounting judgments made.

5.4. Classification of exceptional items

Key audit matter description	**Account balance: Operating costs (included in the exceptional items and remeasurements column). Refer to notes 1E and 5 to the financial statements and the Audit Committee's discussion on pages 76 – 78.** The Consolidated Income Statement separately identifies exceptional items and certain remeasurements (the 'middle column'). This results in focus being placed on what management refer to as 'business performance' or 'adjusted profit'. Adjusted profit is a critical measure for stakeholders and is one of the principal measures which the Board uses to review the performance of the Group's segments. In addition, underlying profit, which is derived from adjusted profit, is another widely used measure and is used in determining aspects of executive remuneration. Accordingly, the classification of items in the middle column is important for users of the financial statements. Consistency in the identification and presentation of these items is also important to ensure comparability of year-on-year reporting in the Annual Report and Accounts. There is judgement in the classification and accuracy of the amounts determined to be exceptional in accordance the Group's exceptional items framework and any amounts so classified impact the adjusted profit of the Group. In the current year management classified the following items as exceptional charges in the middle column: • Environmental charges of £402 million – Relating to the re-evaluation of estimates of total remediation costs and cost sharing allocations borne by the Group for the three US Superfund sites, as well as the impact of the change in the real discount rate applied to the estimated undiscounted cash flows for all environmental provisions; and • Deferred tax arising on the reversal of the previously enacted reduction in the UK corporation tax rate of £192 million. The key judgements related to the calculation of the environmental charges have been discussed in the 'environmental provisions' key audit matter.

5.4. Classification of exceptional items continued

How the scope of our audit responded to the key audit matter	We have tested the controls over the classification and accuracy of the amounts presented as exceptional items in the middle column. We have obtained the Group's exceptional items framework and assessed the reasonableness of the framework for identifying items to be classified as exceptional. We assessed whether the classification of each of the items classified as exceptional complies with the approved framework and ESMA guidance and is reasonable. In making this assessment we also considered the consistency of application of the framework year on year. We substantiated the nature and quantum of significant individual items by examining appropriate evidence. We also considered other items which were not identified as exceptional in the context of management's exceptional items framework as part of our challenge of management's conclusions thereon, such as the provision for bad and doubtful debts in the US which was increased in the current year on account of the impact of COVID-19 and the related cessation of certain collection activities and disconnection of customers for non-payments.
Key observations	Our testing confirmed that the relevant controls over the classification and accuracy of the amounts presented as exceptional items in the middle column were found to be operating effectively. We determined that the amounts disclosed as exceptional were so classified in accordance with the Audit Committee approved exceptional items framework and that the framework has been applied consistently with prior years. Specifically, the classification of material increases in environmental provisions at the three Superfund sites and the impact on deferred tax balances of a change in tax rates have been classified as exceptional in prior years. We concur that the additional US bad debt charge should not be exceptional as it would represent just part of an amount calculated in accordance with IFRS.

5.5. Net pension obligations

Key audit matter description	**Account balance: Pensions and other post-retirement benefit obligations. Refer to notes 1E, 25 and 35 to the financial statements and the Audit Committee's discussion on pages 76 – 78.** Substantially all of the Group's employees are members of one of a number of pension schemes in either the UK or US. These pension schemes include both defined benefit and defined contribution schemes. Healthcare and life insurance benefits are also provided to eligible retired US employees. There are significant assumptions used in the valuations of the defined benefit obligations, which as at 31 March 2020 represent a liability of £24.6 billion (2019: £24.9 billion), and valuations of unquoted pension assets ('unquoted assets'), which as at 31 March 2020 make up £11.4 billion (2019: £8.4 billion) out of scheme assets of £23.7 billion (2019: £24.8 billion). The critical judgements relating to the pension obligations include inflation assumptions, discount rates, mortality assumptions and future salary changes applied to active members. The setting of these assumptions is complex and changes to them can have a material impact on the value of pension obligations. Management uses external actuaries to assist in determining these assumptions. Accordingly, we have identified certain of these assumptions to be 'higher' audit risks. Unlike the fair value of other assets that are readily observable and therefore more easily independently corroborated, the valuation of unquoted pension assets classified is inherently subjective. As such there is significant judgement in determining the fair value of these assets including the selection of the valuation methodology and other critical assumptions. The COVID-19 pandemic has resulted in the valuation of certain property assets being subject to increased uncertainty. In addition the valuation of certain unquoted investments including those held in private equity portfolios are subject to an unusually high level of uncertainty due to the most recent valuations on them being performed prior to the significant economic impacts of the COVID-19 pandemic. For these investments, management engaged external experts to assess the economic impact of COVID-19 on the asset valuations as at year end, including property specialists who assessed the value of the property portfolio held within pension assets. Accordingly, we have identified this as an area of 'higher' audit risk. In the UK, the Group entered into two buy-in policies in the year. The Section A policy was entered into in August 2019, with the Section B policy completing in November 2019. The transactions involve the transfer of certain pension assets in the form of gilts and cash, valued at £2.8 billion and £1.6 billion respectively, in return for bulk annuity policies, with the intention of mitigating longevity risk. The transactions represent part of the Group's long term de-risking strategy, of a similar nature to the longevity swap entered into in 2018. Under a buy-in transaction the ultimate obligation to pay the members remains with the scheme and is hence retained within the Group's pension obligations; the bulk annuity is considered a qualifying insurance policy and is recognised at the valuation of the obligation it covers as an asset to the scheme. At the time of the transactions, the member obligations to which the policies relate were valued at £2.4 billion for Section A and £1.3 billion for Section B resulting in the recognition of actuarial losses of £700 million being recognised in Other Comprehensive Income, as disclosed in note 25 to the financial statements.
How the scope of our audit responded to the key audit matter	We tested the controls over the valuation of unquoted pension assets and over the critical assumptions used in determining the valuation of the pension obligations. We engaged internal actuarial experts to assist in testing the discount rates used in calculating the pension obligations. We independently calculated appropriate discount rates and compared these to management's rates. Our actuarial experts also assisted us in benchmarking and challenging the other assumptions used by management in determining the value of pension obligations particularly focusing on inflation, salary growth and mortality rates; this included comparing the inputs and assumptions used in determining the valuation of the Group's schemes to those used in comparable pension plans and/or our internal benchmarks. Additionally, we considered the competence, capability and objectivity of the independent actuaries engaged by the Group to perform valuations of the relevant schemes and where applicable, of unquoted assets. We engaged internal specialists to challenge management's valuation of certain unquoted scheme assets. Our work included assessing the reasonableness of the valuation methodologies applied, reviewing publically available information on these assets, comparing the valuations to internal benchmarks and confirmation of inputs used by management to determine the asset values. Further, our actuarial experts assisted us with the assessment of management's assumptions and valuation methodology related to the buy-ins and we consulted with technical experts as to the correct accounting treatment.
Key observations	Our testing confirmed that the relevant controls over the valuation of unquoted pension assets and over the critical assumptions used in determining the valuation of the pension obligations operated effectively. We judge the discount rates and other key actuarial assumptions used by management to be within our internally developed reasonable range or consistent with our internally developed assumptions.

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5. Key audit matters continued

5.5. Net pension obligations continued

Key observations continued

We note that the recognition of the actuarial loss on the buy-in transactions, representing the difference between the price paid and the value of the obligations covered by the buy-in policies is appropriately recognised in OCI as it is treated as a change in the fair value of plan assets. We assessed the appropriateness of the related disclosures in note 25 to the financial statements and consider them to be reasonable.

We consider management's valuations of the unquoted investments to be reasonable and the disclosures in note 1E to the financial statements regarding the estimation uncertainty and in note 35 to the financial statements regarding the sensitivity of the pension assets balance to the valuation of unquoted assets to be appropriate.

5.6. Treasury derivative transactions

Key audit matter description

Account balances: Derivative financial assets and derivative financial liabilities. Refer to notes 17 and 32 to the financial statements.

The Group mitigates the exposure to interest rate and foreign exchange rate risks with risk management activities including the use of derivatives such as cross-currency and interest rate swaps. The Group designates derivatives in hedge relationships where they judge this to meet the requirements of IFRS 9. Due to the technical nature of this assessment, we have identified it as a 'higher' audit risk. At 31 March 2020 the Group had derivative financial assets of £1,342 million (31 March 2019: £1,153 million) and derivative financial liabilities of £1,334 million (31 March 2019: £1,183 million).

The valuation of the derivative portfolio requires management to make certain assumptions and judgements in particular around the valuation methodologies adopted and the discount rate to be applied to forecast cash flows.

The portfolio also includes 'level 3' derivative financial liabilities of £245 million (31 March 2019: £216 million) for which unobservable inputs that are significant to the fair value measurement must be used in the valuation models. This results in management having to make estimates in relation to unobservable inputs, which increase the complexity and level of estimation uncertainty, and there is judgement involved in determining the methodology used to fair value these derivatives. Accordingly, we have identified this as an area of 'higher' audit risk.

How the scope of our audit responded to the key audit matter

We have tested the controls over the recording and valuation of derivative financial instruments. This has included testing of the review controls performed by management over the valuations and its challenge of the estimates made.

In conjunction with our treasury specialists we have tested a sample of the valuation models used by management, including a challenge of the assumptions therein, to confirm the appropriateness of the valuation methodology adopted and the assumptions applied. We have obtained third party confirmations to test the completeness and accuracy of the information held within the Group's treasury management system.

We have assessed the appropriateness of the hedge documentation, eligibility of designations and hedge effectiveness testing performed by management and tested the disclosures within the financial statements.

We assessed whether the representation of items in the cash flow statement to reflect the change in accounting policy have been appropriately disclosed.

Key observations

Our testing confirmed that the relevant controls over the recording and valuation of derivative financial instruments were effective.

We conclude that the valuation of derivatives and the Group's use of hedge accounting is appropriate.

We are satisfied that the disclosures in respect of the cash flow statement accounting policy change, and the amounts represented in the prior year to reflect the updated policy, are appropriate.

5.7. IT user access controls

Key audit matter description

IT systems fulfil a critical role in the Group's financial reporting and accordingly IT user access control deficiencies potentially impact all account balances. Refer additionally to the Audit Committee's discussion of significant issues on pages 76 – 78.

In the past two financial years (ended on 31 March 2019 and 31 March 2018), we identified deficiencies relating to segregation of duties, control over privileged access and user access management both within the Group and the Group's IT service organisations (together 'access deficiencies'). The deficiencies identified increased the risk that individuals within the Group and at service organisations had inappropriate access during the period.

Management continued executing on their remediation programme commenced during the year ended 31 March 2018 in order to strengthen the IT control framework, and substantially completed the programme.

The existence of deficiencies during the year results in an increased risk that data and reports from the affected systems are not reliable.

The level of risk ascribed to our work in this area is dependent on the nature and complexity of the controls themselves and the balances within the financial statements the controls address.

How the scope of our audit responded to the key audit matter

In responding to the access deficiencies for in scope IT systems and the associated IT infrastructure, we have determined the impact that inappropriate levels of access throughout the year could feasibly have had on the affected systems and account balances including assessing the likelihood of inappropriate user access impacting the financial statements. Further, we tested controls implemented by management to identify instances of the use of inappropriate access, as well as mitigating controls included within management's remediation programme. Where no such controls existed, we extended the scope of our audit such that we have not placed reliance on controls for information produced or held in the impacted systems.

Key observations

A number of the deficiencies identified as unremediated in the prior year were remediated by year-end. We do not consider the remaining deficiencies to be significant and we found the mitigating controls implemented by management operated effectively.

Due to the fact that the newly remediated controls did not operate for the entire year, we conducted a largely substantive audit in the areas impacted by the access deficiencies. We continued to rely on controls in certain areas where the IT systems were not impacted by the access deficiencies.

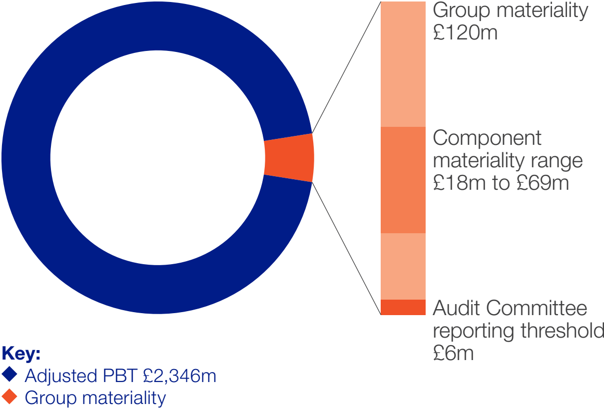
6. Our application of materiality

6.1. Materiality

We define materiality as the magnitude of misstatement in the financial statements that makes it probable that the economic decisions of a reasonably knowledgeable person would be changed or influenced. We use materiality both in planning the scope of our audit work and in evaluating the results of our work.

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

	Group financial statements	Parent company financial statements
Materiality	£120 million (2019: £124 million).	£100 million (2019: £100 million).
Basis for determining materiality	Our determined materiality represents 5.1% of adjusted profit before tax and 6.8% of statutory profit before tax. Adjusted profit before tax is profit before tax, exceptional items and remeasurements as disclosed in the consolidated income statement. Prior year materiality was determined on a similar basis.	1.2% of net assets.
Rationale for the benchmark applied	We consider adjusted profit before tax to be an important benchmark of the performance of the Group. We consider it appropriate to adjust for exceptional items and remeasurements as these items are volatile and not reflective of the underlying performance of the Group. We conducted an assessment of which line items we understand to be the most important to investors and analysts by reviewing analyst reports and National Grid's communications to shareholders and lenders, as well as the communications of peer companies. This assessment resulted in us considering the financial statement line items above. Profit before tax is the benchmark ordinarily considered by us when auditing listed entities. It provides comparability against other companies across all sectors, but has limitations when auditing companies whose earnings are impacted by items which can be volatile from one period to the next, and therefore may not be representative of the volume of transactions and the overall size of the business in a given year, or where the impact of volatility may result in the recognition of material income or charges in a particular year. Whilst not an IFRS measure, adjusted profit is one of the key metrics communicated by management in National Grid's results announcements. It excludes some of the volatility arising from changes in fair values of financial assets and liabilities as well as "exceptional items" and this was the key measure applied in the prior year.	As the Company is non-trading, operates primarily as a holding company for the Group's trading entities, and is not profit orientated, we believe the net asset position is the most appropriate benchmark to use.



6.2. Performance materiality

We set performance materiality at a level lower than materiality to reduce the probability that, in aggregate, uncorrected and undetected misstatements exceed the materiality for the financial statements as a whole. Group performance materiality was set at £92.0 million for the 2020 audit (2019: £86.8 million), or 77% of Group materiality (2019: 70%). In determining to increase performance materiality, we considered the following factors:

- our cumulative experience from prior year audits;
- the level of corrected and uncorrected misstatements identified;
- our risk assessment, including our understanding of the entity and its environment; and
- our assessment of the Group's overall control environment.

Independent auditor's report
to the members of National Grid plc continued

6. Our application of materiality continued

6.3. Error reporting threshold

We agreed with the Audit Committee that we would report to the Committee all audit differences in excess of £6.0 million (2019: £6.2 million), as well as differences below that threshold which, in our view, warranted reporting on qualitative grounds. We also report to the Audit Committee on disclosure matters that we identified when assessing the overall presentation of the financial statements.

7. An overview of the scope of our audit

The following significant components of the Group were identified in our audit planning: UK Electricity Transmission, UK Gas Transmission and US Regulated. Each of these components was subjected to a full-scope audit for Group reporting purposes, completed to the individual component materiality level discussed above.

As each of the financially significant components maintains separate financial records we have engaged component auditors from the Deloitte member firms in the US or the UK to perform procedures at these components on our behalf. This approach allows us to engage local auditors who have appropriate knowledge of local regulations to perform this audit work. We issued detailed instructions to the component auditors and directed and supervised their work through a number of visits to the component auditors during the planning and performance stages of our audit alongside frequent remote communication and review of their work. In response to the COVID-19 pandemic which limited our ability to make component visits after the year end, frequent calls were held between the Group and component teams and remote access to relevant documents was provided.

Our oversight of component auditors focused on the planning of their audit work and key judgements made. In particular, our supervision and direction focused on the work performed in relation to key audit matters including internal controls (including general IT controls), environmental provisions, pensions, treasury derivative transactions and the classification of exceptional items. As part of our monitoring of component auditors we have also attended key local audit meetings.

Additionally our audit planning identified the following non-significant components where we consider there to be a reasonable possibility of material misstatement in specific items within the financial statements: UK Property, the Isle of Grain LNG terminal and the Metering business. Accordingly, we have directed component auditors to perform specific audit procedures in relation to material account balances and analytical procedures on the respective income statements and statements of financial position for these components. The work on these components is carried out by the same component audit team as for the UK Electricity Transmission and UK Gas Transmission components.

In addition to the work performed at a component level the Group audit team also performed audit procedures on the parent company financial statements, including but not limited to corporate activities such as treasury and pensions as well as on the consolidated financial statements themselves, including entity-level controls, litigation provisions, the consolidation, financial statement disclosures and risk assessment work on components not included elsewhere in the scope of our audit. The Group audit team also led the work in connection with the impact of climate change on the useful lives of the Group's gas assets and co-ordinated certain procedures performed on key areas, such as environmental provisions, where audit work is performed by both the Group and component audit teams as well as analytical reviews on out-of-scope components.

Revenue (%)

Gross assets (%)

Gross liabilities (%)

8. Other information

The directors are responsible for the other information. The other information comprises the information included in the Annual Report, other than the financial statements and our auditor's report thereon.

Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion 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 such material inconsistencies or apparent material misstatements, we are required to determine whether there is a material misstatement in 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.

In this context, matters that we are specifically required to report to you as uncorrected material misstatements of the other information include where we conclude that:

- **Fair, balanced and understandable** – the statement given by the directors that they consider the Annual Report and financial statements taken as a whole is fair, balanced and understandable and provides the information necessary for shareholders to assess the Group's position and performance, business model and strategy, is materially inconsistent with our knowledge obtained in the audit; or
- **Audit Committee reporting** – the section describing the work of the Audit Committee does not appropriately address matters communicated by us to the Audit Committee; or
- **Directors' statement of compliance with the UK Corporate Governance Code** – the parts of the directors' statement required under the Listing Rules relating to the Company's compliance with the UK Corporate Governance Code containing provisions specified for review by the auditor in accordance with Listing Rule 9.8.10R(2) do not properly disclose a departure from a relevant provision of the UK Corporate Governance Code.

We have nothing to report in respect of these matters.

9. Responsibilities of directors

As explained more fully in the directors' responsibilities statement, the directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the directors 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 directors are responsible for assessing the Group's and the parent company'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 directors either intend to liquidate the Group or the parent company or to cease operations, or have no realistic alternative but to do so.

10. Auditor's 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 auditor's 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 (UK) 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.

Details of the extent to which the audit was considered capable of detecting irregularities, including fraud and non-compliance with laws and regulations are set out below.

A further description of our responsibilities for the audit of the financial statements is located on the FRC's website at: www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditor's report.

11. Extent to which the audit was considered capable of detecting irregularities, including fraud

We identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and then design and perform audit procedures responsive to those risks, including obtaining audit evidence that is sufficient and appropriate to provide a basis for our opinion.

11.1. Identifying and assessing potential risks related to irregularities

In identifying and assessing risks of material misstatement in respect of irregularities, including fraud and non-compliance with laws and regulations, we considered the following:

- the nature of the industry and sector, control environment and business performance including the design of the Group's remuneration policies, key drivers for directors' remuneration, bonus levels and performance targets;
- results of our enquiries of management, internal audit and the Audit Committee about their own identification and assessment of the risks of irregularities;
- any matters we identified having obtained and reviewed the Group's documentation of their policies and procedures relating to:
  - identifying, evaluating and complying with laws and regulations and whether they were aware of any instances of non-compliance;
  - detecting and responding to the risks of fraud and whether they have knowledge of any actual, suspected or alleged fraud;
  - the internal controls established to mitigate risks of fraud or non-compliance with laws and regulations;
- the matters discussed among the audit engagement team including significant component audit teams and involving relevant internal specialists, including tax, pensions, IT, and treasury specialists regarding how and where fraud might occur in the financial statements and any potential indicators of fraud. The engagement team includes audit partners and staff who have extensive experience of working with companies in the same sectors as National Grid operates, and this experience was relevant to the discussion about where fraud risks may arise. The discussion was also carried out across the engagement team specific to the potential fraud implications of COVID-19 in relation to added financial pressures as well as in relation to increases in remote working.

In common with all audits under ISAs (UK), we are also required to identify management override as a significant risk and to perform specific procedures to respond to that risk.

We also obtained an understanding of the legal and regulatory frameworks that the Group operates in, focusing on provisions of those laws and regulations that had a direct effect on the determination of material amounts and disclosures in the financial statements. The key laws and regulations we considered in this context included the UK Companies Act 2006, the UK Listing Rules, pensions and tax legislation, US Securities Exchange Act 1934 and relevant SEC regulations, as well as laws and regulations prevailing in each country in which we identified a full scope component. In addition, compliance with terms of the Group's operating licence and environmental regulations were fundamental to the Group's operations.

In addition, we considered provisions of other laws and regulations that do not have a direct effect on the financial statements but compliance with which may be fundamental to the Group's ability to operate or to avoid a material penalty. These included the Group's operating licences and environmental regulations.

11.2. Audit response to risks identified

As a result of performing the above, we did not identify any key audit matters related to the potential risk of fraud or non-compliance with laws and regulations.

Our procedures to respond to risks identified included the following:

- reviewing the financial statement disclosures and testing to supporting documentation to assess compliance with provisions of relevant laws and regulations described as having a direct effect on the financial statements;
- enquiring of management, the Audit Committee and in-house legal counsel concerning actual and potential litigation and claims;
- performing analytical procedures to identify any unusual or unexpected relationships that may indicate risks of material misstatement due to fraud;
- reading minutes of meetings of those charged with governance, reviewing internal audit reports and reviewing correspondence with relevant regulatory authorities;
- in addressing the risk of fraud through management override of controls, testing the appropriateness of journal entries and other adjustments; assessing whether the judgements made in making accounting estimates are indicative of a potential bias; and evaluating the business rationale of any significant transactions that are unusual or outside the normal course of business.

We also communicated relevant identified laws and regulations and potential fraud risks to all engagement team members including internal specialists and significant component audit teams, and remained alert to any indications of fraud or non-compliance with laws and regulations throughout the audit.

Independent auditor's report
to the members of National Grid plc continued

Report on other legal and regulatory requirements

12. Opinions on other matters prescribed by the Companies Act 2006

In our opinion the part of the directors' remuneration report to be audited has been properly prepared in accordance with the Companies Act 2006.

In our opinion, based on the work undertaken in the course of the audit:

- the information given in the strategic report and the directors' report for the financial year for which the financial statements are prepared is consistent with the financial statements; and
- the strategic report and the directors' report have been prepared in accordance with applicable legal requirements.

In the light of the knowledge and understanding of the Group and the parent company and their environment obtained in the course of the audit, we have not identified any material misstatements in the strategic report or the directors' report.

13. Matters on which we are required to report by exception

13.1. Adequacy of explanations received and accounting records

Under the Companies Act 2006 we are required to report to you if, in our opinion:

- we have not received all the information and explanations we require for our audit; or
- adequate accounting records have not been kept by the parent company, or returns adequate for our audit have not been received from branches not visited by us; or
- the parent company financial statements are not in agreement with the accounting records and returns.

We have nothing to report in respect of these matters.

13.2. Directors' remuneration

Under the Companies Act 2006 we are also required to report if in our opinion certain disclosures of directors' remuneration have not been made or the part of the directors' remuneration report to be audited is not in agreement with the accounting records and returns.

We have nothing to report in respect of these matters.

14. Other matters

14.1. Auditor tenure

We became independent and commenced our audit transition on 1 January 2017. Following the recommendation of the audit committee, we were appointed by the Shareholders at the Annual General Meeting on 31 July 2017 to audit the financial statements for the year ending 31 March 2018 and subsequent financial periods.

The period of total uninterrupted engagement including previous renewals and reappointments of the firm is three years, covering the years ending 31 March 2018 to 31 March 2020.

14.2. Consistency of the audit report with the additional report to the Audit Committee

Our audit opinion is consistent with the additional report to the Audit Committee we are required to provide in accordance with ISAs (UK).

15. Use of our report

This report is made solely to the company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the company and the company's members as a body, for our audit work, for this report, or for the opinions we have formed.

Douglas King FCA (Senior statutory auditor)
For and on behalf of Deloitte LLP
Statutory Auditor
London, United Kingdom
17 June 2020

Consolidated income statement
for the years ended 31 March

2020	Notes	Before exceptional items and remeasurements £m	Exceptional items and remeasurements (see note 5) £m	Total £m
Continuing operations				
Revenue	2(a),3	**14,540**	**–**	**14,540**
Provision for bad and doubtful debts	4	**(234)**	**–**	**(234)**
Other operating costs	4,5	**(10,999)**	**(527)**	**(11,526)**
Operating profit/(loss)	2(b)	**3,307**	**(527)**	**2,780**
Finance income	5,6	**70**	**(16)**	**54**
Finance costs	5,6	**(1,119)**	**(48)**	**(1,167)**
Share of post-tax results of joint ventures and associates	5,16	**88**	**(1)**	**87**
Profit/(loss) before tax	2(b),5	**2,346**	**(592)**	**1,754**
Tax	5,7	**(433)**	**(47)**	**(480)**
Profit/(loss) after tax from continuing operations	5	**1,913**	**(639)**	**1,274**
Profit/(loss) after tax from discontinued operations	10	**5**	**(14)**	**(9)**
Total profit/(loss) for the year (continuing and discontinued)		**1,918**	**(653)**	**1,265**
Attributable to:				
Equity shareholders of the parent		**1,917**	**(653)**	**1,264**
Non-controlling interests from continuing operations		**1**	**–**	**1**
Earnings per share (pence)				
Basic earnings per share (continuing)	8			**36.8**
Diluted earnings per share (continuing)	8			**36.6**
Basic earnings per share (continuing and discontinued)	8			**36.5**
Diluted earnings per share (continuing and discontinued)	8			**36.3**

2019	Notes	Before exceptional items and remeasurements £m	Exceptional items and remeasurements (see note 5) £m	Total £m
Continuing operations				
Revenue	2(a),3	14,933	–	14,933
Provision for bad and doubtful debts	4	(181)	–	(181)
Other operating costs	4,5	(11,310)	(572)	(11,882)
Operating profit/(loss)	2(b)	3,442	(572)	2,870
Finance income	5,6	73	15	88
Finance costs	5,6	(1,066)	(91)	(1,157)
Share of post-tax results of joint ventures and associates	10,16	40	–	40
Profit/(loss) before tax	2(b),5	2,489	(648)	1,841
Tax	5,7	(488)	149	(339)
Profit/(loss) after tax from continuing operations	5	2,001	(499)	1,502
Profit/(loss) after tax from discontinued operations	10	57	(45)	12
Total profit/(loss) for the year (continuing and discontinued)		2,058	(544)	1,514
Attributable to:				
Equity shareholders of the parent		2,055	(544)	1,511
Non-controlling interests from continuing operations		3	–	3
Earnings per share (pence)				
Basic earnings per share (continuing)	8			44.3
Diluted earnings per share (continuing)	8			44.1
Basic earnings per share (continuing and discontinued)	8			44.6
Diluted earnings per share (continuing and discontinued)	8			44.4

Consolidated income statement
for the years ended 31 March continued

2018	Notes	Before exceptional items and remeasurements £m	Exceptional items and remeasurements (see note 5) £m	Total £m
Continuing operations				
Revenue	2(a)	15,250	–	15,250
Provision for bad and doubtful debts	4	(36)	–	(36)
Other operating costs	4,5	(11,757)	36	(11,721)
Operating profit	2(b)	3,457	36	3,493
Finance income	6	127	–	127
Finance costs	5,6	(1,128)	119	(1,009)
Share of post-tax results of joint ventures and associates	10	44	5	49
Profit before tax	2(b),5	2,500	160	2,660
Tax	5,7	(584)	1,473	889
Profit after tax from continuing operations	5	1,916	1,633	3,549
Profit/(loss) after tax from discontinued operations	10	145	(143)	2
Total profit for the year (continuing and discontinued)		2,061	1,490	3,551
Attributable to:				
Equity shareholders of the parent		2,060	1,490	3,550
Non-controlling interests from continuing operations		1	–	1
Earnings per share (pence)				
Basic earnings per share (continuing)	8			102.5
Diluted earnings per share (continuing)	8			102.1
Basic earnings per share (continuing and discontinued)	8			102.6
Diluted earnings per share (continuing and discontinued)	8			102.1

Consolidated statement of comprehensive income
for the years ended 31 March

	Notes	**2020 £m**	2019 £m	2018 £m
Profit after tax from continuing operations		**1,274**	1,502	3,549
Other comprehensive income from continuing operations				
Items from continuing operations that will never be reclassified to profit or loss:				
Remeasurement (losses)/gains on pension assets and post-retirement benefit obligations	25	**(724)**	68	1,313
Net losses on equity instruments designated at fair value through other comprehensive income		**(9)**	–	–
Net (losses)/gains on financial liability designated at fair value through profit and loss attributable to changes in own credit risk		**(3)**	7	–
Net losses in respect of cash flow hedging of capital expenditure		**(17)**	(13)	–
Tax on items that will never be reclassified to profit or loss	7	**212**	(15)	(530)
Total items from continuing operations that will never be reclassified to profit or loss		**(541)**	47	783
Items from continuing operations that may be reclassified subsequently to profit or loss:				
Exchange adjustments		**551**	347	(505)
Net (losses)/gains in respect of cash flow hedges		**(128)**	(40)	16
Net losses in respect of cost of hedging		**(78)**	(66)	–
Net losses on available-for-sale investments		**–**	–	(30)
Transferred to profit or loss on sale of available-for-sale investments		**–**	–	(73)
Net (losses)/gains on investment in debt instruments measured at fair value through other comprehensive income		**(15)**	2	–
Share of other comprehensive (losses)/income of associates, net of tax		**(5)**	1	–
Tax on items that may be reclassified subsequently to profit or loss	7	**35**	12	33
Total items from continuing operations that may be reclassified subsequently to profit or loss		**360**	256	(559)
Other comprehensive (loss)/income for the year, net of tax from continuing operations		**(181)**	303	224
Other comprehensive income for the year, net of tax from discontinued operations[1]	10	**6**	36	147
Other comprehensive (loss)/income for the year, net of tax		**(175)**	339	371
Total comprehensive income for the year from continuing operations		**1,093**	1,805	3,773
Total comprehensive (loss)/income for the year from discontinued operations	10	**(3)**	48	149
Total comprehensive income for the year		**1,090**	1,853	3,922
Attributable to:				
Equity shareholders of the parent				
From continuing operations		**1,091**	1,801	3,773
From discontinued operations		**(3)**	48	149
		1,088	1,849	3,922
Non-controlling interests				
From continuing operations		**2**	4	–

1. The other comprehensive income from discontinued operations relates to the items of other comprehensive income of Cadent (investment through Quadgas HoldCo Limited). Refer to note 10 for details.

Consolidated statement of changes in equity
for the years ended 31 March

	Share capital £m	Share premium account £m	Retained earnings £m	Other equity reserves[1] £m	Total shareholders' equity £m	Non-controlling interests £m	Total equity £m
At 31 March 2017	449	1,324	22,582	(3,987)	20,368	16	20,384
Profit for the year	–	–	3,550	–	3,550	1	3,551
Other comprehensive income/(loss) for the year	–	–	925	(553)	372	(1)	371
Total comprehensive income/(loss) for the year	–	–	4,475	(553)	3,922	–	3,922
Equity dividends	–	–	(4,487)	–	(4,487)	–	(4,487)
Scrip dividend-related share issue[2]	3	(3)	–	–	–	–	–
Purchase of treasury shares	–	–	(1,017)	–	(1,017)	–	(1,017)
Issue of treasury shares	–	–	33	–	33	–	33
Purchase of own shares	–	–	(5)	–	(5)	–	(5)
Share-based payments	–	–	16	–	16	–	16
Tax on share-based payments	–	–	2	–	2	–	2
At 31 March 2018 (as previously reported)	452	1,321	21,599	(4,540)	18,832	16	18,848
Impact of transition to IFRS 9 and IFRS 15	–	–	(268)	72	(196)	–	(196)
At 1 April 2018 (as restated)	452	1,321	21,331	(4,468)	18,636	16	18,652
Profit for the year	–	–	1,511	–	1,511	3	1,514
Other comprehensive income for the year	–	–	89	249	338	1	339
Total comprehensive income for the year	–	–	1,600	249	1,849	4	1,853
Equity dividends	–	–	(1,160)	–	(1,160)	–	(1,160)
Scrip dividend-related share issue[2]	6	(7)	–	–	(1)	–	(1)
Issue of treasury shares	–	–	18	–	18	–	18
Purchase of own shares	–	–	(2)	–	(2)	–	(2)
Share-based payments	–	–	27	–	27	–	27
Cash flow hedges transferred to the statement of financial position, net of tax	–	–	–	(18)	(18)	–	(18)
At 1 April 2019	458	1,314	21,814	(4,237)	19,349	20	19,369
Profit for the year	–	–	1,264	–	1,264	1	1,265
Other comprehensive (loss)/income for the year	–	–	(509)	333	(176)	1	(175)
Total comprehensive income for the year	–	–	755	333	1,088	2	1,090
Equity dividends	–	–	(892)	–	(892)	–	(892)
Scrip dividend-related share issue[2]	12	(13)	–	–	(1)	–	(1)
Issue of treasury shares	–	–	17	–	17	–	17
Purchase of own shares	–	–	(6)	–	(6)	–	(6)
Share-based payments	–	–	19	–	19	–	19
Tax on share-based payments	–	–	3	–	3	–	3
Cash flow hedges transferred to the statement of financial position, net of tax	–	–	–	(15)	(15)	–	(15)
At 31 March 2020	**470**	**1,301**	**21,710**	**(3,919)**	**19,562**	**22**	**19,584**

1. For further details of other equity reserves, see note 28.
2. Included within the share premium account are costs associated with scrip dividends.

Consolidated statement of financial position
as at 31 March

	Notes	2020 £m	2019 £m
Non-current assets			
Goodwill	11	**6,233**	5,869
Other intangible assets	12	**1,295**	1,084
Property, plant and equipment	13	**48,770**	43,913
Other non-current assets	14	**354**	264
Pension assets	25	**1,849**	1,567
Financial and other investments	15	**543**	667
Investments in joint ventures and associates	16	**995**	608
Derivative financial assets	17	**1,249**	1,045
Total non-current assets		**61,288**	55,017
Current assets			
Inventories and current intangible assets	18	**549**	370
Trade and other receivables	19	**2,986**	3,153
Current tax assets		**102**	126
Financial and other investments	15	**1,998**	1,981
Derivative financial assets	17	**93**	108
Cash and cash equivalents	20	**73**	252
Assets held for sale	10	**–**	1,956
Total current assets		**5,801**	7,946
Total assets		**67,089**	62,963
Current liabilities			
Borrowings	21	**(4,072)**	(4,472)
Derivative financial liabilities	17	**(380)**	(350)
Trade and other payables	22	**(3,602)**	(3,769)
Contract liabilities	23	**(76)**	(61)
Current tax liabilities		**(86)**	(161)
Provisions	26	**(348)**	(316)
Total current liabilities		**(8,564)**	(9,129)
Non-current liabilities			
Borrowings	21	**(26,722)**	(24,258)
Derivative financial liabilities	17	**(954)**	(833)
Other non-current liabilities	24	**(891)**	(808)
Contract liabilities	23	**(1,082)**	(933)
Deferred tax liabilities	7	**(4,184)**	(3,965)
Pensions and other post-retirement benefit obligations	25	**(2,802)**	(1,785)
Provisions	26	**(2,306)**	(1,883)
Total non-current liabilities		**(38,941)**	(34,465)
Total liabilities		**(47,505)**	(43,594)
Net assets		**19,584**	19,369
Equity			
Share capital	27	**470**	458
Share premium account		**1,301**	1,314
Retained earnings		**21,710**	21,814
Other equity reserves	28	**(3,919)**	(4,237)
Total shareholders' equity		**19,562**	19,349
Non-controlling interests		**22**	20
Total equity		**19,584**	19,369

The consolidated financial statements set out on pages 121 to 208 were approved by the Board of Directors on 17 June 2020 and were signed on its behalf by:

Sir Peter Gershon Chairman
Andy Agg Chief Financial Officer

National Grid plc
Registered number: 4031152

Consolidated cash flow statement
for the years ended 31 March

	Notes	2020 £m	2019 £m	2018 £m
Cash flows from operating activities				
Total operating profit from continuing operations	2(b)	**2,780**	2,870	3,493
Adjustments for:				
Exceptional items and remeasurements	5	**527**	572	(36)
Depreciation, amortisation and impairment		**1,640**	1,588	1,530
Share-based payments		**19**	27	16
Changes in working capital		**269**	40	118
Changes in provisions		**(169)**	(110)	(206)
Changes in pensions and other post-retirement benefit obligations		**(92)**	(123)	(239)
Cash flows relating to exceptional items		**(60)**	(400)	26
Cash generated from operations – continuing operations		**4,914**	4,464	4,702
Tax (paid)/recovered		**(199)**	(75)	8
Net cash inflow from operating activities – continuing operations		**4,715**	4,389	4,710
Net cash used in operating activities – discontinued operations	10	**(97)**	(71)	(207)
Cash flows from investing activities				
Acquisition of financial investments		**(108)**	(89)	(2)
Acquisition of Geronimo and Emerald	38	**(139)**	–	–
Investments in joint ventures and associates		**(82)**	(143)	(129)
Loans to joint ventures and associates		**–**	(31)	(68)
Disposal of financial investments		**63**	18	134
Disposal of 61% interest in UK Gas Distribution		**–**	–	(20)
Disposal of interests in Quadgas HoldCo Limited	10	**1,965**	–	–
Purchases of intangible assets		**(317)**	(306)	(173)
Purchases of property, plant and equipment		**(4,583)**	(3,635)	(3,738)
Disposals of property, plant and equipment		**68**	38	10
Dividends received from joint ventures and associates		**75**	68	69
Interest received		**73**	68	30
Net movements in short-term financial investments		**7**	822	5,953
Net movements in derivatives[1]		**(223)**	(412)	330
Net cash flow (used in)/from investing activities – continuing operations		**(3,201)**	(3,602)	2,396
Net cash flow used in investing activities – discontinued operations	10	**6**	156	171
Cash flows from financing activities				
Purchase of treasury shares		**–**	–	(1,017)
Proceeds from issue of treasury shares		**16**	17	33
Purchase of own shares		**(6)**	(2)	(5)
Proceeds received from loans	29(c)	**4,218**	2,932	1,941
Repayment of loans	29(c)	**(3,253)**	(1,969)	(2,156)
Payments of lease liabilities	29(c)	**(121)**	(70)	(71)
Net movements in short-term borrowings	29(c)	**(424)**	179	(764)
Net movements in derivatives[1]	29(c)	**(187)**	35	(267)
Interest paid	29(c)	**(957)**	(914)	(853)
Dividends paid to shareholders		**(892)**	(1,160)	(4,487)
Net cash flow used in financing activities – continuing operations		**(1,606)**	(952)	(7,646)
Net cash flow (used in)/from financing activities – discontinued operations	10	**–**	–	(231)
Net decrease in cash and cash equivalents	29(a)	**(183)**	(80)	(807)
Exchange movements		**4**	3	(3)
Cash and cash equivalents at start of year		**252**	329	1,139
Cash and cash equivalents at end of year	20	**73**	252	329

1. Certain derivative balances have been represented for all periods presented to reflect a reclassification from financing activities to investing activities to reflect a change in accounting policy (see note 1 for details).

Notes to the consolidated financial statements
– analysis of items in the primary statements

1. Basis of preparation and recent accounting developments

Accounting policies describe our approach to recognising and measuring transactions and balances in the year. The accounting policies applicable across the financial statements are shown below, whereas accounting policies that are specific to a component of the financial statements have been incorporated into the relevant note.

This section also shows areas of judgement and key sources of estimation uncertainty in these financial statements. In addition, we have summarised new International Accounting Standards Board (IASB) and EU endorsed accounting standards, amendments and interpretations and whether these are effective for this year end or in later years, explaining how significant changes are expected to affect our reported results.

National Grid's principal activities involve the transmission and distribution of electricity and gas in Great Britain and northeastern US. The Company is a public limited liability company incorporated and domiciled in England and Wales, with its registered office at 1–3 Strand, London WC2N 5EH.

The Company, National Grid plc, which is the ultimate parent of the Group, has its primary listing on the London Stock Exchange and is also quoted on the New York Stock Exchange.

These consolidated financial statements were approved for issue by the Board on 17 June 2020.

These consolidated financial statements have been prepared in accordance with International Accounting Standards (IAS) and International Financial Reporting Standards (IFRS) and related interpretations as issued by the IASB and IFRS as adopted by the EU. They are prepared on the basis of all IFRS accounting standards and interpretations that are mandatory for periods ended 31 March 2020 and in accordance with the Companies Act 2006 applicable to companies reporting under IFRS and Article 4 of the EU IAS Regulation. The comparative financial information has also been prepared on this basis.

The consolidated financial statements have been prepared on a historical cost basis, except for the recording of pension assets and liabilities, the revaluation of derivative financial instruments and certain commodity contracts and certain financial assets and liabilities measured at fair value.

These consolidated financial statements are presented in pounds sterling, which is also the functional currency of the Company.

The notes to the financial statements have been prepared on a continuing basis unless otherwise stated.

Our income statement and segmental analysis separately identify financial results before and after exceptional items and remeasurements. We continue to use a columnar presentation as we consider it improves the clarity of the presentation, and is consistent with the way that financial performance is measured by management and reported to the Board and Executive Committee, and assists users of the financial statements to understand the results. The inclusion of total profit for the period from continuing operations before exceptional items and remeasurements forms part of the incentive target set annually for remunerating certain Executive Directors and accordingly we believe it is important for users of the financial statements to understand how this compares to our results on a statutory basis and period on period.

A. Going concern

As at the date of approving these financial statements, the impact of COVID-19 on the Group's operations is continually being assessed and subject to rapid change. The Directors have assessed the principal risks discussed on pages 24 – 25, including by modelling both a base case and a reasonable worst case scenario. The reasonable worst-case scenario covers the cash flow impact associated with an extended lockdown for a period of 12 months across both the UK and US. The main cash flow impacts identified in the reasonable worst-case scenario are:

- a significant reduction in cash collections over an extended 12-month period driven by lower customer demand and increased bad debt in our US businesses;
- additional working capital required to fund payment term extensions and charge deferrals in the UK electricity market, intended to help customers and end-user consumers;
- one-off increases in other costs such as cleaning, safety equipment and IT; offset by
  - a reduction in non-essential capital expenditure across the Group driven by increased absenteeism, supply chain issues and difficulty in accessing sites; and
  - a reduction in discretionary spend across all areas (e.g. recruitment, travel and consultancy spend).

As part of their analysis, the Board also considered the following potential levers at their discretion to improve the position identified by the reasonable worst-case scenario in the event that the debt capital markets are not accessible:

- further significant changes in the phasing of the Group's capital programme with elements of non-essential works and programmes delayed beyond June 2021;
- a number of further reductions in operating expenditure across the Group primarily related to workforce cost reductions in both the UK and the US; and
- the payment of dividends to shareholders.

Having considered the reasonable worst-scenario and further levers at the Board's discretion, the Group continues to have headroom against the Group's committed facilities identified in note 33 to the financial statements.

In addition to the above, the ability to raise new financing was separately included in the analysis and the Directors noted the £0.9 billion debt issuances completed in April 2020 (disclosed in note 21 to the financial statements) as evidence of the Group's ability to continue to have access to the debt capital markets if needed. Other factors considered by the Board as part of their Going Concern assessment included the potential impact of Brexit trade talks, the Group's various ongoing rate case determinations in the UK and US alongside inherent uncertainties in cash flow forecasts (such as the impact of storms in our US business).

Based on the above, the Directors have concluded the Group is well placed to manage its financing and other business risks satisfactorily, and have a reasonable expectation that the Group will have adequate resources to continue in operation for at least 12 months from the signing date of these consolidated financial statements. They therefore consider it appropriate to adopt the going concern basis of accounting in preparing the financial statements.

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

1. Basis of preparation and recent accounting developments continued

B. Basis of consolidation
The consolidated financial statements incorporate the results, assets and liabilities of the Company and its subsidiaries, together with a share of the results, assets and liabilities of joint operations.

A subsidiary is defined as an entity controlled by the Group. Control is achieved where the Group is exposed to, or has the rights to, variable returns from its involvement with the entity and has the power to affect those returns through its power over the entity.

The Group accounts for joint ventures and associates using the equity method of accounting, where the investment is carried at cost plus post-acquisition changes in the share of net assets of the joint venture or associate, less any provision for impairment. Losses in excess of the consolidated interest in joint ventures and associates are not recognised, except where the Company or its subsidiaries have made a commitment to make good those losses.

Where necessary, adjustments are made to bring the accounting policies used in the individual financial statements of the Company, subsidiaries, joint operations, joint ventures and associates into line with those used by the Group in its consolidated financial statements under IFRS. Intercompany transactions are eliminated.

The results of subsidiaries, joint operations, joint ventures and associates acquired or disposed of during the year are included in the consolidated income statement from the effective date of acquisition or up to the effective date of disposal, as appropriate.

Acquisitions are accounted for using the acquisition method, where the purchase price is allocated to the identifiable assets acquired and liabilities assumed on a fair value basis and the remainder recognised as goodwill.

C. Treatment of interests in Quadgas HoldCo Limited (Quadgas) – discontinued operations and held for sale
At the end of June 2019, we completed the disposal of our retained 39% interest in the UK Gas Distribution business (held through Quadgas) that was classified as held for sale. We have treated the results and cash flows of Quadgas as a discontinued operation in the consolidated income statement and consolidated cash flow statement. Refer to note 10 for further details.

D. Foreign currencies
Transactions in currencies other than the functional currency of the Company or subsidiary concerned are recorded at the rates of exchange prevailing on the dates of the transactions. At each reporting date, monetary assets and liabilities that are denominated in foreign currencies are retranslated at closing exchange rates. Non-monetary assets are not retranslated unless they are carried at fair value.

Gains and losses arising on the retranslation of monetary assets and liabilities are included in the income statement, except where the application of hedge accounting requires inclusion in other comprehensive income (see note 32(e)).

On consolidation, the assets and liabilities of operations that have a functional currency different from the Company's functional currency of pounds sterling, principally our US operations that have a functional currency of US dollars, are translated at exchange rates prevailing at the reporting date. Income and expense items are translated at the average exchange rates for the period where these do not differ materially from rates at the date of the transaction. Exchange differences arising are recognised in other comprehensive income and transferred to the consolidated translation reserve within other equity reserves (see note 28).

E. Areas of judgement and key sources of estimation uncertainty
The preparation of financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosures of contingent assets and liabilities, and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from these estimates. Information about such judgements and estimations is in the notes to the financial statements, and the key areas are summarised below.

Areas of judgement that have the most significant effect on the amounts recognised in the financial statements are as follows:
- categorisation of certain items as exceptional items or remeasurements and the definition of adjusted earnings (see notes 5 and 8). In applying the Group's exceptional items framework, we have considered a number of key matters, as detailed in note 5;
- the judgement that notwithstanding legislation enacted and targets established during the year ended 31 March 2020 committing the UK, New York State and Massachusetts to achieving net zero greenhouse gas emissions by 2050, these do not trigger a reassessment of the remaining useful economic lives of our gas network assets (see estimate below and note 13); and
- following the legal separation of the Electricity System Operator on 1 April 2019, we concluded that the Electricity System Operator acts as an agent in respect of certain Transmission Network Use of Service revenues, principally those collected on behalf of the Scottish and Offshore transmission operators, as detailed in note 3.

Key sources of estimation uncertainty that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are as follows:
- the valuation of liabilities for pensions and other post-retirement benefits (see note 25); and
- the cash flows applied in determining the environmental provisions, in particular relating to three US Superfund sites (see note 26).

In light of the current ongoing impact of the COVID-19 pandemic, valuations of certain assets and liabilities are necessarily more subjective. In particular, two further areas of estimation uncertainty impacting the Group's position as at 31 March 2020 have been identified:

- the valuation of certain pension assets, in particular unquoted equities, properties and diversified alternatives, in light of the volatile economic markets (see note 25); and
- the recoverability of customer receivables, particularly in relation to US retail customers, in light of the suspension of debt collection activities and customer termination activities (see note 19).

In addition, we also highlight the estimates made regarding the useful economic lives of our gas network assets due to the length over which they are being depreciated, the potential for new and evolving technologies over that period, and the range of potential pathways for meeting net zero targets (see note 13 for details and sensitivity analysis).

In order to illustrate the impact that changes in assumptions for the valuation of pension assets and liabilities and cash flows for environmental provisions could have on our results and financial position, we have included sensitivity analyses in note 35. Information on what we believe a reasonably possible range of outcomes to be on recoverability of customer receivables are included in note 19.

1. Basis of preparation and recent accounting developments continued

F. Accounting policy choices

IFRS provides certain options available within accounting standards. Choices we have made, and continue to make, include the following:

- Presentational formats: we use the nature of expense method for our income statement and aggregate our statement of financial position to net assets and total equity. In the income statement, we present subtotals of total operating profit, profit before tax and profit after tax from continuing operations, together with additional subtotals excluding exceptional items and remeasurements as a result of the three columnar presentation described earlier. Exceptional items and remeasurements are presented in a separate column on the face of the income statement.
- Financial instruments: we normally opt to apply hedge accounting in most circumstances where this is permitted (see note 32(e)).
- Cash flow statement: Following a review in the year, we have changed our accounting policy in relation to the presentation of derivatives in the cash flow statement, which has resulted in £412 million of cash outflows for 2019 and £330 million of cash inflows from 2018 to be presented as investing activities rather than financing activities. The reclassified cash flows are in relation to derivatives associated with our net investment hedges, and given they are designated in a hedge relationship, the Group has decided to present them together with the underlying hedged item rather than as part of our overall financing activities.

G. New IFRS accounting standards and interpretations effective for the year ended 31 March 2020

The Group adopted IFRS 16 'Leases' with effect from 1 April 2019. We have applied the modified retrospective approach permitted in the standard whereby prior year comparatives have not been restated on adoption. Instead, any cumulative transition adjustments are reflected through reserves. Refer to note 37 for full details of the impact and transition adjustments arising on adoption.

The UK's Financial Conduct Authority announced that LIBOR will cease to exist by the end of 2021, and will be replaced by alternative reference rates. In September 2019, the IASB amended IFRS 9 and IFRS 7 by issuing Interest Rate Benchmark Reform, which provides exceptions to specific hedge accounting requirements to ensure that hedging relationships are not considered to be modified as a result of the change in the reference rate. The amendments were endorsed in January 2020 for adoption in the EU. The Group early-adopted these changes to IFRS 9 and IFRS 7 with effect from 1 April 2019. There were no transition adjustments on adoption. Refer to note 32(e) for further details of the impact in the current period.

The Group has also adopted the following amendments to standards, which have had no material impact on the Group's results or financial statement disclosure:

- IFRIC 23 'Uncertainty over Income Tax Treatments';
- Amendments to IAS 28 'Investments in Associates – Long-term Interests in Associates and Joint Ventures';
- Annual Improvements to IFRS Standards 2015–2017 Cycle; and
- Amendments to IAS 19 'Employee Benefits'.

H. New IFRS accounting standards and interpretations not yet adopted

The following new accounting standards and amendments to existing standards have been issued but are not yet effective or have not yet been endorsed by the EU:

- IFRS 17 'Insurance Contracts';
- Amendments to IFRS 3 'Business Combinations';
- Amendments to the References to the Conceptual Framework;
- Amendments to IAS 1 and IAS 8: Definition of material; and
- Amendments to IAS 1 'Presentation of Financial Statements'.

Effective dates remain subject to the EU endorsement process.

The Group is currently assessing the impact of the above standards, but they are not expected to have a material impact. The Group has not adopted any other standard, amendment or interpretation that has been issued but is not yet effective.

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

2. Segmental analysis

This note sets out the financial performance for the year split into the different parts of the business (operating segments). The performance of these operating segments is monitored and managed on a day-to-day basis. Revenue and the results of the business are analysed by operating segment, based on the information the Board of Directors uses internally for the purposes of evaluating the performance of each operating segment and determining resource allocation between them. The Board is National Grid's chief operating decision maker (as defined by IFRS 8 'Operating Segments') and assesses the profitability of operations principally on the basis of operating profit before exceptional items and remeasurements (see note 5). As a matter of course, the Board also considers profitability by segment, excluding the effect of timing. However, the measure of profit disclosed in this note is operating profit before exceptional items and remeasurements as this is the measure that is most consistent with the IFRS results reported within these financial statements.

The results of our three principal businesses are reported to the Board of Directors and are treated as reportable operating segments. The following table describes the main activities for each reportable operating segment:

UK Electricity Transmission	The high-voltage electricity transmission networks in England and Wales and independent Great Britain system operator.
UK Gas Transmission	The high-pressure gas transmission networks in Great Britain and system operator in Great Britain.
US Regulated	Gas distribution networks, electricity distribution networks and high-voltage electricity transmission networks in New York and New England and electricity generation facilities in New York.

The UK Electricity Transmission segment also includes the independent Electricity System Operator (ESO). Although there is a separate governance structure (including a separate Executive Committee), the Board receives financial information on an aggregated UK Electricity Transmission basis, which includes the results of the ESO, and accordingly the ESO is included within the reportable segment.

National Grid Ventures (NGV) is our only other operating segment. It does not currently meet the thresholds set out in IFRS 8 to be identified as a separate reportable segment and therefore its results are not required to be separately presented. Instead, NGV's results are reported alongside the results of all other operating businesses on an aggregated basis as "NGV and Other", with certain additional disclosure included in footnotes.

NGV represents our key strategic growth area outside our regulated core business in competitive markets across the US and the UK. The business comprises all commercial operations in metering, LNG at the Isle of Grain in the UK, electricity interconnectors and our new investments in Geronimo Energy LLC (Geronimo) and Emerald Energy Venture LLC (Emerald). Geronimo is a developer of wind and solar generation based in Minneapolis in the US. The acquisition is National Grid's first ownership stake in wind generation and an expansion of our activities in solar generation.

Other activities that do not form part of any of the segments in the above table or NGV primarily relate to our UK property business together with insurance and corporate activities in the UK and US and the Group's investments in technology and innovation companies through National Grid Partners.

The segmental information is presented in relation to continuing operations only and therefore does not include the profits and losses relating to our interest in Quadgas for any period presented (see note 10).

(a) Revenue

Revenue primarily represents the sales value derived from the generation, transmission and distribution of energy, together with the sales value derived from the provision of other services to customers. Refer to note 3 for further details.

Sales between operating segments are priced considering the regulatory and legal requirements to which the businesses are subject. The analysis of revenue by geographical area is on the basis of destination. There are no material sales between the UK and US geographical areas.

	2020			2019			2018		
	Total sales £m	**Sales between segments £m**	**Sales to third parties £m**	Total sales £m	Sales between segments £m	Sales to third parties £m	Total sales £m	Sales between segments £m	Sales to third parties £m
Operating segments – continuing operations:									
UK Electricity Transmission	**3,702**	**(8)**	**3,694**	3,351	(20)	3,331	4,154	(28)	4,126
UK Gas Transmission	**927**	**(16)**	**911**	896	(12)	884	1,091	(9)	1,082
US Regulated	**9,205**	**–**	**9,205**	9,846	–	9,846	9,272	–	9,272
NGV and Other[1]	**736**	**(6)**	**730**	876	(4)	872	776	(6)	770
Total revenue from continuing operations	**14,570**	**(30)**	**14,540**	14,969	(36)	14,933	15,293	(43)	15,250
Split by geographical areas – continuing operations:									
UK			**5,282**			5,045			5,938
US			**9,258**			9,888			9,312
			14,540			14,933			15,250

1. Included within NGV and Other is £608 million (2019: £597 million; 2018: £593 million) of revenue relating to NGV.

2. Segmental analysis continued

(b) Operating profit

A reconciliation of the operating segments' measure of profit to profit before tax from continuing operations is provided below. Further details of the exceptional items and remeasurements are provided in note 5.

	Before exceptional items and remeasurements			After exceptional items and remeasurements		
	2020 £m	2019 £m	2018 £m	**2020 £m**	2019 £m	2018 £m
Operating segments – continuing operations:						
UK Electricity Transmission	**1,320**	1,015	1,041	**1,316**	778	1,041
UK Gas Transmission	**348**	303	487	**347**	267	487
US Regulated	**1,397**	1,724	1,698	**880**	1,425	1,734
NGV and Other[1,2]	**242**	400	231	**237**	400	231
Total operating profit from continuing operations	**3,307**	3,442	3,457	**2,780**	2,870	3,493
Split by geographical area – continuing operations:						
UK	**1,925**	1,695	1,840	**1,915**	1,422	1,840
US	**1,382**	1,747	1,617	**865**	1,448	1,653
	3,307	3,442	3,457	**2,780**	2,870	3,493

Below we reconcile total operating profit from continuing operations to profit before tax from continuing operations. Total operating exceptional items and remeasurements of £527 million charge (2019: £572 million charge; 2018: £36 million gain) are detailed in note 5. This is comprised of a £4 million charge (2019: £237 million charge; 2018: £nil) attributable to UK Electricity Transmission; £1 million charge (2019: £36 million charge; 2018: £nil) to UK Gas Transmission; £517 million charge (2019: £299 million charge; 2018: £36 million gain) to US Regulated; and £5 million charge (2019: £nil; 2018: £nil) to NGV and Other.

	Before exceptional items and remeasurements			After exceptional items and remeasurements		
	2020 £m	2019 £m	2018 £m	**2020 £m**	2019 £m	2018 £m
Reconciliation to profit before tax:						
Operating profit from continuing operations	**3,307**	3,442	3,457	**2,780**	2,870	3,493
Finance income	**70**	73	127	**54**	88	127
Finance costs	**(1,119)**	(1,066)	(1,128)	**(1,167)**	(1,157)	(1,009)
Share of post-tax results of joint ventures and associates	**88**	40	44	**87**	40	49
Profit before tax from continuing operations	**2,346**	2,489	2,500	**1,754**	1,841	2,660

1. Included within NGV and Other is £269 million (2019: £263 million; 2018: £234 million) of operating profit before exceptional items and remeasurements and £268 million of operating profit after exceptional items and remeasurements (2019: £263 million; 2018: £234 million), relating to NGV.
2. In 2019, NGV and Other included gains of £95 million in relation to cash received in respect of two legal settlements.

(c) Capital expenditure

Capital expenditure represents additions to property, plant and equipment and non-current intangibles but excludes additional investments in and loans to joint ventures and associates. In 2020, we transferred certain software assets and properties which are held outside the US rate base and operate for the benefit of our US Regulated businesses, that were previously included within the NGV and Other segment, to the US Regulated segment. See footnote 2.

	Net book value of property, plant and equipment and other intangible assets			Capital expenditure			Depreciation, amortisation and impairment		
	2020 £m	2019 £m	2018 £m	**2020 £m**	2019 £m	2018 £m	**2020 £m**	2019 £m	2018 £m
Operating segments:									
UK Electricity Transmission	**13,788**	13,288	13,028	**1,043**	925	999	**(469)**	(628)	(475)
UK Gas Transmission	**4,513**	4,412	4,280	**249**	308	310	**(171)**	(181)	(194)
US Regulated[2]	**29,623**	24,542	20,953	**3,228**	2,650	2,424	**(855)**	(700)	(635)
NGV and Other[1,2]	**2,141**	2,755	2,491	**559**	438	341	**(145)**	(226)	(226)
Total from continuing operations	**50,065**	44,997	40,752	**5,079**	4,321	4,074	**(1,640)**	(1,735)	(1,530)
Split by geographical area – continuing operations:									
UK	**20,427**	19,343	18,772	**1,847**	1,584	1,527	**(784)**	(931)	(804)
US	**29,638**	25,654	21,980	**3,232**	2,737	2,547	**(856)**	(804)	(726)
	50,065	44,997	40,752	**5,079**	4,321	4,074	**(1,640)**	(1,735)	(1,530)
Asset type:									
Property, plant and equipment	**48,770**	43,913	39,853	**4,727**	4,015	3,901	**(1,464)**	(1,560)	(1,392)
Non-current intangible assets	**1,295**	1,084	899	**352**	306	173	**(176)**	(175)	(138)
Total from continuing operations	**50,065**	44,997	40,752	**5,079**	4,321	4,074	**(1,640)**	(1,735)	(1,530)

1. Included within NGV and Other are assets with a net book value of £2,080 million (2019: £1,635 million; 2018: £1,454 million), capital expenditure of £550 million (2019: £317 million; 2018: £186 million) and depreciation, amortisation and impairment of £124 million (2019: £114 million; 2018: £143 million) relating to NGV.
2. In 2020, US Regulated includes certain software assets and properties in the US which are outside the US rate base and operate for the benefit of our US regulated businesses. These assets were included within NGV and Other in 2019 and 2018. The assets had a net book value of £1,062 million in 2019 and £998 million in 2018, capital expenditure of £87 million in 2019 and £161 million in 2018 and depreciation, amortisation and impairment of £102 million in 2019 and £80 million in 2018.

Total non-current assets other than financial instruments and pension assets located in the UK and US were £31,780 million and £25,867 million respectively as at 31 March 2020 (31 March 2019: UK £30,072 million, US £21,787 million; 31 March 2018: UK £20,816 million, US £27,663 million).

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

3. Revenue

Revenue arises in the course of ordinary activities and principally comprises:
- transmission services;
- distribution services; and
- generation services.

Transmission services, distribution services and certain other services (excluding rental income but including metering) fall within the scope of IFRS 15 'Revenue from Contracts with Customers', whereas generation services (which solely relate to the contract with the Long Island Power Authority (LIPA) in the US) are accounted for under the leasing standard as rental income, also presented within revenue. Revenue is measured based on the consideration specified in a contract with a customer and excludes amounts collected on behalf of third parties and value added tax. The Group recognises revenue when it transfers control over a product or service to a customer.

IFRS 15 was adopted in the prior year and applied prospectively from 1 April 2018. Therefore, the analysis below is only provided for the current period and the immediate comparative period. Below, we include a description of principal activities, by reportable segment, from which the Group generates its revenue. For more detailed information about our segments, see note 2.

(a) UK Electricity Transmission
The UK Electricity Transmission segment principally generates revenue by providing electricity transmission services (both as transmission owner in England and Wales and system operator in Great Britain). Our business operates as a monopoly regulated by Ofgem, which has established price control mechanisms that set the amount of annual allowed returns our business can earn (along with the Scottish and Offshore transmission operators amongst others). The IFRS revenues we record are principally a function of volumes and price. Price is determined prior to our financial year-end with reference to the regulated allowed returns and estimated annual volumes. Where revenue received or receivable exceeds the maximum amount permitted by regulatory agreement, adjustments will be made to future prices to reflect this over-recovery. No liability is recognised, as such an adjustment to future prices relates to the provision of future services. Similarly, no asset is recognised where a regulatory agreement permits adjustments to be made to future prices in respect of an under-recovery. As part of our regulatory agreements we are entitled to recover certain costs directly from customers (pass-through costs). These amounts are included in the overall calculation of allowed revenue as stipulated by regulatory agreements.

The System Operator earns revenue for balancing supply and demand of electricity on the transmission system, where it acts as principal. Revenue is recognised as the service is provided. The System Operator also collects revenues on behalf of transmission operators, principally NGET and the Scottish and Offshore transmission operators, from users who connect to or use the transmission system. However, these amounts are paid to the transmission operators before the System Operator has collected payment from the users (electricity suppliers) and therefore the System Operator does hold some exposure to credit losses with electricity suppliers. The System Operator must set the charges paid by electricity suppliers by reference to the price control mechanism described above. That mechanism does not grant the System Operator with discretion to deviate from that mechanism. The transmission operators own and maintain the electricity network and receive direct feedback from electricity suppliers on the quality of the network they provide. There is a judgement about whether the System Operator acts as a principal or agent in respect of the transmission network revenues collected on behalf of the Scottish and Offshore transmission operators (as set out in note 1). We have concluded that it acts as an agent in respect of these transmission revenues and therefore records the attributable revenue net of operating costs.

The transmission of high-voltage electricity encompasses the following principal services:

- the supply of high-voltage electricity (including both transmission and system operator charges); and
- construction work (principally for connections).

For the supply of high-voltage electricity, revenue is recognised based on capacity and volumes. Our performance obligation is satisfied over time as our customers make use of our network. We bill monthly in arrears and our payment terms are up to 60 days.

For construction work relating to connections, customers can either pay over the useful life of the connection or upfront. Revenue is recognised over time, as we provide access to our network, and where the customer pays upfront, revenues are deferred and released over the life of the connection.

For other construction where there is no consideration for any future services, for example diversions (being the re-routing of network assets at our customers' request), revenues are recognised as the construction work is completed.

(b) UK Gas Transmission
The UK Gas Transmission segment of the Group principally generates revenue by providing gas transmission services to our customers (both as transmission owner and as system operator) in Great Britain. Similar to our UK Electricity Transmission business, our business operates as a monopoly regulated by Ofgem. The price control mechanism in place that determines our annual allowances is also similar, as is the way in which revenue is recorded.

The transmission of gas encompasses the following principal services:

- the supply of high-pressure gas (including both transmission and system operator charges); and
- construction work (principally for connections).

For the supply of high-pressure gas, revenue is recognised based on capacity and volumes. Our performance obligation is satisfied over time as our customers make use of our network, and we bill monthly in arrears with payment terms of up to 45 days.

For construction work relating to connections, customers pay for the connection upfront. Revenue is recognised over time, as we provide access to our network. Where revenues are received upfront, they are deferred and released over the life of the connection.

For other construction where there is no consideration for any future services (such as diversions), revenues are recognised when the construction work is completed.

3. Revenue continued

(c) US Regulated

The US Regulated segment of the Group principally generates revenue by providing gas and electricity distribution services in New York and New England, high voltage electricity transmission services in New York and New England, and electricity generation in New York.

Distribution services

Provision of gas and electricity distribution services in New York and New England. This comprises the following principal services:

- Gas and electricity distribution: revenue is recognised based on usage by customers (over time) and billed monthly. Payment terms are 30 days; and
- Connections: revenue is recognised over time, as we provide access to our network. Where payments are made upfront, they are deferred over the life of the asset.

Transmission services

Provision of electricity transmission services to customers and operation of electricity transmission facilities. Our principal services are:

- Electricity transmission: revenue is recognised based on usage by customers (over time) and billed monthly. Payment terms are 30 days; and
- Connections: revenue is recognised over time, as we provide access to our network. Where payments are made upfront, they are deferred over the life of the asset.

Electricity generation

Provision of energy services and supply capacity to produce energy for the use of customers of the Long Island Power Authority (LIPA) through a power supply agreement. This falls within the scope of the leasing standard, where we act as lessor with rental income being recorded as other income, which forms part of total revenue.

(d) NGV and Other

NGV and Other includes electricity interconnectors, LNG at the Isle of Grain, Geronimo, metering, sales from our UK property business, rental income and insurance.

The Group recognises revenue from transmission services through interconnectors and LNG at the Isle of Grain by means of customers' use of capacity and volumes. Revenue is recognised over time and is billed monthly. Payment terms are up to 30 days.

Other revenue in the scope of IFRS 15 principally includes revenues from our UK metering business and sales of renewables projects from Geronimo to Emerald (see note 38). Revenue is recognised as it is earned. In the case of the UK metering business, revenue is billed monthly and payment terms are up to 30 days.

Other revenue, recognised in accordance with standards other than IFRS 15, includes property sales by our UK commercial property business (including sales to our St William joint venture) and rental income. Property sales are recorded at a point in time (when the sale is legally completed) and rental income is recorded over time.

(e) Disaggregation of revenue

In the following tables, revenue is disaggregated by primary geographical market and major service lines. The table reconciles disaggregated revenue with the Group's reportable segments (see note 2).

Revenue for the year ended 31 March 2020	UK Electricity Transmission £m	UK Gas Transmission £m	US Regulated £m	NGV and Other £m	Total £m
Revenue under IFRS 15					
Transmission	1,992	649	425	309	3,375
Distribution	–	–	8,319	–	8,319
System Operator	1,610	214	–	–	1,824
Other	69	15	12	296	392
Total IFRS 15 revenue	3,671	878	8,756	605	13,910
Other revenue					
Generation	–	–	369	–	369
Other	23	33	80	125	261
Total other revenue	23	33	449	125	630
Total revenue from continuing operations	3,694	911	9,205	730	14,540

Geographical split for the year ended 31 March 2020	UK Electricity Transmission £m	UK Gas Transmission £m	US Regulated £m	NGV and Other £m	Total £m
Revenue under IFRS 15					
UK	3,671	878	–	567	5,116
US	–	–	8,756	38	8,794
Total IFRS 15 revenue	3,671	878	8,756	605	13,910
Other revenue					
UK	23	33	–	110	166
US	–	–	449	15	464
Total other revenue	23	33	449	125	630
Total revenue from continuing operations	3,694	911	9,205	730	14,540

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

3. Revenue continued
(e) Disaggregation of revenue continued

Revenue for the year ended 31 March 2019	UK Electricity Transmission £m	UK Gas Transmission £m	US Regulated £m	NGV and Other £m	Total £m
Revenue under IFRS 15					
Transmission	1,909	661	370	313	3,253
Distribution	–	–	8,941	–	8,941
System Operator	1,416	172	–	–	1,588
Other	–	–	–	284	284
Total IFRS 15 revenue	3,325	833	9,311	597	14,066
Other revenue					
Generation	–	–	367	–	367
Other	6	51	168	275	500
Total other revenue	6	51	535	275	867
Total revenue from continuing operations	3,331	884	9,846	872	14,933

Geographical split for the year ended 31 March 2019	UK Electricity Transmission £m	UK Gas Transmission £m	US Regulated £m	NGV and Other £m	Total £m
Revenue under IFRS 15					
UK	3,325	833	–	585	4,743
US	–	–	9,311	12	9,323
Total IFRS 15 revenue	3,325	833	9,311	597	14,066
Other revenue					
UK	6	51	–	245	302
US	–	–	535	30	565
Total other revenue	6	51	535	275	867
Total revenue from continuing operations	3,331	884	9,846	872	14,933

Revenue to be recognised in future periods, presented as contract liabilities of £1,158 million (2019: £994 million) (see note 23), relates to contributions in aid of construction. Revenue is recognised over the life of the asset. The asset lives for connections in UK Electricity Transmission, UK Gas Transmission, NGV and US Regulated are 40 years, 36 years (to 2055), 15 years and up to 51 years respectively. The weighted average amortisation period is 18 years.

Future revenues in relation to unfulfilled performance obligations not yet received in cash amount to £3.1 billion (2019: £3.5 billion). £1.5 billion (2019: £1.6 billion) relates to connection contracts in UK Electricity Transmission which will be recognised as revenue over 29 years and £1.5 billion (2019: £1.8 billion) relates to revenues to be earned under Grain LNG contracts until 2029. The remaining amount will be recognised as revenue over 5 years.

The amount of revenue recognised for the year ended 31 March 2020 from performance obligations satisfied (or partially satisfied) in previous periods, mainly due to the changes in the estimate of the stage of completion, is £nil (2019: £nil).

4. Operating costs

Below we have presented separately certain items included in our operating costs from continuing operations. These include a breakdown of payroll costs (including disclosure of amounts paid to key management personnel) and fees paid to our auditors.

	Before exceptional items and remeasurements			Exceptional items and remeasurements			Total		
	2020 £m	2019 £m	2018 £m	**2020 £m**	2019 £m	2018 £m	**2020 £m**	2019 £m	2018 £m
Depreciation, amortisation and impairment	**1,640**	1,588	1,530	**–**	147	–	**1,640**	1,735	1,530
Payroll costs	**1,684**	1,703	1,648	**–**	149	–	**1,684**	1,852	1,648
Provision for bad and doubtful debts	**234**	181	36	**–**	–	–	**234**	181	36
Purchases of electricity	**1,318**	1,504	1,299	**85**	(50)	(14)	**1,403**	1,454	1,285
Purchases of gas	**1,276**	1,644	1,539	**40**	(2)	4	**1,316**	1,642	1,543
Property and other taxes	**1,191**	1,108	1,057	**–**	–	–	**1,191**	1,108	1,057
Balancing Services Incentive Scheme	**1,317**	1,196	1,012	**–**	–	–	**1,317**	1,196	1,012
Payments to other UK network owners[1]	**–**	–	1,043	**–**	–	–	**–**	–	1,043
Other	**2,573**	2,567	2,629	**402**	328	(26)	**2,975**	2,895	2,603
	11,233	11,491	11,793	**527**	572	(36)	**11,760**	12,063	11,757
Operating costs include:									
Inventory consumed							**328**	415	367
Research and development expenditure							**14**	19	13

1. Under IFRS 15, with effect from 1 April 2018, revenue and associated payments to other UK network owners are presented on a net basis.

(a) Payroll costs

	2020 £m	2019 £m	2018 £m
Wages and salaries[1]	**2,188**	2,084	1,998
Social security costs	**168**	156	157
Defined contribution scheme costs	**75**	72	65
Defined benefit pension costs	**135**	232	156
Share-based payments	**19**	27	16
Severance costs (excluding pension costs)	**1**	76	7
	2,586	2,647	2,399
Less: payroll costs capitalised	**(902)**	(795)	(751)
Total payroll costs	**1,684**	1,852	1,648

1. Included within wages and salaries are US other post-retirement benefit costs of £45 million (2019: £48 million; 2018: £46 million). For further information refer to note 25.

(b) Number of employees

	31 March 2020	**Monthly average 2020**	31 March 2019	Monthly average 2019	31 March 2018	Monthly average 2018
UK	**6,321**	**6,151**	5,962	6,227	6,517	6,431
US	**16,748**	**16,679**	16,614	16,669	16,506	16,274
Total number of employees	**23,069**	**22,830**	22,576	22,896	23,023	22,705

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

4. Operating costs continued
(c) Key management compensation

	2020 £m	2019 £m	2018 £m
Short-term employee benefits	7	7	8
Compensation for loss of office	1	–	–
Post-employment benefits	1	1	1
Share-based payments	3	3	3
Total key management compensation	12	11	12

Key management compensation relates to the Board, including the Executive Directors and Non-executive Directors for the years presented.

(d) Directors' emoluments
Details of Executive Directors' emoluments are contained in the Remuneration Report on page 96 and those of Non-executive Directors on page 101.

(e) Auditors' remuneration
Auditors' remuneration is presented below in accordance with the requirements of the Companies Act 2006 and the principal accountant fees and services disclosure requirements of Item 16C of Form 20-F:

	2020 £m	2019 £m	2018 £m
Audit fees payable to the parent Company's auditors and their associates in respect of:			
Audit of the parent Company's individual and consolidated financial statements[1]	1.9	1.6	2.7
The auditing of accounts of any associate of the Company[2]	8.7	8.5	9.3
Other services supplied[3]	6.3	5.2	3.9
	16.9	15.3	15.9
Total other services[4]			
Tax fees:			
Tax compliance services	–	–	0.3
Tax advisory services	–	–	–
All other fees:			
Other assurance services[5]	0.6	1.1	0.7
Services relating to corporate finance transactions not covered above	–	–	–
Other non-audit services not covered above[6]	0.5	2.2	0.9
	1.1	3.3	1.9
Total auditors' remuneration	18.0	18.6	17.8

1. Audit fees in each year represent fees for the audit of the Company's financial statements and regulatory reporting for the years ended 31 March 2020, 2019 and 2018.
2. The 2019 comparative has been updated following finalisation of the 2019 audit fee with the Audit Committee.
3. Other services supplied represent fees payable for services in relation to other statutory filings or engagements that are required to be carried out by the auditors. In particular, this includes fees for reports under section 404 of the US Public Company Accounting Reform and Investor Protection Act of 2002 (Sarbanes-Oxley), audit reports on regulatory returns and the review of interim financial statements for the six-month periods ended 30 September 2019, 2018 and 2017 respectively.
4. There were no audit related fees as described in Item 16C(b) of Form 20-F.
5. Principally amounts relating to assurance services provided in relation to comfort letters for debt issuances.
6. In 2020, non-audit services include auction monitor work on Contracts for Difference, IT project assurance and a review of controls over our data on New York customers. In 2019 and 2018, non-audit services primarily related to the UK Property business in respect of the evaluation of possible options for the use of property assets.

The Audit Committee considers and makes recommendations to the Board, to be put to shareholders for approval at each AGM, in relation to the appointment, re-appointment, removal and oversight of the Company's independent auditors. The Committee also considers and approves the audit fees on behalf of the Board in accordance with the Competition and Market Authority Audit Order 2014. The auditors' remuneration is then put to shareholders at each AGM. Details of our policies and procedures in relation to non-audit services to be provided by the independent auditors are set out on page 81 of the Corporate Governance Report.

Certain services are prohibited from being performed by the external auditors under the Sarbanes-Oxley Act. Of the above services, none were prohibited.

5. Exceptional items and remeasurements

To monitor our financial performance, we use a profit measure that excludes certain income and expenses. We call that measure 'business performance' or 'adjusted profit'. Business performance (which excludes exceptional items and remeasurements as defined below) is used by management to monitor financial performance as it is considered that it aids the comparability of our reported financial performance from year to year. We exclude items from business performance because, if included, these items could distort understanding of our performance for the year and the comparability between periods. This note analyses these items, which are included in our results for the year but are excluded from business performance.

Exceptional items and remeasurements from continuing operations

	2020 £m	2019 £m	2018 £m
Included within operating profit			
Exceptional items:			
Environmental charges	**(402)**	–	–
Cost efficiency and restructuring programmes	**–**	(204)	–
Massachusetts Gas labour dispute	**–**	(283)	–
Impairment of nuclear connection development costs	**–**	(137)	–
Final settlement of LIPA MSA Transition	**–**	–	26
	(402)	(624)	26
Remeasurements – commodity contract derivatives	**(125)**	52	10
	(527)	(572)	36
Included within finance income and costs			
Remeasurements:			
Net gains/(losses) on financing derivatives	**1**	(40)	119
Net (losses)/gains on financial assets at fair value through profit and loss	**(16)**	15	–
Net losses on financial liabilities at fair value through profit and loss	**(49)**	(51)	–
	(64)	(76)	119
Included within share of post-tax results of joint ventures and associates			
Exceptional items:			
Deferred tax arising on the reduction in US corporation tax rate	**–**	–	5
Remeasurements:			
Net losses on financial instruments	**(1)**	–	–
Total included within profit before tax	**(592)**	(648)	160
Included within tax			
Exceptional items – credits/(debits) arising on items not included in profit before tax:			
Deferred tax arising on the reduction in the US corporation tax rate	**–**	–	1,510
Deferred tax arising on the reversal of the reduction in UK corporation tax rate	**(192)**	–	–
Tax on exceptional items	**103**	144	(9)
Tax on remeasurements	**42**	5	(28)
	(47)	149	1,473
Total exceptional items and remeasurements after tax	**(639)**	(499)	1,633
Analysis of total exceptional items and remeasurements after tax			
Exceptional items after tax	**(491)**	(480)	1,532
Remeasurements after tax	**(148)**	(19)	101
Total exceptional items and remeasurements after tax	**(639)**	(499)	1,633

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

5. Exceptional items and remeasurements continued

Exceptional items

Management uses an exceptional items framework that has been discussed and approved by the Audit Committee. This follows a three-step process which considers the nature of the event, the financial materiality involved and any particular facts and circumstances. In considering the nature of the event, management focuses on whether the event is within the Group's control and how frequently such an event typically occurs. In determining the facts and circumstances, management considers factors such as ensuring consistent treatment between favourable and unfavourable transactions, the precedent for similar items, the number of periods over which costs will be spread or gains earned, and the commercial context for the particular transaction.

Items of income or expense that are considered by management for designation as exceptional items include significant restructurings, write-downs or impairments of non-current assets, significant changes in environmental or decommissioning provisions, integration of acquired businesses, gains or losses on disposals of businesses or investments and significant debt redemption costs as a consequence of transactions such as significant disposals or issues of equity, and the related tax, as well as deferred tax arising on changes to corporation tax rates.

Costs arising from restructuring programmes include redundancy costs. Redundancy costs are charged to the consolidated income statement in the year in which a commitment is made to incur the costs and the main features of the restructuring plan have been announced to affected employees.

Set out below are details of the transactions against which we have considered the application of our exceptional items framework in each of the years for which results are presented.

2020

We concluded that the increase in costs associated with the changes in our environmental provisions (£402 million) and the additional deferred tax charge reflecting the impact of the remeasurement of the Group's deferred tax liabilities as a result of a change in the substantively enacted UK corporation tax rate (£192 million) meet the criteria to be classified as exceptional.

A further £10 million of COVID-19 related costs incurred in the year have similarly not been classified as exceptional in view of the quantum involved and all costs associated with the settlement reached with the State of New York in respect of the Downstate New York Gas Moratorium have also been treated as part of adjusted profit.

Environmental charges: In the US, the most significant component of our £1.9 billion environmental provision relates to several Superfund sites, and arose from former manufacturing gas plant facilities, formerly owned or operated by the Group or its predecessor companies.

The sites are subject to both State and Federal law in the US. Under Federal and State Superfund laws, potential liability for the historical contamination may be imposed on responsible parties jointly and severally, without regard to fault, even if the activities were lawful when they occurred. The provisions and the Group's share of estimated costs are re-evaluated at each reporting period. As a result of notices issued by governmental authorities and newly developed cost estimates prepared by third-party engineers, we have re-evaluated our estimates of total costs and cost sharing allocations borne by the Company, and accordingly have increased our provision by £326 million. Under the terms of our rate plans, we are entitled to recovery of environmental clean-up costs from rate payers, but under IFRS no asset can be recognised for this recovery.

Also included in the total environmental charge is the £76 million impact of the change in the real discount rate applied to the environmental provisions across the Group, of which £66 million relates to the US and £10 million to the UK. Given the substantial and sustained change in gilts and corporate bond yields, we concluded it was appropriate to reduce the real discount rate from 1% to 0.5%. The weighted average remaining duration of our cash flows is now around 10 years.

2019

In assessing certain items of income and expenditure against our exceptional items framework, we concluded that the costs associated with the Massachusetts Gas labour dispute (£283 million), our cost efficiency and restructuring programme (£204 million) and impairments relating to two nuclear connection cancellations (£137 million) should be treated as exceptional (as described further below).

We also considered whether the £95 million income from two legal settlements received in the period should be classified as exceptional. However, we concluded it was appropriate to recognise the income in earnings before exceptional items (within NGV and Other), in line with the treatment of the original costs.

Cost efficiency and restructuring programmes: Our UK and US businesses incurred restructuring charges as we reviewed organisational structures, operational activities and relevant roles and responsibilities to ensure we are able to operate more efficiently and to continue to drive outperformance for customers and shareholders. The cash outflow for the year was £93 million.

Massachusetts Gas labour dispute: Between June 2018 and January 2019, National Grid implemented a workforce contingency plan across its Massachusetts Gas business following the expiration of contracts for the 1,250 members of the existing workforce. The net incremental cost of the experienced contractors working alongside supervisors and workers from other areas of the business was £283 million, reflecting the financial performance of the US regulated business had the workforce contingency plan not been implemented. The total cash outflow related to the labour dispute was £320 million for the year.

Impairment of nuclear connection development costs: In 2018, Toshiba announced the cancellation of its NuGen project to build a new nuclear power station at Moorside in Cumbria, and NuGen terminated its connection agreement with UK Electricity Transmission. In February 2019, Hitachi terminated its connection agreements in respect of its Horizon projects at Wylfa and Oldbury. As there was no realistic prospect of these schemes continuing in their present form, we concluded that it was appropriate to impair the assets we had been developing for over 10 years. After deducting cash inflows relating to termination fees received of £13 million, the net impairment charge was £137 million.

2018

Final settlement of LIPA MSA transition: During the year, the Group reached an agreement with LIPA on an amount in final settlement of receivables and payables that arose following the cessation of the Management Services Agreement with LIPA in December 2013. The settlement resulted in a gain of £26 million, which was recorded as exceptional, consistent with the treatment of gains and losses on the original transaction.

5. Exceptional items and remeasurements continued

Remeasurements

Remeasurements comprise unrealised gains or losses recorded in the consolidated income statement arising from changes in the fair value of certain of our financial assets and liabilities accounted for at fair value through profit and loss (FVTPL). These assets and liabilities include commodity contract derivatives and financing derivatives to the extent that hedge accounting is not achieved or is not effective.

The unrealised gains or losses reported in profit and loss on certain additional assets and liabilities now treated at FVTPL are also classified within remeasurements. These relate to financial assets (which fail the 'solely payments of principal and interest test' under IFRS 9), the money market fund investments used by Group Treasury for cash management purposes and certain financial liabilities which we elected to designate at FVTPL. In all cases, these fair values increase or decrease because of changes in foreign exchange, commodity or other financial indices over which we have no control.

We report unrealised gains or losses relating to certain discrete classes of financial assets accounted for at FVTPL within business performance. These comprise our portfolio of investments made by National Grid Partners, our investment in Sunrun Neptune 2016 LLC and the contingent consideration arising on the acquisition of Geronimo (all within NGV and Other). The performance of these assets (including changes in fair value) are included in our assessment of business performance for the relevant business units.

Remeasurements excluded from business performance are made up of the following categories:

i. Net gains/(losses) on commodity contract derivatives represent mark-to-market movements on certain physical and financial commodity contract obligations in the US. These contracts primarily relate to the forward purchase of energy for supply to customers, or to the economic hedging thereof, that are required to be measured at fair value and that do not qualify for hedge accounting. Under the existing rate plans in the US, commodity costs are recoverable from customers although the timing of recovery may differ from the pattern of costs incurred;

ii. Net gains/(losses) on financing derivative financial instruments comprise gains and losses arising on derivative financial instruments reported in the consolidated income statement in relation to risk management of interest rate and foreign exchange exposures. These exclude gains and losses for which hedge accounting has been effective, and have been recognised directly in the consolidated statement of other comprehensive income or are offset by adjustments to the carrying value of debt (see notes 17 and 32);

iii. Net gains/(losses) on financial assets measured at FVTPL comprise gains and losses on the investment funds held by our insurance captives which are categorised as FVTPL (see note 15);

iv. Net gains/(losses) on financial liabilities measured at FVTPL comprises the change in the fair value (excluding changes due to own credit risk) of a financial liability that was designated at FVTPL on transition to IFRS 9 to reduce a measurement mismatch (see note 21); and

v. Unrealised net gains/(losses) on derivatives and other financial instruments within our joint ventures and associates.

Items included within tax

2020

The Finance Act 2016, which was enacted on 15 September 2016, reduced the main UK corporation tax rate to 17% with effect from 1 April 2020. Deferred tax balances were calculated at this rate for the years ended 31 March 2017 to 2019. On 17 March 2020, the UK Government utilised the Provisional Collection of Taxes Act 1968 to substantively enact a reversal of the reduction in the main UK corporation tax rate to 17% with effect from 1 April 2020, resulting in the rate remaining at 19%. Deferred taxes at the reporting date have been measured using enacted tax rates and reflected in these financial statements, resulting in a £192 million deferred tax charge, principally due to the remeasurement of deferred tax liabilities. The treatment of this charge as exceptional is consistent with the treatment for the year ended 31 March 2017 when the original reduction in the tax rate was substantively enacted, resulting in the recognition of an exceptional tax credit of £94 million.

2018

The Tax Cuts and Jobs Act (Tax Reform), which was enacted on 22 December 2017, reduced the US corporate tax rate from 35% to 21% with effect from 1 January 2018. Deferred taxes at the reporting date have been measured using these enacted tax rates. This resulted in a one-off deferred tax credit in the year ended 31 March 2018. However, as described in note 11, we expect the overall impact of Tax Reform to be economically neutral for the Group.

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

6. Finance income and costs

This note details the interest income generated by our financial assets and interest expense incurred on our financial liabilities, primarily our financing portfolio (including our financing derivatives). It also includes the net interest on our pensions and other post-retirement assets. In reporting business performance, we adjust net financing costs to exclude any net gains or losses on financial instruments included in remeasurements (see note 5). In addition, where debt redemptions relate to exceptional transactions they are typically treated as exceptional.

The Group adopted IFRS 9 with effect from 1 April 2018. The comparatives for 2018 were not required to be restated and were accounted for in accordance with IAS 39. Following the adoption of IFRS 9, finance income and costs remeasurements include unrealised gains and losses on certain assets and liabilities now treated at FVTPL. The interest income, dividends and interest expense on these items are included in finance income and finance costs before remeasurements, respectively.

	Notes	**2020 £m**	2019 £m	2018 £m
Finance income				
Interest income on financial instruments:				
Bank deposits and other financial assets		**48**	54	54
Dividends received on equities held at fair value through other comprehensive income		**2**	2	–
Gains on disposal of available-for-sale investments		**–**	–	73
Other income		**20**	17	–
		70	73	127
Finance costs				
Net interest on pensions and other post-retirement benefit obligations	25	**(23)**	(22)	(65)
Interest expense on financial liabilities held at amortised cost:				
Bank loans and overdrafts		**(73)**	(72)	(87)
Other borrowings[1]		**(997)**	(970)	(1,030)
Interest expense on financial liabilities held at fair value through profit and loss		**(22)**	(20)	–
Derivatives		**(39)**	(43)	12
Unwinding of discount on provisions	26	**(77)**	(74)	(75)
Other interest		**(10)**	–	(11)
Less: interest capitalised[2]		**122**	135	128
		(1,119)	(1,066)	(1,128)
Remeasurements – Finance income				
Net (losses)/gains on financial assets held at fair value through profit and loss		**(16)**	15	–
		(16)	15	–
Remeasurements – Finance costs				
Net losses on financial liabilities held at fair value through profit and loss		**(49)**	(51)	–
Net (losses)/gains on financing derivatives[3]:				
Derivatives designated as hedges for hedge accounting		**(13)**	(37)	49
Derivatives not designated as hedges for hedge accounting		**14**	(3)	70
		(48)	(91)	119
Total remeasurements – Finance income and costs		**(64)**	(76)	119
Finance income		**54**	88	127
Finance costs		**(1,167)**	(1,157)	(1,009)
Net finance costs from continuing operations		**(1,113)**	(1,069)	(882)

1. Includes interest expense on lease liabilities (see note 13 for details).
2. Interest on funding attributable to assets in the course of construction in the current year was capitalised at a rate of 3.6% (2019: 3.9%; 2018: 4.1%). In the UK, capitalised interest qualifies for a current year tax deduction with tax relief claimed of £15 million (2019: £19 million; 2018: £20 million). In the US, capitalised interest is added to the cost of plant and qualifies for tax depreciation allowances.
3. Includes a net foreign exchange gain on financing activities of £66 million (2019: £264 million gain; 2018: £314 million loss) offset by foreign exchange losses and gains on financing derivatives measured at fair value.

7. Tax

Tax is payable in the territories where we operate, mainly the UK and the US. This note gives further details of the total tax charge and tax liabilities, including current and deferred tax. The current tax charge is the tax payable on this year's taxable profits. Deferred tax is an accounting adjustment to provide for tax that is expected to arise in the future due to differences in the accounting and tax bases.

The tax charge for the period is recognised in the income statement, the statement of comprehensive income or directly in equity, according to the accounting treatment of the related transaction. The tax charge comprises both current and deferred tax.

Current tax assets and liabilities are measured at the amounts expected to be recovered from or paid to the tax authorities. The tax rates and tax laws used to compute the amounts are those that have been enacted or substantively enacted by the reporting date.

The Group operates internationally in territories with different and complex tax codes. Management exercises judgement in relation to the level of provision required for uncertain tax outcomes. There are a number of tax positions not yet agreed with the tax authorities where different interpretations of legislation could lead to a range of outcomes. Judgements are made for each position having regard to particular circumstances and advice obtained.

Deferred tax is provided for using the balance sheet liability method, and is recognised on temporary differences between the carrying amount of assets and liabilities in the financial statements and the corresponding tax bases.

Deferred tax liabilities are generally recognised on all taxable temporary differences, and deferred tax assets are recognised to the extent that it is probable that taxable profits will be available against which deductible temporary differences can be utilised. However, deferred tax assets and liabilities are not recognised if the temporary differences arise from the initial recognition of goodwill or from the initial recognition of other assets and liabilities in a transaction (other than a business combination) that affects neither the accounting nor the taxable profit or loss.

Deferred tax liabilities are recognised on taxable temporary differences arising on investments in subsidiaries and joint arrangements except where the Company is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred tax is calculated at the tax rates that are expected to apply in the period when the liability is settled or the asset is realised, based on the tax rates and tax laws that have been enacted or substantively enacted by the reporting date.

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the deferred tax asset to be recovered. Unrecognised deferred tax assets are reassessed at each reporting date and are recognised to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities and when they relate to income taxes levied by the same tax authority and the Company and its subsidiaries intend to settle their current tax assets and liabilities on a net basis.

Tax charged/(credited) to the consolidated income statement – continuing operations

	2020 £m	2019 £m	2018 £m
Tax before exceptional items and remeasurements	**433**	488	584
Exceptional tax on items not included in profit before tax (see note 5)	**192**	–	(1,510)
Tax on other exceptional items and remeasurements	**(145)**	(149)	37
Total tax reported within exceptional items and remeasurements	**47**	(149)	(1,473)
Total tax charge/(credit) from continuing operations	**480**	339	(889)

Tax as a percentage of profit before tax

	2020 %	2019 %	2018 %
Before exceptional items and remeasurements – continuing operations	**18.5**	19.6	23.4
After exceptional items and remeasurements – continuing operations	**27.4**	18.4	(33.4)

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

7. Tax continued
The tax charge/(credit) for the year can be analysed as follows:

	2020 £m	2019 £m	2018 £m
Current tax:			
UK corporation tax at 19% (2019: 19%; 2018: 19%)	**179**	132	200
UK corporation tax adjustment in respect of prior years	**(4)**	(12)	(18)
	175	120	182
Overseas corporation tax	**(2)**	8	15
Overseas corporation tax adjustment in respect of prior years	**(41)**	(40)	(4)
	(43)	(32)	11
Total current tax from continuing operations	**132**	88	193
Deferred tax:			
UK deferred tax	**269**	27	65
UK deferred tax adjustment in respect of prior years	**6**	2	(2)
	275	29	63
Overseas deferred tax	**64**	208	(1,155)
Overseas deferred tax adjustment in respect of prior years	**9**	14	10
	73	222	(1,145)
Total deferred tax from continuing operations	**348**	251	(1,082)
Total tax charge/(credit) from continuing operations	**480**	339	(889)

Tax charged/(credited) to the consolidated statement of comprehensive income and equity

	2020 £m	2019 £m	2018 £m
Current tax:			
Available-for-sale investments	**–**	–	(11)
Cash flow hedges, cost of hedging and own credit reserve	**–**	3	–
Share-based payments	**–**	–	(3)
Deferred tax:			
Available-for-sale investments	**–**	–	(18)
Investments at fair value through other comprehensive income	**(1)**	–	–
Cash flow hedges, cost of hedging and own credit reserve	**(40)**	(12)	(4)
Remeasurements of pension assets and post-retirement benefit obligations[1]	**(206)**	12	530
Share-based payments	**(3)**	–	1
	(250)	3	495
Total tax recognised in the statements of comprehensive income from continuing operations	**(247)**	3	497
Total tax relating to share-based payments recognised directly in equity from continuing operations	**(3)**	–	(2)
	(250)	3	495

1. Remeasurements of gains on pension assets and post-retirement benefit obligations for the year ended 31 March 2018 includes a deferred tax charge of £281 million arising on the reduction in the US corporation tax rate.

7. Tax continued

The tax charge/(credit) for the year after exceptional items and remeasurements, for the continuing business, is higher (2019: lower tax charge; 2018: lower tax charge) than the standard rate of corporation tax in the UK of 19% (2019: 19%; 2018: 19%):

	Before exceptional items and remeasurements 2020 £m	**After exceptional items and remeasurements 2020 £m**	Before exceptional items and remeasurements 2019 £m	After exceptional items and remeasurements 2019 £m	Before exceptional items and remeasurements 2018 £m	After exceptional items and remeasurements 2018 £m
Profit before tax from continuing operations						
Before exceptional items and remeasurements	**2,346**	**2,346**	2,489	2,489	2,500	2,500
Exceptional items and remeasurements	**–**	**(592)**	–	(648)	–	160
Profit before tax from continuing operations	**2,346**	**1,754**	2,489	1,841	2,500	2,660
Profit before tax from continuing operations multiplied by UK corporation tax rate of 19% (2019: 19%; 2018: 19%)	**446**	**334**	473	350	475	506
Effect of:						
Adjustments in respect of prior years[1]	**(30)**	**(30)**	(36)	(36)	(22)	(14)
Expenses not deductible for tax purposes	**26**	**29**	22	28	20	21
Non-taxable income[2]	**(18)**	**(18)**	(36)	(36)	(16)	(26)
Adjustment in respect of foreign tax rates	**53**	**18**	78	56	153	157
Deferred tax impact of change in UK tax rate	**–**	**192**	(3)	(3)	(7)	(7)
Deferred tax impact of change in US tax rate due to Tax Reform	**–**	**–**	–	–	–	(1,510)
Adjustment in respect of post-tax profits of joint ventures and associates included within profit before tax	**(17)**	**(17)**	(8)	(8)	(8)	(9)
Other[3]	**(27)**	**(28)**	(2)	(12)	(11)	(7)
Total tax charge/(credit) from continuing operations	**433**	**480**	488	339	584	(889)
	%	**%**	%	%	%	%
Effective tax rate – continuing operations	**18.5**	**27.4**	19.6	18.4	23.4	(33.4)

1. Prior year adjustment is primarily due to agreement of prior period tax returns.
2. Includes gains on chargeable disposals which are offset by previously unrecognised capital losses.
3. Other primarily comprises a recognition of deferred tax on previously unrecognised capital losses and claims for land remediation relief.

Factors that may affect future tax charges

On 17 March 2020, the UK government utilised the Provisional Collection of Taxes Act 1968 to substantively enact a reversal of the reduction in the main UK corporation tax rate to 17% with effect from 1 April 2020. The main UK corporation tax rate therefore remains at 19%. Deferred tax balances have been calculated at this rate.

We will continue to monitor the developments driven by Brexit, the OECD's Base Erosion and Profit Shifting (BEPS) project and European Commission initiatives including fiscal aid investigations. At this time, we do not expect this to have any material impact on our future tax charges. Governments across the world including the UK and the US have introduced various stimulus/reliefs for businesses to cope with the impact of the COVID-19 pandemic. We will monitor as the details become available for any that may materially impact our future tax charges.

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

7. Tax continued

Tax included within the statement of financial position

The following are the major deferred tax assets and liabilities recognised, and the movements thereon, during the current and prior reporting periods:

	Accelerated tax depreciation £m	Share-based payments £m	Pensions and other post-retirement benefits £m	Financial instruments £m	Other net temporary differences[1] £m	Total £m
Deferred tax liabilities/(assets)						
At 31 March 2018 (as previously reported)	4,874	(9)	(203)	21	(1,047)	3,636
Impact of transition to IFRS 9 and IFRS 15	19	–	–	(5)	(93)	(79)
At 1 April 2018 (as restated)	4,893	(9)	(203)	16	(1,140)	3,557
Exchange adjustments and other[2]	275	–	(31)	(3)	(76)	165
(Credited)/charged to income statement	309	–	52	6	(124)	243
Charged/(credited) to other comprehensive income and equity	–	–	12	(12)	–	–
At 1 April 2019	5,477	(9)	(170)	7	(1,340)	3,965
Exchange adjustments and other[2]	210	(30)	(28)	(3)	(27)	122
(Credited)/charged to income statement	613	(7)	44	(13)	(287)	350
Charged/(credited) to other comprehensive income and equity	–	(2)	(206)	(46)	1	(253)
At 31 March 2020	**6,300**	**(48)**	**(360)**	**(55)**	**(1,653)**	**4,184**

1. The deferred tax asset of £1,653 million as at 31 March 2020 (2019: £1,340 million) in respect of other net temporary differences primarily relates to net operating losses of £547 million (2019: £423 million) and US environmental provisions of £529 million (2019: £409 million).
2. Exchange adjustments and other comprises foreign exchange arising on translation of the US dollar deferred tax balances. It also includes reclassification of £29 million from other temporary differences to share-based payments.

Deferred tax assets and liabilities are only offset where there is a legally enforceable right of offset and there is an intention to settle the balances net. The deferred tax balances (after offset) for statement of financial position purposes consist solely of deferred tax liabilities of £4,184 million (2019: £3,965 million). This balance is after offset of a deferred tax asset of £547 million (2019: £423 million) which has been recognised in respect of net operating losses (£535 million) and capital losses (£12 million).

Deferred tax assets in respect of some capital losses as well as trading losses and non-trade deficits have not been recognised as their future recovery is uncertain or not currently anticipated. The deferred tax asset not recognised relating to capital losses has increased due to remeasurement of opening deferred tax asset as a result of change in substantively enacted UK corporation tax rate from 17% to 19%. Hence the total deferred tax assets not recognised are as follows:

	2020 £m	2019 £m
Capital losses	**1,626**	1,470
Non-trade deficits	**1**	4
Trading losses	**6**	5

The capital losses arose in the UK on disposal of certain businesses or assets. They are available to carry forward indefinitely but can only be offset against future capital gains. The UK non-trade deficits arose prior to 1 April 2017 and therefore can only be offset against future non-trade profits.

At 31 March 2020 and 31 March 2019, there were no recognised deferred tax liabilities for taxes that would be payable on the unremitted earnings of the Group's subsidiaries or its associates as there are no significant corporation tax consequences of the Group's UK, US or overseas subsidiaries or associates paying dividends to their parent companies. There are also no significant income tax consequences for the Group from the payment of dividends by the Group to its shareholders.

8. Earnings per share (EPS)

EPS is the amount of post-tax profit attributable to each ordinary share. Basic EPS is calculated on profit for the year attributable to equity shareholders divided by the weighted average number of shares in issue during the year. Diluted EPS shows what the impact would be if all outstanding share options were exercised and treated as ordinary shares at year end. The weighted average number of shares is increased by additional shares issued as scrip dividends and reduced by shares repurchased by the Company during the year. The earnings per share calculations are based on profit after tax attributable to equity shareholders of the Company which excludes non-controlling interests.

Adjusted earnings and EPS, which exclude exceptional items and remeasurements, are provided to reflect the business performance sub-totals used by the Company. We have included reconciliations from this additional EPS measure to earnings for both basic and diluted EPS to provide additional detail for these items. For further details of exceptional items and remeasurements, see note 5.

Following the sale of the UK Gas Distribution business on 31 March 2017, National Grid plc returned £3,171 million of proceeds to shareholders through a special dividend, paid on 2 June 2017. In order to maintain the comparability of the Company's share price before and after the special dividend, this was preceded by a share consolidation undertaken on 22 May 2017, replacing every 12 existing ordinary shares with 11 new ordinary shares. The weighted average number of ordinary shares outstanding for the year ended 31 March 2018 includes the effect of both the share consolidation and the special dividend from the date that the special dividend was paid. The associated share buyback programme which began on 2 June 2017 completed in March 2018. Purchased shares are held as treasury shares.

(a) Basic EPS

	Earnings 2020 £m	EPS 2020 pence	Earnings 2019 £m	EPS 2019 pence	Earnings 2018 £m	EPS 2018 pence
Adjusted earnings from continuing operations	1,912	55.2	1,998	59.0	1,915	55.3
Exceptional items and remeasurements after tax from continuing operations	(639)	(18.4)	(499)	(14.7)	1,633	47.2
Earnings from continuing operations	1,273	36.8	1,499	44.3	3,548	102.5
Adjusted earnings from discontinued operations	5	0.2	57	1.7	145	4.2
Exceptional items and remeasurements after tax from discontinued operations	(14)	(0.5)	(45)	(1.4)	(143)	(4.1)
Earnings from discontinued operations	(9)	(0.3)	12	0.3	2	0.1
Total adjusted earnings	1,917	55.4	2,055	60.7	2,060	59.5
Total exceptional items and remeasurements after tax (including discontinued operations)	(653)	(18.9)	(544)	(16.1)	1,490	43.1
Total earnings	1,264	36.5	1,511	44.6	3,550	102.6

	2020 millions	2019 millions	2018 millions
Weighted average number of ordinary shares – basic	3,461	3,386	3,461

(b) Diluted EPS

	Earnings 2020 £m	EPS 2020 pence	Earnings 2019 £m	EPS 2019 pence	Earnings 2018 £m	EPS 2018 pence
Adjusted earnings from continuing operations	1,912	55.0	1,998	58.8	1,915	55.1
Exceptional items and remeasurements after tax from continuing operations	(639)	(18.4)	(499)	(14.7)	1,633	47.0
Earnings from continuing operations	1,273	36.6	1,499	44.1	3,548	102.1
Adjusted earnings from discontinued operations	5	0.1	57	1.7	145	4.2
Exceptional items and remeasurements after tax from discontinued operations	(14)	(0.4)	(45)	(1.4)	(143)	(4.2)
Earnings from discontinued operations	(9)	(0.3)	12	0.3	2	–
Total adjusted earnings	1,917	55.1	2,055	60.5	2,060	59.3
Total exceptional items and remeasurements after tax (including discontinued operations)	(653)	(18.8)	(544)	(16.1)	1,490	42.8
Total earnings	1,264	36.3	1,511	44.4	3,550	102.1

	2020 millions	2019 millions	2018 millions
Weighted average number of ordinary shares – diluted	3,478	3,401	3,476

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

8. Earnings per share (EPS) continued
(c) Reconciliation of basic to diluted average number of shares

	2020 millions	2019 millions	2018 millions
Weighted average number of ordinary shares – basic	**3,461**	3,386	3,461
Effect of dilutive potential ordinary shares – employee share plans	**17**	15	15
Weighted average number of ordinary shares – diluted	**3,478**	3,401	3,476

9. Dividends
Interim dividends are recognised when they become payable to the Company's shareholders. Final dividends are recognised when they are approved by shareholders.

	2020			2019			2018		
	Pence per share	Cash dividend paid £m	Scrip dividend £m	Pence per share	Cash dividend paid £m	Scrip dividend £m	Pence per share	Cash dividend paid £m	Scrip dividend £m
Interim dividend in respect of the current year	**16.57**	**335**	**241**	16.08	450	94	15.49	346	176
Special dividend	**–**	**–**	**–**	–	–	–	84.375	3,171	–
Final dividend in respect of the prior year	**31.26**	**557**	**517**	30.44	710	319	29.10	970	33
	47.83	**892**	**758**	46.52	1,160	413	128.965	4,487	209

The Directors are proposing a final dividend for the year ended 31 March 2020 of 32.0p per share that will absorb approximately £1,123 million of shareholders' equity (assuming all amounts are settled in cash). It will be paid on 19 August 2020 to shareholders who are on the register of members at 3 July 2020 (subject to shareholders' approval at the AGM). A scrip dividend will be offered as an alternative.

Following completion of the sale of the majority interest in UK Gas Distribution, the Company paid a special dividend on 2 June 2017 of 84.375p per existing ordinary share ($5.4224 per existing American Depositary Share). This returned £3,171 million to shareholders. No scrip dividend was offered as an alternative.

10. Discontinued operations and assets held for sale

The results and cash flows of significant assets or businesses sold during the year are shown separately from our continuing operations, and presented within discontinued operations in the income statement and cash flow statement. Assets and businesses are classified as held for sale when their carrying amounts are recovered through sale rather than through continuing use. They only meet the held for sale condition when the assets are ready for immediate sale in their present condition, management is committed to the sale and it is highly probable that the sale will complete within one year. Depreciation ceases on assets and businesses when they are classified as held for sale and the assets and businesses are impaired if the proceeds less sale costs fall short of the carrying value.

In June 2019, the Group sold its remaining 39% interest in Cadent (held through its holding in Quadgas HoldCo Limited (Quadgas)). This interest had been classified as held for sale from 30 June 2018 until the date of disposal, as detailed in the Annual Report and Accounts for the year ended 31 March 2019.

The aggregate carrying value of our investment in Quadgas at the disposal date was £1,956 million. This was comprised of the carrying value of the Group's equity interest in Quadgas of £1,494 million, a shareholder loan to Quadgas of £352 million and a derivative financial asset with a fair value of £110 million. The total sales proceeds were £1,965 million. The gain on disposal was £9 million.

10. Discontinued operations and assets held for sale continued

We considered the disposal of our 39% investment in Quadgas as the final stage of the plan to dispose of our interest in the UK Gas Distribution business first announced in 2015, and accordingly treated the results and cash flows arising from Quadgas as a discontinued operation on the basis that the sale formed the final part of a 'single coordinated plan' to dispose of UK Gas Distribution. As a consequence, we have classified the various elements of income, expense and cash flows within discontinued operations as set out below. Once the assets are treated as 'held for sale', equity accounting ceases for our investment in our associate. We therefore ceased to record our share of profits from 30 June 2018.

The summary income statement for discontinued operations is as follows:

	2020 £m	2019 £m	2018 £m
Revenue	–	–	–
Operating costs[1]	(23)	(1)	(41)
Operating loss	(23)	(1)	(41)
Net finance income	6	23	137
Share of post-tax results of joint ventures and associates[2]	–	(5)	(89)
(Loss)/profit before tax from discontinued operations	(17)	17	7
Tax from discontinued operations	(1)	(5)	(5)
(Loss)/profit after tax from discontinued operations	(18)	12	2
Gain on disposal	9	–	–
Total (loss)/profit after tax from discontinued operations[3]	(9)	12	2

1. Operating costs for the year ended 31 March 2020 relate to final transaction costs and other expenses in relation to Quadgas. Operating costs of £41 million for the year ended 31 March 2018 related to amounts in respect of the disposal of the UK Gas Distribution business, primarily relating to the completion accounts settlement in November 2017.
2. For the year ended 31 March 2019, the amount presented is the net of £43 million impairment charge against the investment in Quadgas (see note 16) and £38 million share of Quadgas post-tax profits recognised prior to classification as held for sale.
3. Of the total profit after tax from discontinued operations, the £23 million of operating expenses and the £9 million gain on disposal are treated as exceptional. For the year ended 31 March 2019, the £43 million impairment charge against the investment in Quadgas, net operating costs of £1 million and the tax thereon are classified as exceptional items.

The summary statement of comprehensive income for discontinued operations is as follows:

	2020 £m	2019 £m	2018 £m
(Loss)/profit after tax from discontinued operations	(9)	12	2
Other comprehensive income			
Items that will never be reclassified to profit or loss:			
Share of other comprehensive income of associate, net of tax	–	36	142
Total items from discontinued operations that will never be reclassified to profit or loss	–	36	142
Items that may be reclassified subsequently to profit or loss:			
Net gains in respect of cash flow hedges	6	–	–
Share of other comprehensive income of associate, net of tax	–	–	5
Total items from discontinued operations that may be reclassified subsequently to profit or loss	6	–	5
Other comprehensive income for the year, net of tax from discontinued operations	6	36	147
Total comprehensive (loss)/income for the year from discontinued operations	(3)	48	149

The summary cash flows for discontinued operations are as follows:

Cash flows used in operating activities of £97 million (2019: £71 million; 2018: £207 million) primarily related to cash outflows in respect of voluntary contributions totalling £66 million paid to the Warm Homes Fund, the utilisation of provisions and the payment of the final transaction fees incurred in the period. The utilisation of provisions in 2018 mainly related to payments of professional fees in respect of the disposal of the UK Gas Distribution business.

Cash inflows from investing activities of £6 million (2019: £156 million; 2018: £171 million) were comprised of dividends received and interest received on the shareholder loan.

There were no cash flows for financing activities in 2020 or 2019. In 2018, net cash flows used in financing activities were £231 million for the settlement of RPI swaps relating to the final stages of the Group-wide liability management programme executed as part of sale process of the UK Gas Distribution business.

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

11. Goodwill

Goodwill represents the excess of what we paid to acquire businesses over the fair value of their net assets at the acquisition date. We assess whether goodwill is recoverable each year by performing an impairment review.

Goodwill is recognised as an asset and is not amortised, but is tested for impairment annually or more frequently if events or changes in circumstances indicate a potential impairment. Any impairment is recognised immediately in the income statement and is not subsequently reversed.

Goodwill and fair value adjustments arising on the acquisition of a foreign entity are treated as assets and liabilities of the foreign entity and translated at the closing exchange rate.

Goodwill is allocated to cash-generating units and this allocation is made to those cash-generating units that are expected to benefit from the business combination in which the goodwill arose.

Impairment is recognised where there is a difference between the carrying value of the cash-generating unit and the estimated recoverable amount of the cash-generating unit to which that goodwill has been allocated. Any impairment loss is first allocated to the carrying value of the goodwill and then to the other assets within the cash-generating unit. Recoverable amount is defined as the higher of fair value less costs to sell and estimated value-in-use at the date the impairment review is undertaken.

Value-in-use represents the present value of expected future cash flows, discounted using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted.

Impairments are recognised in the income statement and are disclosed separately.

	Total £m
Net book value at 1 April 2018	5,444
Exchange adjustments	425
Net book value at 31 March 2019	5,869
Additions	81
Exchange adjustments	283
Net book value at 31 March 2020	**6,233**

Additions in the period relate to the goodwill recognised on the acquisition of Geronimo. Refer to note 38 for details.

There is no significant accumulated impairment charge as at 31 March 2020 or 31 March 2019.

The amounts disclosed above as at 31 March 2020 relate to the following cash-generating units: New York £3,544 million (2019: £3,382 million); Massachusetts £1,325 million (2019: £1,264 million); Rhode Island £493 million (2019: £470 million); Federal £790 million (2019: £753 million); and Geronimo £81 million (2019: £nil).

Goodwill is reviewed annually for impairment and the recoverability of goodwill has been assessed by comparing the carrying amount of our operations described above (our cash-generating units) with the expected recoverable amount on a value-in-use basis. In each assessment, the value-in-use has been calculated based on five-year plan projections that incorporate our best estimates of future cash flows, customer rates, costs (including changes in commodity prices), future prices and growth. Such projections reflect our current regulatory rate plans taking into account regulatory arrangements to allow for future rate plan filings and recovery of investment. Our plans have proved to be reliable guides in the past and the Directors believe the estimates are appropriate.

The future economic growth rate used to extrapolate projections beyond five years is 2.1% (2019: 2.2%). The growth rate has been determined having regard to data on projected growth in US real gross domestic product (GDP). Based on the position of our business in the underlying US economy, it is appropriate for the terminal growth rate to be based upon the overall growth in real GDP and, given the nature of our operations, to extend over a long period of time. Cash flow projections have been discounted to reflect the time value of money, using a post-tax discount rate of 4.5% (2019: 5.3%). The equivalent pre-tax discount rate is 4.5% (2019: 5.3%) as tax is assumed to be a pass-through cost to our customers, recoverable under our rate plans. The discount rate represents the estimated weighted average cost of capital of these operations.

In reaching this conclusion, the Directors considered the manner in which Tax Reform has impacted the Group and its future cash flows. In our US business, we are subject to federal and state taxes; however, our regulatory arrangements require us to pass this cost back to our customers. The reduction in the corporation tax rate in 2018 from 35% to 21% is being reflected through lower bills to customers, reducing our revenues (and tax costs) in future periods. For the purposes of the goodwill impairment exercise, we have reflected the lower billing levels through lower revenue forecasts as well as lower tax charges.

Historically, as a result of tax losses arising from claiming accelerated depreciation allowances, we have not paid substantial amounts of tax in the US. Accordingly, for IFRS purposes, we have recognised significant deferred tax liabilities in respect of these accelerated allowances. In accounting terms, Tax Reform triggered the remeasurement of our deferred tax liabilities from 35% to 21% for the year ended 31 March 2018. However, the impact for our US business is that the amounts we have previously received from customers assuming a 35% federal tax rate instead of a 21% federal tax rate must now be returned to customers over a period of up to 50 years. Offsetting this change is the additional income we earn, since the rate base grows faster. (Our rate base is net of deferred tax liabilities, which, as a result of Tax Reform, is now smaller.) In overall terms, the outcome is economically neutral.

In assessing the carrying value of goodwill, we have sensitised our forecasts to factor in a reduction in revenues and lower tax costs into our cash flow forecasts, but we have not reflected the impact of additional rate base growth on future earnings. While it is possible that a key assumption in the calculation could change, the Directors believe that no reasonably foreseeable change would result in an impairment of goodwill, in view of the long-term nature of the key assumptions and the margin by which the estimated value-in-use exceeds the carrying amount. This remains the case even after taking into account the short-term effects of COVID-19, the most significant of which is an increase in bad debt charges in the short-term.

12. Other intangible assets

Other intangible assets include software which is written down (amortised) over the period we expect to receive a benefit from the asset.

Identifiable intangible assets are recorded at cost less accumulated amortisation and any provision for impairment. Other intangible assets are tested for impairment only if there is an indication that the carrying value of the assets may have been impaired. Impairments of assets are calculated as the difference between the carrying value of the asset and the recoverable amount, if lower. Where such an asset does not generate cash flows that are independent from other assets, the recoverable amount of the cash-generating unit to which that asset belongs is estimated. Impairments are recognised in the consolidated income statement and are disclosed separately. Any assets which suffered impairment in a previous period are reviewed for possible reversal of the impairment at each reporting date.

Internally generated intangible assets, such as software, are recognised only if: i) an asset is created that can be identified; ii) it is probable that the asset created will generate future economic benefits; and iii) the development cost of the asset can be measured reliably. Where no internally generated intangible asset can be recognised, development expenditure is recorded as an expense in the period in which it is incurred.

Other intangible assets are amortised on a straight-line basis over their estimated useful economic lives. Amortisation periods for intangible assets are:

	Years
Software	1 to 10

	Software £m
Cost at 1 April 2018	1,797
Exchange adjustments	70
Additions	306
Disposals	(15)
Reclassifications[1]	10
Cost at 31 March 2019	2,168
Exchange adjustments	63
Additions	352
Disposals	–
Reclassifications[1]	–
Cost at 31 March 2020	2,583
Accumulated amortisation at 1 April 2018	(898)
Exchange adjustments	(26)
Amortisation charge for the year	(175)
Accumulated amortisation of disposals	15
Accumulated amortisation at 31 March 2019	(1,084)
Exchange adjustments	(28)
Amortisation charge for the year	(176)
Accumulated amortisation of disposals	–
Accumulated amortisation at 31 March 2020	(1,288)
Net book value at 31 March 2020[2]	**1,295**
Net book value at 31 March 2019	1,084

1. Reclassifications includes amounts transferred from property, plant and equipment (see note 13).
2. Included in software is £69 million (2019: £116 million) relating to the US Enterprise Resource Planning system, which still has a remaining amortisation period of three years.

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

13. Property, plant and equipment

The following note shows the physical assets controlled by us. The cost of these assets primarily represents the amount initially paid for them. This includes both their purchase price and the construction and other costs associated with getting them ready for operation. A depreciation expense is charged to the income statement to reflect annual wear and tear and the reduced value of the asset over time. Depreciation is calculated by estimating the number of years we expect the asset to be used (useful economic life or UEL) and charging the cost of the asset to the income statement equally over this period.

We operate an energy networks business and therefore have a significant physical asset base. We continue to invest in our networks to maintain reliability, create new customer connections and ensure our networks are flexible and resilient. Our business plan envisages these additional investments will be funded through a mixture of cash generated from operations and the issue of new debt.

Property, plant and equipment is recorded at cost, less accumulated depreciation and any impairment losses. Cost includes the purchase price of the asset; any payroll and finance costs incurred which are directly attributable to the construction of property, plant and equipment; and the cost of any associated asset retirement obligations.

Property, plant and equipment includes assets in which the Group's interest comprises legally protected statutory or contractual rights of use. Additions represent the purchase or construction of new assets, including capital expenditure for safety and environmental assets, and extensions to, enhancements to, or replacement of, existing assets. All costs associated with projects or activities which have not been fully commissioned at the period end are classified within assets in the course of construction. No depreciation is provided on freehold land or assets in the course of construction.

Other items of property, plant and equipment are depreciated, on a straight-line basis, at rates estimated to write off their book values over their estimated useful economic lives. In assessing estimated useful economic lives, consideration is given to any contractual arrangements and operational requirements relating to particular assets. The assessments of estimated useful economic lives and residual values of assets are performed annually.

Unless otherwise determined by operational requirements, the depreciation periods for the principal categories of property, plant and equipment are, in general, as shown in the table below split between the UK and US, along with the weighted average remaining UEL for each class of property, plant and equipment (which is calculated by applying the annual depreciation charge per class of asset by the net book value of that class of asset).

	Years		
	UK	US	Weighted average remaining UEL
Freehold and leasehold buildings	up to 60	up to 100	26
Plant and machinery:			
Electricity transmission plant and wires	10 to 100	45 to 80	40
Electricity distribution plant	n/a	35 to 85	37
Electricity generation plant	15 to 40	20 to 93	21
Interconnector plant and other	5 to 60	8 to 50	23
Gas plant – mains, services and regulating equipment	10 to 65	47 to 95	49
Gas plant – storage	5 to 40	12 to 65	13
Gas plant – meters	7 to 30	14 to 65	18
Motor vehicles and office equipment	up to 10	up to 26	5

Gas asset lives

The role that gas networks play in the pathway to achieving the greenhouse gas emissions reductions targets set in the jurisdictions in which we operate is currently uncertain. However, we believe the gas assets which we own and operate today will continue to have a crucial role in maintaining security, reliability and affordability of energy beyond 2050, although the scale and purpose for which the networks will be used is dependent on technological developments and policy choices of governments and regulators.

- In the UK, the gas mains, services and regulating assets relating to the National Transmission System (NTS) were subject to a detailed review in January 2019. The most material components of these are our pipeline assets, which are due to be fully depreciated by 2070, with other assets being depreciated over various periods between now and then. That review was undertaken prior to the UK enacting legislation committing to net zero by 2050, but considered scenarios which included an extension of the emissions reduction targets (80% emissions reduction target at the time of the report). The review concluded that the most likely outcome was for the NTS network assets to remain in use beyond 2050, including in those scenarios where the greenhouse gas emissions of gas networks were largely eliminated.

  We do not believe developments since January 2019 would change the conclusions of this review.
- With respect to our US gas distribution assets, asset lives are assessed as part of detailed depreciation studies completed as part of each separate rate proceeding. Depreciation studies consider the physical condition of assets and the expected operational life of an asset. We believe these assessments are our best estimate of the UEL of our gas network assets in the US.
- The weighted average remaining UEL for our US gas distribution fixed asset base is circa 50 years, however a sizeable proportion of our assets are assumed to have UELs which extend beyond 2080. We continue to believe the lives identified by rate proceedings are the best estimate of the assets' UELs, although we continue to keep this assumption under review as we learn more about possible future pathways towards net zero. Whilst the targets, goals and ambitions have now been formalised in legislation in the states in which we operate, there is widespread recognition that work needs to be done to define the possible future decarbonisation pathways.
- Asset depreciation lives feed directly into our regulatory recovery mechanisms, such that any shortening of asset recovery periods as agreed with regulators should be recoverable through future rates, subject to agreement, over future periods, as part of wider considerations around ensuring the continuing affordability of gas in our service territories.

13. Property, plant and equipment continued

Given the uncertainty described relating to the UELs of our gas assets, below we provide a sensitivity on the depreciation charge for our UK and US regulated segments were a shorter UEL presumed:

	Increase in depreciation expense	
	UK regulated £m	US regulated £m
UELs limited to 2050	37	151
UELs limited to 2060	13	66
UELs limited to 2070	–	26

Note that this sensitivity calculation excludes any assumptions regarding residual value for our asset base and the effect shortening asset depreciation lives would expect to have on our regulatory recovery mechanisms.

Items within property, plant and equipment are tested for impairment only if there is some indication that the carrying value of the assets may have been impaired. Impairments of assets are calculated as the difference between the carrying value of the asset and the recoverable amount, if lower. Where such an asset does not generate cash flows that are independent from other assets, the recoverable amount of the cash-generating unit to which that asset belongs is estimated. Impairments are recognised in the income statement and if immaterial are included within the depreciation charge for the year.

	Land and buildings £m	Plant and machinery £m	Assets in the course of construction[1] £m	Motor vehicles and office equipment £m	Total £m
Cost at 1 April 2018	2,930	49,374	4,273	857	57,434
Exchange adjustments	114	2,001	70	47	2,232
Additions	34	391	3,533	57	4,015
Disposals	(35)	(357)	(159)	(44)	(595)
Reclassifications[2]	295	2,974	(3,292)	13	(10)
Cost at 1 April 2019 (as previously reported)	3,338	54,383	4,425	930	63,076
Right-of-use assets recognised on transition to IFRS 16[3]	381	67	–	20	468
Cost at 1 April 2019 (as restated)	3,719	54,450	4,425	950	63,544
Exchange adjustments	98	1,511	53	33	1,695
Additions	130	464	4,029	104	4,727
Disposals	(79)	(486)	(9)	(65)	(639)
Reclassifications[2,4]	29	4,303	(4,433)	14	(87)
Cost at 31 March 2020	3,897	60,242	4,065	1,036	69,240
Accumulated depreciation at 1 April 2018	(674)	(16,398)	–	(509)	(17,581)
Exchange adjustments	(19)	(501)	–	(25)	(545)
Depreciation charge for the year	(93)	(1,229)	(150)	(101)	(1,573)
Disposals	7	335	150	44	536
Reclassifications[2]	1	(1)	–	–	–
Accumulated depreciation at 1 April 2019	(778)	(17,794)	–	(591)	(19,163)
Exchange adjustments	(16)	(372)	–	(20)	(408)
Depreciation charge for the year	(92)	(1,252)	–	(120)	(1,464)
Disposals	36	464	–	58	558
Reclassifications[2]	3	(7)	–	11	7
Accumulated depreciation at 31 March 2020	(847)	(18,961)	–	(662)	(20,470)
Net book value at 31 March 2020	**3,050**	**41,281**	**4,065**	**374**	**48,770**
Net book value at 31 March 2019	2,560	36,589	4,425	339	43,913

1. In 2019, included within disposals are UK nuclear connections development costs of £150 million (before £13 million of termination income) which were written off. See note 5 for further details.
2. Represents amounts transferred between categories, (to)/from other intangible assets (see note 12), reclassifications from inventories and reclassifications between cost and accumulated depreciation.
3. £468 million of additional right-of-use assets were recognised on transition to IFRS 16 on 1 April 2019. See note 37 for details.
4. Comprises an £87 million reduction in gross cost of assets in the course of construction in our UK Electricity Transmission business for costs previously capitalised and accrued as due to a supplier that are no longer payable.

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

13. Property, plant and equipment continued

Right-of-use assets

The Group leases various properties, land, equipment and cars. With effect from 1 April 2019, new lease arrangements entered into 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 (see note 37). The right-of-use asset and associated lease liability arising from a lease are initially measured at the present value of the lease payments expected over the lease term, plus any other costs. The discount rate applied is the rate implicit in the lease or, if that is not available, then the incremental rate of borrowing for a similar term and similar security. The lease term takes account of exercising any extension options that are at our option if we are reasonably certain to exercise the option and any lease termination options unless we are reasonably certain not to exercise the option. Each lease payment is allocated between the liability and finance cost. The finance cost is charged to the income statement over the lease period using the effective interest rate method. The right-of-use asset is depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis. For short-term leases (lease term of 12 months or less) and leases of low-value assets (such as computers), the Group continues to recognise a lease expense on a straight-line basis.

Included within the net book value of property, plant and equipment at 31 March 2020 are right-of-use assets, split as follows:

	Land and buildings £m	Plant and machinery £m	Assets in the course of construction £m	Motor vehicles and office equipment £m	Total £m
Net book value at 31 March 2020	364	95	–	225	684
Additions	10	1	–	73	84
Depreciation charge for the year ended 31 March 2020	(29)	(16)	–	(72)	(117)

The following balances have been included in the income statement for the year ended 31 March 2020 in respect of right-of-use assets:

	Total £m
Included within net finance income and costs:	
Interest expense on lease liabilities	(26)
Included within revenue:	
Lease income	35
Included within operating expenses:	
Expenses relating to low-value leases	(12)

The associated lease liabilities are disclosed in note 21.

The total of future minimum sub lease payments expected to be received under non-cancellable sub leases is £94 million (2019: £86 million).

	2020 £m	2019 £m
Information in relation to property, plant and equipment		
Capitalised interest included within cost	**2,118**	1,995
Contributions to cost of property, plant and equipment included within:		
Trade and other payables	**84**	87
Non-current liabilities	**428**	372
Contract liabilities – current	**76**	61
Contract liabilities – non-current	**1,082**	933

14. Other non-current assets

Other non-current assets include assets that do not fall into any other non-current asset category (such as goodwill or property, plant and equipment) where the benefit to be received from the asset is not due to be received until after 31 March 2021.

	2020 £m	2019 £m
Other receivables	**35**	28
Non-current tax assets	**65**	56
Prepayments	**19**	7
Accrued income[1]	**235**	173
	354	264

1. Includes accrued income in relation to property sales to the St William joint venture.

15. Financial and other investments

The Group holds a range of financial and other investments. These investments include short-term money funds, quoted investments in equities or bonds of other companies, long-term loans to our joint ventures, investments in our venture capital portfolio (National Grid Partners), bank deposits with a maturity of greater than three months, and cash balances that cannot be readily used in operations, principally collateral pledged against derivative holdings.

The Group has reported four categories of financial investments, and the classification for each investment is dependent on its contractual cash flows and the business model it is held under and recognised on trade date.

Debt instruments that have contractual cash flows that are solely payments of principal and interest, and which are held within a business model whose objective is to collect contractual cash flows, are held at amortised cost. This category includes our long-term loans to joint ventures as well as receivables in relation to deposits and collateral.

Debt investments that have contractual cash flows that are solely payments of principal and interest, and which are held within a business model whose objective is both to collect the contractual cash flows and to sell the debt instruments, are measured at fair value through other comprehensive income. On disposal, any realised gains or losses are recycled to the income statement in investment income (see note 6). Other investments include insurance contracts, measured at fair value, and held to back the present value of unfunded obligations in note 25.

The Group has elected to measure equity instruments at fair value through other comprehensive income that are shares held as part of a portfolio of financial instruments which back some long-term employee liabilities. They are not held for trading and so recognising gains and losses on these investments in profit and loss would not be representative of performance in the year. On disposal, any realised gains and losses are transferred to retained profits (see note 28).

Other financial investments are subsequently measured at fair value through profit and loss. This primarily comprises our money market funds, insurance company fund investments and corporate venture capital investments held by National Grid Partners.

Financial and other investments are initially recognised on trade date. Subsequent to initial recognition, the fair values of financial assets that are quoted in active markets are based on bid prices. When independent prices are not available, fair values are determined using valuation techniques used by the relevant markets. The techniques use observable market data to the extent available.

	2020 £m	2019 £m
Non-current		
Debt and other investments at fair value through other comprehensive income	**352**	343
Equity investments at fair value through other comprehensive income	**83**	93
Investments at fair value through profit and loss	**108**	62
Loans to joint ventures[1]	**–**	169
	543	667
Current		
Investments at fair value through profit and loss	**1,278**	1,311
Financial assets at amortised cost	**720**	670
	1,998	1,981
	2,541	2,648
Financial and other investments include the following:		
Investments in short-term money funds[2]	**978**	969
Insurance company fund investments[3]	**300**	342
Equities[4]	**83**	93
Bonds[4]	**132**	122
Cash surrender value of life insurance policies[4]	**220**	221
Loans to joint ventures	**–**	169
National Grid Partners and other investments[5]	**108**	62
Restricted balances:		
Collateral[6]	**685**	637
Other	**35**	33
	2,541	2,648

1. As at 31 March 2019, this related to a loan to a joint venture, which was measured at amortised cost.
2. Includes £1 million (2019: £6 million) held as insurance company fund investments and £26 million (2019: £22 million) US non-qualified plan investments, and therefore restricted.
3. Includes restricted amounts of £300 million (2019: £342 million) held as insurance company fund investments.
4. Includes restricted amounts of £435 million (2019: £436 million) relating to US non-qualified plan investments.
5. This includes a series of small unquoted equity investments held by National Grid Partners of £97 million (2019: £51 million).
6. Refers to collateral placed with counterparties with whom we have entered into a credit support annex to the ISDA (International Swaps and Derivatives Association) Master Agreement.

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

15. Financial and other investments continued

Fair value through profit and loss and fair value through other comprehensive income investments are recorded at fair value. The carrying value of current financial assets at amortised cost approximates their fair values, primarily due to short-dated maturities. The carrying value of the non-current loans to joint ventures approximates their fair values as at 31 March 2019. The exposure to credit risk at the reporting date is the fair value of the financial investments. For further information on our credit risk, refer to note 32(a).

For the purposes of impairment assessment, the investments in bonds are considered to be low risk as they are managed with an investment remit to hold investment grade securities; life insurance policies are held with regulated insurance companies; and deposits, collateral receivable and other financial assets at amortised cost are investment grade. All financial assets held at fair value through other comprehensive income or amortised cost are therefore considered to have low credit risk and have a loss allowance equal to 12-month expected credit losses.

In determining the expected credit losses for these assets, some or all of the following information has been considered: credit ratings, the financial position of counterparties, the future prospects of the relevant industries and general economic forecasts.

No fair value through other comprehensive income or amortised cost financial assets have had modified cash flows during the period. There has been no change in the estimation techniques or significant assumptions made during the year in assessing the loss allowance for these financial assets. There were no significant movements in the gross carrying value of financial assets during the year that contribute to changes in the loss allowance. No collateral is held in respect of any of the financial investments in the above table. No balances are more than 30 days past due, and no balances were written off during the year.

16. Investments in joint ventures and associates

Investments in joint ventures and associates represent businesses we do not control but over which we exercise joint control or significant influence. They are accounted for using the equity method. A joint venture is an arrangement established to engage in economic activity, which the Group jointly controls with other parties and has rights to the net assets of the arrangement. An associate is an entity which is neither a subsidiary nor a joint venture, but over which the Group has significant influence.

	2020			2019		
	Associates £m	**Joint ventures £m**	**Total £m**	Associates £m	Joint ventures £m	Total £m
Share of net assets at 1 April	**291**	**317**	**608**	1,807	361	2,168
Exchange adjustments	**20**	**12**	**32**	17	(6)	11
Additions	**16**	**156**	**172**	58	85	143
Capitalisation of shareholder loan to Nemo Link Limited	**–**	**176**	**176**	–	–	–
Impairment charge against investment in Quadgas	**–**	**–**	**–**	(43)	–	(43)
Transfer of interest in Quadgas to assets held for sale	**–**	**–**	**–**	(1,625)	–	(1,625)
Share of post-tax results for the year	**40**	**47**	**87**	67	11	78
Share of other comprehensive income of associates, net of tax	**1**	**–**	**1**	37	–	37
Dividends received	**(41)**	**(34)**	**(75)**	(38)	(30)	(68)
Other movements[1]	**14**	**(20)**	**(6)**	11	(104)	(93)
Share of net assets at 31 March	**341**	**654**	**995**	291	317	608

1. Other movements on joint ventures relate to reducing the carrying value of the investment in St William Homes LLP to reflect deferred income we expect to recognise over the next 10 years.

A list of joint ventures and associates including the name and proportion of ownership is provided in note 34. Transactions with and outstanding balances with joint ventures and associates are shown in note 31. The joint ventures and associates have no significant contingent liabilities to which the Group is exposed, and the Group has no significant contingent liabilities in relation to its interests in the joint ventures and associates. The Group has capital commitments of £240 million (2019: £18 million) in relation to joint ventures.

16. Investments in joint ventures and associates continued

At 31 March 2020, the Group had three material joint ventures, being its 50% equity stakes in BritNed and Nemo Link Limited (Nemo) and its 51% stake in Emerald Energy Venture LLC (Emerald). The Group has one material associate, being its 26.25% investment in Millennium Pipeline Company LLC. BritNed is a joint venture with the Dutch transmission system operator, TenneT, and operates the subsea electricity link between Great Britain and the Netherlands, commissioned in 2011. Nemo is a joint venture with the Belgian transmission operator, Elia, and is a subsea electricity interconnector between the UK and Belgium, which became operational on 31 January 2019. BritNed and Nemo have reporting periods ending on 31 December with monthly management reporting information provided to National Grid. Emerald is a joint venture with Washington State Investment Board and builds and operates wind and solar assets. Emerald was acquired on 11 July 2019. Millennium Pipeline Company LLC is an associate that owns a natural gas pipeline from southern New York to the Lower Hudson Valley. Summarised financial information as at 31 March, together with the carrying amount of the investments, is as follows:

	BritNed Development Limited		Millennium Pipeline Company LLC		Nemo Link Limited		Emerald Energy Venture LLC
	2020 £m	2019 £m	**2020 £m**	2019 £m	**2020 £m**	2019 £m	**2020 £m**
Statement of financial position							
Non-current assets	**399**	370	**971**	937	**582**	537	**435**
Cash and cash equivalents	**54**	59	**33**	35	**26**	47	**66**
All other current assets	**4**	2	**26**	22	**5**	3	**6**
Non-current liabilities	**(45)**	(11)	**(315)**	(326)	**(29)**	2	**(232)**
Current liabilities	**(16)**	(28)	**(43)**	(84)	**(10)**	(375)	**(2)**
Net assets	**396**	392	**672**	584	**574**	214	**273**
Group's ownership interest in joint venture/associate	**198**	196	**176**	153	**287**	107	**139**
Group adjustment: elimination of profits on sales to joint venture	**–**	–	**–**	–	**–**	–	**(10)**
Carrying amount of the Group's investment	**198**	196	**176**	153	**287**	107	**129**

	BritNed Development Limited		Millennium Pipeline Company LLC		Nemo Link Limited		Emerald Energy Venture LLC
	2020 £m	2019 £m	**2020 £m**	2019 £m	**2020 £m**	2019 £m	**2020 £m**
Income statement							
Revenue	**80**	87	**206**	166	**45**	12	**19**
Depreciation and amortisation	**(14)**	(13)	**(46)**	(34)	**(23)**	(4)	**(7)**
Other costs	**(10)**	(10)	**(20)**	(24)	**(8)**	(4)	**(10)**
Operating profit	**56**	64	**140**	108	**14**	4	**2**
Net interest expense	**–**	–	**(22)**	(11)	**–**	–	**(3)**
Profit before tax	**56**	64	**118**	97	**14**	4	**(1)**
Income tax expense	**(10)**	(10)	**–**	–	**(2)**	–	**–**
Profit for the year	**46**	54	**118**	97	**12**	4	**(1)**
Group's share of profit/(loss)	**23**	27	**31**	25	**6**	2	**(1)**
Group adjustment: Tax charge	**–**	–	**(9)**	–	**–**	–	**–**
Group's share of post-tax results for the year	**23**	27	**22**	25	**6**	2	**(1)**

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

17. Derivative financial instruments

Derivatives are financial instruments that derive their value from the price of an underlying item such as interest rates, foreign exchange rates, credit spreads, commodities, equities or other indices. In accordance with policies approved by the Board, derivatives are transacted generally to manage exposures to fluctuations in interest rates, foreign exchange rates and commodity prices. Our derivatives balances comprise two broad categories:

- financing derivatives managing our exposure to interest rates and foreign exchange rates. Specifically, we use these derivatives to manage our financing portfolio, holdings in foreign operations and contractual operational cash flows; and
- commodity contract derivatives managing our US customers' exposure to price and supply risks. Some forward contracts for the purchase of commodities meet the definition of derivatives and are included here. We also enter into derivative financial instruments linked to commodity prices, including index futures, options and swaps. These are used to manage market price volatility.

Derivatives are initially recognised at fair value and subsequently remeasured to fair value at each reporting date. Changes in fair values are recorded in the period they arise, in either the consolidated income statement or other comprehensive income as required by IFRS 9. Where the gains or losses recorded in the income statement arise from changes in the fair value of derivatives to the extent that hedge accounting is not applied or is not fully effective, these are recorded as remeasurements, detailed in notes 5 and 6. Where the fair value of a derivative is positive it is carried as a derivative asset, and where negative as a derivative liability.

We calculate the fair value of derivative financial instruments by taking the present value of future cash flows, primarily incorporating market observable inputs. The various inputs include foreign exchange spot and forward rates, yield curves of the respective currencies, currency basis spreads between the respective currencies, interest rate and inflation curves, the forward rate curves of underlying commodities, and for those positions that are not fully cash collateralised the credit quality of the counterparties.

Certain clauses embedded in non-derivative financial instruments or other contracts are presented as derivatives because they impact the risk profile of their host contracts and they are deemed to have risks or rewards not closely related to those host contracts.

Further information on how derivatives are valued and used for risk management purposes is presented in note 32.

Information on commodity contracts and other commitments not meeting the definition of derivatives is presented in note 30.

The fair values of derivatives by category are as follows:

	2020			2019		
	Assets £m	**Liabilities £m**	**Total £m**	Assets £m	Liabilities £m	Total £m
Financing derivatives	**1,267**	**(1,134)**	**133**	1,052	(1,084)	(32)
Commodity contract derivatives	**75**	**(200)**	**(125)**	101	(99)	2
	1,342	**(1,334)**	**8**	1,153	(1,183)	(30)

(a) Financing derivatives
The fair values of financing derivatives by type are as follows:

	2020			2019		
	Assets £m	**Liabilities £m**	**Total £m**	Assets £m	Liabilities £m	Total £m
Interest rate swaps	**556**	**(337)**	**219**	539	(384)	155
Cross-currency interest rate swaps	**643**	**(514)**	**129**	470	(443)	27
Foreign exchange forward contracts[1]	**58**	**(39)**	**19**	41	(41)	–
Inflation-linked swaps	**–**	**(234)**	**(234)**	–	(214)	(214)
Equity options	**10**	**(10)**	**–**	2	(2)	–
	1,267	**(1,134)**	**133**	1,052	(1,084)	(32)

1. Included within the foreign exchange forward contracts balance is £(3) million (2019: £32 million) of derivatives in relation to hedging of capital expenditure.

17. Derivative financial instruments continued

(a) Financing derivatives continued

The maturity profile of financing derivatives is as follows:

	2020			2019		
	Assets £m	**Liabilities £m**	**Total £m**	Assets £m	Liabilities £m	Total £m
Current						
Less than 1 year	**62**	**(254)**	**(192)**	56	(282)	(226)
	62	**(254)**	**(192)**	56	(282)	(226)
Non-current						
In 1 to 2 years	**480**	**(51)**	**429**	19	(193)	(174)
In 2 to 3 years	**13**	**(5)**	**8**	416	(1)	415
In 3 to 4 years	**20**	**(28)**	**(8)**	11	–	11
In 4 to 5 years	**31**	**(109)**	**(78)**	20	(14)	6
More than 5 years	**661**	**(687)**	**(26)**	530	(594)	(64)
	1,205	**(880)**	**325**	996	(802)	194
	1,267	**(1,134)**	**133**	1,052	(1,084)	(32)

The notional contract[1] amounts of financing derivatives by type are as follows:

	2020 £m	2019 £m
Interest rate swaps	**(3,101)**	(6,299)
Cross-currency interest rate swaps	**(8,097)**	(6,700)
Foreign exchange forward contracts	**(3,284)**	(2,937)
Inflation-linked swaps	**(500)**	(500)
Equity options	**(800)**	(800)
	(15,782)	(17,236)

1. The notional contract amounts of derivatives indicate the gross nominal value of transactions outstanding at the reporting date.

(b) Commodity contract derivatives

The fair values of commodity contract derivatives by type are as follows:

	2020			2019		
	Assets £m	**Liabilities £m**	**Total £m**	Assets £m	Liabilities £m	Total £m
Commodity purchase contracts accounted for as derivative contracts						
Forward purchases of gas	**64**	**(108)**	**(44)**	66	(78)	(12)
Derivative financial instruments linked to commodity prices						
Electricity swaps	**4**	**(83)**	**(79)**	29	(19)	10
Gas swaps	**7**	**(8)**	**(1)**	5	(1)	4
Gas options	**–**	**(1)**	**(1)**	1	(1)	–
	75	**(200)**	**(125)**	101	(99)	2

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

17. Derivative financial instruments continued

(b) Commodity contract derivatives continued

The maturity profile of commodity contract derivatives is as follows:

	2020			2019		
	Assets £m	**Liabilities £m**	**Total £m**	Assets £m	Liabilities £m	Total £m
Current						
Less than one year	**31**	**(126)**	**(95)**	52	(68)	(16)
	31	**(126)**	**(95)**	52	(68)	(16)
Non-current						
In 1 to 2 years	**8**	**(35)**	**(27)**	14	(9)	5
In 2 to 3 years	**9**	**(24)**	**(15)**	9	(8)	1
In 3 to 4 years	**8**	**(12)**	**(4)**	6	(4)	2
In 4 to 5 years	**7**	**(1)**	**6**	6	(4)	2
More than 5 years	**12**	**(2)**	**10**	14	(6)	8
	44	**(74)**	**(30)**	49	(31)	18
	75	**(200)**	**(125)**	101	(99)	2

The notional quantities of commodity contract derivatives by type are as follows:

	2020	2019
Forward purchases of gas[1]	**102m Dth**	52m Dth
Electricity swaps	**12,836 GWh**	12,848 GWh
Electricity options	**0 GWh**	10,444 GWh
Gas swaps	**89m Dth**	87m Dth
Gas options	**26m Dth**	34m Dth

1. Forward gas purchases have terms up to four years (2019: two years). The contractual obligations under these contracts are £128 million (2019: £108 million).

18. Inventories and current intangible assets

Inventories represent assets that we intend to use in order to generate revenue in the short term, either by selling the asset itself (for example, fuel stocks) or by using it to fulfil a service to a customer or to maintain our network (consumables).

Inventories are stated at the lower of weighted average cost and net realisable value. Where applicable, cost comprises direct materials and direct labour costs as well as those overheads that have been incurred in bringing the inventories to their present location and condition.

Emission allowances, principally relating to the emissions of carbon dioxide in the UK and sulphur and nitrous oxides in the US, are recorded as intangible assets within current assets, and they are initially recorded at cost and subsequently at the lower of cost and net realisable value. A liability is recorded in respect of the obligation to deliver emission allowances, and emission charges are recognised in the income statement in the period in which emissions are made.

	2020 £m	2019 £m
Fuel stocks	**151**	99
Raw materials and consumables	**265**	184
Current intangible assets – emission allowances	**133**	87
	549	370

There is a provision for obsolescence of £21 million against inventories as at 31 March 2020 (2019: £20 million).

19. Trade and other receivables

Trade and other receivables are amounts which are due from our customers for services we have provided.

Trade and other receivables are initially recognised at fair value and subsequently measured at amortised cost, less any appropriate allowances for estimated irrecoverable amounts.

	2020 £m	2019 £m
Trade receivables	**1,551**	1,899
Accrued income	**869**	883
Prepayments	**408**	237
Other receivables	**158**	134
	2,986	3,153

Trade receivables are non-interest-bearing and generally have a 30 to 90 days term. Due to their short maturities, the fair value of trade and other receivables approximates their carrying value. The maximum exposure of trade receivables to credit risk is the gross carrying amount of £2,063 million (2019: £2,293 million).

Provision for impairment of receivables
A provision for credit losses is recognised at an amount equal to the expected credit losses that will arise over the lifetime of the trade receivables and accrued income.

	2020 £m	2019 £m
At 1 April	**394**	309
Exchange adjustments	**20**	24
Charge for the year, net of recoveries	**234**	181
Uncollectible amounts written off	**(136)**	(120)
At 31 March	**512**	394

The trade receivables balance, accrued income balance and provisions balance split by geography is as follows:

	As at 31 March 2020			As at 31 March 2019		
	UK £m	US £m	Total £m	UK £m	US £m	Total £m
Trade receivables	**227**	**1,836**	**2,063**	313	1,980	2,293
Accrued income	**461**	**408**	**869**	445	438	883
Provision for impairment of trade receivables	**(40)**	**(472)**	**(512)**	(40)	(354)	(394)

There are no retail customers in the UK businesses. A provision matrix is not used in the UK as an assessment of expected losses on individual debtors is performed, and the provision is not material.

In the US, £1,806 million (2019: £1,885 million) of the trade receivables and unbilled revenue balance is attributable to retail customers. For non-retail US customer receivables, a provision matrix is not used and expected losses are determined on individual debtors.

The provision for retail customer receivables in the US is calculated based on a series of provision matrices which are prepared by regulated entity and by customer type. The expected loss rates in each provision matrix are based on historical loss rates adjusted for current and forecasted economic conditions at the balance sheet date. The inclusion of forward-looking information in the provision matrix setting process under IFRS 9 resulted in loss rates that reflect expected future economic conditions and the recognition of an expected loss on all debtors even where no loss event has occurred.

In March 2020, the Group's US distribution businesses ceased certain customer cash collection activities in response to regulatory instructions and to changes in State, Federal and City level regulations and guidance, and actions to minimise risk to the Group's employees. The Group has also ceased customer termination activities as requested by relevant local authorities. In addition, we have considered the macroeconomic data including unemployment levels and our previous experience regarding debtor recoverability during and in the aftermath of the 2008/09 financial crisis (which impacted all of our service territories) and that following Superstorm Sandy in 2012 which impacted our downstate New York gas business specifically.

Based on our review of these factors, we concluded that a reasonable range for the additional provision recognised in light of the cessation of customer terminations and collections following the moratoriums introduced would lie between £81 million and £161 million ($100 million and $200 million). We concluded an additional charge of £117 million represented our best estimate based on the information available, primarily as this represented an impact twice as severe as Superstorm Sandy, adjusted to incorporate all service territories impacted.

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

19. Trade and other receivables continued

The average expected loss rates and gross balances for the retail customer receivables in our US operations are set out below:

	2020 %	2020 £m	2019 %	2019 £m
Unbilled revenue	**5**	**395**	–	420
0 – 30 days	**5**	**623**	3	736
30 – 60 days	**14**	**184**	12	194
60 – 90 days	**29**	**105**	20	89
3 – 6 months	**47**	**119**	30	109
6 – 12 months	**63**	**104**	39	99
Over 12 months	**79**	**276**	68	238
		1,806		1,885

The year-on-year movements in average expected loss rates are driven primarily as a result of the moratoriums on cash collection and termination activities outlined above.

US retail customer receivables are not collateralised. Trade receivables are written off when regulatory requirements are met. Write-off policies vary between jurisdictions as they are aligned with the local regulatory requirements, which differ between regulators. There were no significant amounts written off during the period that were still subject to enforcement action. Our internal definition of default is aligned with that of the individual regulators in each jurisdiction.

For further information on our wholesale and retail credit risk, refer to note 32(a).

20. Cash and cash equivalents

Cash and cash equivalents include cash balances, together with short-term investments with an original maturity of less than three months that are readily convertible to cash.

Net cash and cash equivalents reflected in the cash flow statement are net of bank overdrafts, which are reported in borrowings. The carrying amounts of cash and cash equivalents and bank overdrafts approximate their fair values.

Cash at bank earns interest at floating rates based on daily bank deposit rates. Short-term deposits are made for periods varying between one day and three months, depending on the immediate cash requirements, and earn interest at the respective short-term deposit rates.

Net cash and cash equivalents held in currencies other than sterling have been converted into sterling at year-end exchange rates. For further information on currency exposures, refer to note 32(c).

	2020 £m	2019 £m
Cash at bank	**73**	177
Short-term deposits	**–**	75
Cash and cash equivalents	**73**	252

21. Borrowings

We borrow money primarily in the form of bonds and bank loans. These are for a fixed term and may have fixed or floating interest rates or are linked to RPI. We use derivatives to manage risks associated with interest rates and foreign exchange.

Our price controls and rate plans lead us to fund our networks within a certain ratio of debt to equity and, as a result, we have issued a significant amount of debt. As we continue to invest in our networks, the value of debt is expected to increase over time. To maintain a strong balance sheet and to allow us to access capital markets at commercially acceptable interest rates, we balance the amount of debt we issue with the value of our assets, and we take account of certain other metrics used by credit rating agencies.

All borrowings are accounted for at amortised cost, with the exception of one liability measured at fair value through profit and loss, in order to eliminate a measurement mismatch.

Borrowings, which include interest-bearing, zero-coupon and inflation-linked debt, overdrafts and collateral payable, are initially recorded at fair value. This normally reflects the proceeds received (net of direct issue costs for liabilities measured at amortised cost). Subsequently, borrowings are stated either: i) at amortised cost; or ii) at fair value though profit and loss. Where a borrowing is held at amortised cost, any difference between the proceeds after direct issue costs and the redemption value is recognised over the term of the borrowing in the income statement using the effective interest method. For the liability held at fair value through profit and loss, interest is calculated using the effective interest method.

Where a borrowing or liability is held at fair value, changes in the fair value of the borrowing due to changes in the issuer's credit risk are recorded in the own credit reserve (see note 28). All other changes in the fair value of the liability are recognised in the income statement within remeasurements (see notes 5 and 6).

	2020 £m	2019 £m
Current		
Bank loans	**1,244**	641
Bonds	**1,446**	1,973
Commercial paper	**1,269**	1,792
Lease liabilities	**112**	65
Other loans	**1**	1
	4,072	4,472
Non-current		
Bank loans	**2,819**	2,599
Bonds[1]	**23,094**	21,278
Lease liabilities	**623**	205
Other loans	**186**	176
	26,722	24,258
Total borrowings	**30,794**	28,730

1. Includes a liability held at fair value through profit and loss of £741 million (2019: £667 million).

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

21. Borrowings continued
Total borrowings are repayable as follows:

	2020 £m	2019 £m
Less than 1 year	**4,072**	4,472
In 1 to 2 years	**2,212**	2,393
In 2 to 3 years	**1,664**	1,990
In 3 to 4 years	**757**	1,553
In 4 to 5 years	**2,122**	714
More than 5 years:		
By instalments	**870**	959
Other than by instalments	**19,097**	16,649
	30,794	28,730

The fair value of borrowings at 31 March 2020 was £34,174 million (2019: £32,252 million). Where market values were available, fair value of borrowings (Level 1) was £14,059 million (2019: £14,356 million). Where market values were not available, fair value of borrowings (Level 2) was £20,115 million (2019: £17,896 million), calculated by discounting cash flows at prevailing interest rates. The notional amount outstanding of the debt portfolio at 31 March 2020 was £30,422 million (2019: £28,417 million).

In April 2020, National Grid Electricity Transmission plc issued a £0.4 billion fixed interest rate bond from the NGET EMTN programme with a 20-year tenor and The Narragansett Electric Company issued a $0.6 billion (£0.5 billion) fixed interest rate bond with a 10-year tenor. Both issuances are part of the continued Group funding arrangements.

During the year, the assets of the Colonial Gas Company were merged with the Boston Gas Company, and have been ringfenced post-merger, and certain gas distribution assets of The Narragansett Electric Company are subject to liens and other charges and are provided as collateral over borrowings totalling £84 million at 31 March 2020 (2019: £81 million).

Collateral is placed with or received from any derivative counterparty where we have entered into a credit support annex to the ISDA Master Agreement once the current mark-to-market valuation of the trades between the parties exceeds an agreed threshold. Included in current bank loans is £785 million (2019: £558 million) in respect of cash received under collateral agreements. For further details of our borrowing facilities, refer to note 33. For further details of our bonds in issue, please refer to the debt investor section of our website. Unless included herein, the information on our website is unaudited.

Financial liability at fair value through profit and loss
The financial liability designated at fair value through profit and loss is analysed as follows:

i. the fair value of the liability was £741 million (2019: £667 million), which includes cumulative change in fair value attributable to changes in credit risk recognised in other comprehensive income, post tax of £10 million (2019: £13 million);
ii. the amount repayable at maturity in November 2021 is £759 million (2019: £724 million); and
iii. the difference between carrying amount and contractual amount at maturity is £18 million (2019: £57 million).

This liability has been reclassified in order to eliminate a measurement mismatch with derivatives which provide an economic hedge. The associated derivatives are collateralised and do not contain significant exposure to our own credit risk. The presentation of credit risk in other comprehensive income does not, therefore, create or enlarge an accounting mismatch in profit or loss.

The change in the fair value attributable to a change in credit risk is calculated as the difference between the total change in the fair value of the liability and the change in the value of the liability due to changes in market risk factors alone. The change in the fair value due to market risk factors was calculated using benchmark yield curves as at the end of the reporting period holding the credit risk margin constant. The fair value of the liability was calculated using observed market prices.

21. Borrowings continued

Lease liabilities

The Group adopted IFRS 16 on 1 April 2019, which resulted in the recognition of £474 million of additional lease liabilities. As we applied the modified retrospective approach to transition, comparatives were not restated. Refer to note 37 for details.

Lease liabilities are initially measured at the present value of the lease payments expected over the lease term. The discount rate applied is the rate implicit in the lease or if that is not available, then the incremental rate of borrowing for a similar term and similar security. The lease term takes account of exercising any extension options that are at our option if we are reasonably certain to exercise the option and any lease termination options unless we are reasonably certain not to exercise the option. Each lease payment is allocated between the liability and finance cost. The finance cost is charged to the income statement over the lease period using the effective interest rate method.

	2020 £m	2019 £m
Gross lease liabilities are repayable as follows:		
Less than 1 year	132	65
1 to 5 years	361	183
More than 5 years	481	62
	974	310
Less: finance charges allocated to future periods	(239)	(40)
	735	270
The present value of lease liabilities are as follows:		
Less than 1 year	112	65
1 to 5 years	297	156
More than 5 years	326	49
	735	270

22. Trade and other payables

Trade and other payables include amounts owed to suppliers, tax authorities and other parties which are due to be settled within 12 months. The total also includes deferred amounts, some of which represent monies received from customers but for which we have not yet delivered the associated service. These amounts are recognised as revenue when the service is provided.

Trade and other payables are initially recognised at fair value and subsequently measured at amortised cost. Contingent consideration is measured at fair value.

	2020 £m	2019 £m
Trade payables	2,205	2,404
Deferred payables	137	217
Customer contributions[1]	84	87
Social security and other taxes	202	159
Contingent consideration[2]	30	–
Other payables	944	902
	3,602	3,769

1. From government-related entities.
2. Contingent consideration relates to the acquisition of Geronimo (see note 38).

Due to their short maturities, the fair value of trade payables approximates their carrying value.

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

23. Contract liabilities

Contract liabilities primarily relate to the advance consideration received from customers for construction contracts, mainly in relation to connections, for which revenue is recognised over the life of the asset.

	2020 £m	2019 £m
Current	76	61
Non-current	1,082	933
	1,158	994

Significant changes in the contract liabilities balances during the period are as follows:

	2020 £m	2019 £m
As at 1 April	994	866
Exchange adjustments	39	29
Revenue recognised that was included in the contract liability balance at the beginning of the period	(60)	(51)
Increases due to cash received, excluding amounts recognised as revenue during the period	185	155
Changes due to amounts recognised as revenue	–	(5)
At 31 March	1,158	994

24. Other non-current liabilities

Other non-current liabilities include deferred income which will not be recognised as income until after 31 March 2021. It also includes payables that are not due until after that date.

Contingent consideration is measured at fair value. All other non-current liabilities are initially recognised at fair value and subsequently measured at amortised cost.

	2020 £m	2019 £m
Deferred income[1]	101	96
Customer contributions[2]	428	372
Contingent consideration[3]	44	–
Other payables	318	340
	891	808

1. Principally the deferral of profits relating to the sale of property, which we expect to recognise in future years.
2. From government-related entities.
3. Contingent consideration relates to the acquisition of Geronimo (see note 38).

There is no material difference between the fair value and the carrying value of other payables.

25. Pensions and other post-retirement benefits

All of our employees are eligible to participate in a pension plan. We have defined benefit (DB) and defined contribution (DC) pension plans in the UK and the US. In the US we also provide healthcare and life insurance benefits to eligible employees, post-retirement. The fair value of associated plan assets and present value of DB obligations are updated annually in accordance with IAS 19 (revised). We separately present our UK and US pension plans to show geographical split. Below we provide a more detailed analysis of the amounts recorded in the primary financial statements and the actuarial assumptions used to value the DB obligations.

National Grid's UK pension arrangements are held in separate Trustee administered funds. The arrangements are managed by Trustee companies with boards consisting of company- and member-appointed directors. In the US, the assets of the plans are held in trusts and administered by the Retirement Plans Committee comprised of appointed employees of the Company.

Defined contribution plans

These plans are designed to provide members with a pension pot for their retirement. The risks associated with these plans are assumed by the member.

Payments to these DC plans are charged as an expense as they fall due. There is no legal or constructive obligation on National Grid to pay additional contributions into a DC plan if the fund has insufficient assets to pay all employees' benefits relating to employee service in the current and prior periods.

The National Grid YouPlan

YouPlan is the qualifying UK pension plan that is used for automatic enrolment of new hires.

National Grid pays contributions into YouPlan to provide DC benefits on behalf of employees. National Grid provides a double match of member contributions, up to a maximum Company contribution of 12% of salary as well as the cost of administration and insured benefits.

Defined benefit plans

On retirement, members of DB plans receive benefits whose value is dependent on factors such as salary and length of pensionable service. National Grid's obligation in respect of DB pension plans is calculated separately for each DB plan by projecting the estimated amount of future benefit payments that employees have earned for their pensionable service in the current and prior periods. These future benefit payments are discounted to determine the present value of the liabilities. Current service cost and any unrecognised past service cost are recognised immediately. The discount rate used is the yield curve at the valuation date on high-quality corporate bonds.

Advice is taken from independent actuaries relating to the appropriateness of the key assumptions applied, including life expectancy, expected salary and pension increases, and inflation. Comparatively small changes in the assumptions used may have a significant effect on the amounts recognised in the consolidated income statement, the consolidated statement of other comprehensive income and the net liability recognised in the consolidated statement of financial position.

Remeasurements of pension assets and post-retirement benefit obligations are recognised in full in the period in which they occur in the consolidated statement of other comprehensive income.

The principal UK DB pensions plans are the National Grid UK Pension Scheme (NGUKPS) and the National Grid Electricity Group of the Electricity Supply Pension Scheme (NGEG of ESPS). In the US, we have four principal plans and various healthcare and life insurance plans.

The COVID-19 pandemic

The COVID-19 pandemic has had a global impact on economies, equity and bond markets. Market volatility during March has had an impact on the value of assets held by our DB and DC pension plans. Our UK DB plans have low-risk investment strategies with limited exposure to equities and other return seeking assets, whilst the US plans have a greater exposure to these asset classes.

UK Pensions plans

The arrangements are subject to independent actuarial funding valuations at least every three years, and following consultation and agreement with us, the qualified actuary certifies the employers' contributions, which, together with the specified contributions payable by the employees and proceeds from the plans' assets, are expected to be sufficient to fund the benefits payable.

The results of the most recent actuarial valuations are shown below. See page 167 for the assumptions used for IAS 19 (revised) purposes. The actuarial valuations for NGUKPS as at 31 March 2019 have recently been completed, while we expect the valuation for NGEG of ESPS to be finalised by 30 June 2020.

	Section A of NGUKPS	Section B of NGUKPS	NGEG of ESPS
Latest full actuarial valuation	31 March 2019	31 March 2019	31 March 2016
Actuary	Willis Towers Watson	Willis Towers Watson	Aon Hewitt
Market value of plan assets at latest valuation	£6,551 million	£5,765 million	£2,553 million
Actuarial value of benefits due to members	£6,502 million	£5,831 million	£3,053 million
Market value as percentage of benefits	101%	99%	84%
Funding surplus/(deficit)	£49 million	(£66 million)	(£500 million)
Funding surplus/(deficit) net of tax	£41 million	(£55 million)	(£415 million)

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

25. Pensions and other post-retirement benefits continued

National Grid UK Pension Scheme
NGUKPS consists of three sections, each legally and actuarially separate. Sections A and B are supported by companies within the Group, while Section C is supported by Cadent Gas Limited, now an unrelated third party. The plan closed to new hires on 1 April 2002.

Section A
Following the latest actuarial valuation at 31 March 2019, Section A remains in surplus, and so no deficit funding contributions are required. National Grid and the Trustees have agreed a schedule of contributions whereby the employers will continue to contribute 51.8% of pensionable salary, less member contributions, in respect of future benefit accrual.

As part of the sectionalisation of NGUKPS on 1 January 2017, a guarantee of £1 billion has been provided to Section A. This payment is contingent on insolvency or on failure to pay pension obligations to Section A and can be claimed against National Grid plc, National Grid Holdings One plc or Lattice Group Limited (up to £1 billion in total).

Section B
The latest full actuarial valuation at 31 March 2019 determined that Section B was in deficit. In addition to a £34 million payment already made in September 2019, National Grid and the Trustees agreed that an additional payment of approximately £32 million will be made by September 2020 to eliminate the funding deficit. In addition, the employers contribute 51.4% of pensionable salary, less member contributions, in respect of future benefit accrual.

Pensions buy-ins
During the year, the Trustees of the NGUKPS entered into two buy-in arrangements in order to manage various risks. The policies provide bulk annuities in respect of some pensioner and dependant members of Sections A and B of NGUKPS and were funded by existing assets. In Section A, £2.8 billion of gilts were exchanged for a buy-in policy with Rothesay Life. In Section B, £1.6 billion of gilts were exchanged for a buy-in policy with Legal & General. Both policies are held by the Trustee. For both transactions, the pricing of the policies was highly competitive; however, under IAS 19 the methodology for calculating the value of the buy-ins (as an asset held by the pension plan) differs from the price paid. This resulted in the recognition of an actuarial loss of £0.7 billion on purchase, recorded within the consolidated statement of other comprehensive income.

National Grid Electricity Group of the Electricity Supply Pension Scheme
The last full actuarial valuation for the NGEG of the ESPS determined that the plan was in deficit. National Grid and the Trustees agreed on a schedule of contributions, whereby deficit funding of £48 million is payable each year from 2016 to 2027, which should lead to the elimination of the funding shortfall by March 2027. All deficit funding amounts due will be adjusted for changes in the RPI. In addition, National Grid contributes 40.7% of pensionable salary, less member contributions, in respect of the ongoing service cost. The plan closed to new hires from 1 April 2006.

The plan holds a longevity insurance contract which covers improvements in longevity, providing long-term protection to the scheme, should some pensioner and dependant members live longer than currently expected.

Administration costs
Up to 31 March 2020, National Grid was responsible for the costs of plan administration and the Pension Protection Fund (PPF) levies for both Sections A and B of NGUKPS, and NGEG of ESPS. However, from 1 April 2020 onwards this will only apply to Section B of NGUKPS and NGEG of ESPS, whilst Section A of NGUKPS will fund these costs from the Section's assets.

Security arrangements
National Grid has also established security arrangements with charges in favour of the Trustees.

	Section A of NGUKPS	Section B of NGUKPS	NGEG of ESPS
Value of security arrangements at 31 March 2020[1]	£315 million	£180 million	£239 million
Principal supporting employers	National Grid plc and National Grid UK Limited	National Grid Gas plc (NGG)	National Grid Electricity Transmission plc (NGET)
Additional amounts payable[2] at 31 March 2020	£72 million	A maximum of £280 million	A maximum of £500 million

1. Following the completion of the March 2019 valuations for Sections A and B of NGUKPS, these amounts have changed to £186 million for Section A and to £nil for Section B.
2. These amounts are payable if certain trigger events occur which have been individually agreed between the plans and their relevant supporting employers.

The majority of the security is provided in the form of surety bonds with the remainder in letters of credit. The assets held in security will be paid to the respective section or plan in the event that the relevant supporting employer is subject to an insolvency event or fails to make the required contributions; and applicable to NGEG of ESPS only, if NGET loses its licence to operate under relevant legislation. Counter indemnities have also been taken out to ensure the obligations will be fulfilled.

25. Pensions and other post-retirement benefits continued

US pension plans

National Grid has multiple DC pension plans which allow employee as well as Company contributions. Non-union employees hired after 1 January 2011, as well as new hire represented union employees, receive a core contribution into the DC plan, irrespective of the employee's contribution into the plan.

National Grid sponsors four non-contributory qualified DB pension plans, which provide vested union employees, and vested non-union employees hired before 1 January 2011 with retirement benefits within prescribed limits as defined by the US Internal Revenue Service. National Grid also provides non-qualified DB pension arrangements for a section of current and former employees, which are closed to new entrants. Benefits under the DB plans generally reflect age, years of service and compensation and are paid in the form of an annuity or lump sum. An independent actuary performs valuations annually. The Company funds the DB plans by contributing no less than the minimum amount required, but no more than the maximum tax-deductible amount allowed under US Internal Revenue Service regulations. The range of contributions determined under these regulations can vary significantly depending upon the funded status of the plans. At present, there is some flexibility in the amount that is contributed on an annual basis. In general, the Company's policy for funding the US pension plans is to contribute the amounts collected in rates and capitalised in the rate base during the year, to the extent that the funding is no less than the minimum amount required. For the current financial year, these contributions amounted to approximately £153 million (2019: £231 million).

US retiree healthcare and life insurance plans

National Grid provides healthcare and life insurance benefits to eligible employees, post-retirement. Eligibility is based on certain age and length of service requirements, and in most cases, retirees contribute to the cost of their healthcare coverage. In the US, there is no governmental requirement to pre-fund post-retirement healthcare and life insurance plans. However, in general, the Company's policy for funding the US retiree healthcare and life insurance plans is to contribute amounts collected in rates and capitalised in the rate base during the year. For the current financial year, these contributions amounted to £18 million (2019: £14 million).

For the last few years it has been the Company's policy to primarily direct contributions to the DB pension plans due to concerns over tax deductible limitations relating to the retiree and healthcare and life insurance plans.

Actuarial assumptions

The Company has applied the following financial assumptions in assessing DB liabilities:

	UK pensions		
	2020 %	2019 %	2018 %
Discount rate – past service	**2.35**	2.40	2.60
Discount rate – future service	**2.35**	2.45	2.65
Salary increases	**2.90**	3.50	3.40
Rate of increase in RPI – past service	**2.65**	3.25	3.15
Rate of increase in RPI – future service	**2.45**	3.20	3.10

At 31 March 2020, single equivalent financial assumptions are shown above for presentational purposes, although full yield curves have been used in our calculations. In 2018 and 2019, single equivalent financial assumptions were set which reflected the average duration for the aggregate past and future service obligations.

The discount rate is determined by reference to high-quality UK corporate bonds at the reporting date. The rate of increase in salaries has been set using a promotional scale where appropriate. The rates of increases stated are not indicative of historical increases awarded or a guarantee of future increase, but merely an appropriate assumption used in assessing DB liabilities. Retail Price Index (RPI) is the key assumption that determines assumed increases in pensions in payment and deferment in the UK only.

	US pensions			US other post-retirement benefits		
	2020 %	2019 %	2018 %	**2020 %**	2019 %	2018 %
Discount rate	**3.30**	3.95	4.00	**3.30**	3.95	4.00
Salary increases	**3.50**	3.50	3.50	**3.50**	3.50	3.50
Initial healthcare cost trend rate	**n/a**	n/a	n/a	**7.00**	7.25	7.50
Ultimate healthcare cost trend rate	**n/a**	n/a	n/a	**4.50**	4.50	4.50

Discount rates for US pension liabilities have been determined by reference to appropriate yields on high-quality US corporate bonds at the reporting date based on the duration of plan liabilities. The healthcare cost trend rate is expected to reach the ultimate trend rate by 2030 (2019: 2028).

	2020		2019		2018	
	UK years	**US years**	UK years	US years	UK years	US years
Assumed life expectations for a retiree age 65						
Males	**22.1**	**20.9**	22.0	22.1	22.3	22.0
Females	**23.8**	**23.4**	23.6	24.2	23.9	24.2
In 20 years:						
Males	**23.3**	**22.5**	23.3	23.7	23.7	23.6
Females	**25.3**	**25.1**	25.2	25.9	25.5	25.8

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

25. Pensions and other post-retirement benefits continued

Maturity profile of DB obligations

The weighted average duration of the DB obligation for each category of plan is 14 years for UK pension plans; 14 years for US pension plans and 16 years for US other post-retirement benefit plans.

As at the reporting date, the present value of the funded obligations split according to member status was approximately:

- UK pensions: 8% active members (2019: 10%; 2018: 10%); 14% deferred members (2019: 16%; 2018: 18%); 78% pensioner members (2019: 74%; 2018: 72%);
- US pensions: 36% active members (2019: 37%; 2018: 38%); 9% deferred members (2019: 9%; 2018: 8%); 55% pensioner members (2019: 54%; 2018: 54%); and
- US other post-retirement benefits: 35% active members (2019: 39%; 2018: 38%); 0% deferred members (2019: 0%; 2018: 0%); 65% pensioner members (2019: 61%; 2018: 62%).

For sensitivity analysis see note 35.

Amounts recognised in the consolidated statement of financial position

	2020 £m	2019 £m	2018 £m
Present value of funded obligations	(24,281)	(24,609)	(23,747)
Fair value of plan assets	23,748	24,793	23,858
	(533)	184	111
Present value of unfunded obligations	(345)	(330)	(307)
Other post-employment liabilities	(75)	(72)	(67)
Net defined benefit liability	(953)	(218)	(263)
Represented by:			
Liabilities	(2,802)	(1,785)	(1,672)
Assets	1,849	1,567	1,409
	(953)	(218)	(263)

The geographical split of pensions and other post-retirement benefits is as shown below:

	UK Pensions			US Pensions			US other post-retirement benefits		
	2020 £m	2019 £m	2018 £m	2020 £m	2019 £m	2018 £m	2020 £m	2019 £m	2018 £m
Present value of funded obligations	(12,775)	(14,200)	(14,152)	(7,809)	(6,901)	(6,349)	(3,697)	(3,508)	(3,246)
Fair value of plan assets	14,364	15,507	15,330	6,972	6,646	6,030	2,412	2,640	2,498
	1,589	1,307	1,178	(837)	(255)	(319)	(1,285)	(868)	(748)
Present value of unfunded obligations	(69)	(76)	(74)	(276)	(254)	(233)	–	–	–
Other post-employment liabilities	–	–	–	–	–	–	(75)	(72)	(67)
Net defined benefit asset/(liability)	1,520	1,231	1,104	(1,113)	(509)	(552)	(1,360)	(940)	(815)
Represented by:									
Liabilities	(69)	(76)	(74)	(1,373)	(769)	(783)	(1,360)	(940)	(815)
Assets	1,589	1,307	1,178	260	260	231	–	–	–
	1,520	1,231	1,104	(1,113)	(509)	(552)	(1,360)	(940)	(815)

The recognition of the pension assets in both the UK in relation to the NGUKPS, the NGEG of ESPS and the US in relation to Niagara Mohawk Plan reflects legal and actuarial advice that we have taken regarding recognition of surpluses under IFRIC 14. We have concluded that the Group has an unconditional right to a refund from the individual plans, including from each Section of the NGUKPS and the NGEG of ESPS, in the event of a winding up. In the UK, the Trustees must seek the agreement of the Company to any benefit augmentation beyond the provisions set out in the Scheme Rules. In the US, surplus assets may be used to pay benefits under other Plans, thereby allowing the Company to settle other liabilities under other Plans.

25. Pensions and other post-retirement benefits continued

Amounts recognised in the income statement and statement of other comprehensive income

	2020 £m	2019 £m	2018 £m
Included within operating costs			
Administration costs	**16**	14	16
Included within payroll costs			
Defined benefit plan costs:			
Current service cost	**178**	193	193
Past service cost – augmentations	**–**	5	1
Past service credit – redundancies	**–**	(7)	(1)
Special termination benefit cost – redundancies	**2**	55	9
Past service cost – plan amendments[1]	**–**	34	–
	180	280	202
Included within finance income and costs			
Net interest cost	**23**	22	65
Total included in income statement	**219**	316	283
Remeasurement (losses)/gains of pension assets and post-retirement benefit obligations[2]	**(724)**	68	1,313
Exchange adjustments	**(97)**	(101)	175
Total included in the statement of other comprehensive income	**(821)**	(33)	1,488

1. For the year ended 31 March 2019, the estimated cost of equalising for the impact of GMP under the most cost-effective permissible methodology (Section A of NGUKPS – £17 million; Section B of NGUKPS – £12 million; NGEG of ESPS – £5 million).
2. For the year ended 31 March 2020, this includes an actuarial loss from the purchase of buy-in policies of £0.7 billion.

The geographical split of pensions and other post-retirement benefits is as shown below:

	UK Pensions			US Pensions			US other post-retirement benefits		
	2020 £m	2019 £m	2018 £m	2020 £m	2019 £m	2018 £m	2020 £m	2019 £m	2018 £m
Included within operating costs									
Administration costs	**9**	6	6	**6**	7	9	**1**	1	1
Included within payroll costs									
Defined benefit plan costs:									
Current service cost	**33**	41	49	**100**	104	98	**45**	48	46
Past service cost – augmentations	**–**	5	1	**–**	–	–	**–**	–	–
Past service credit – redundancies	**–**	(7)	(1)	**–**	–	–	**–**	–	–
Special termination benefit cost – redundancies	**2**	55	9	**–**	–	–	**–**	–	–
Past service cost – plan amendments	**–**	34	–	**–**	–	–	**–**	–	–
	35	128	58	**100**	104	98	**45**	48	46
Included within finance income and costs									
Net interest (income)/cost	**(31)**	(31)	3	**21**	21	27	**33**	32	35
Total included in income statement	**13**	103	67	**127**	132	134	**79**	81	82
Remeasurement gains/(losses) of pension assets and post-retirement benefit obligations[1]	**143**	57	1,177	**(588)**	(14)	27	**(279)**	25	109
Exchange adjustments	**–**	–	–	**(42)**	(42)	75	**(55)**	(59)	100
Total included in the statement of other comprehensive income	**143**	57	1,177	**(630)**	(56)	102	**(334)**	(34)	209

1. For the year ended 31 March 2020, UK pensions is stated after an actuarial loss from the purchase of buy-in policies of £0.7 billion.

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

25. Pensions and other post-retirement benefits continued

Reconciliation of the net defined benefit liability

	2020 £m	2019 £m	2018 £m
Opening net defined benefit liability	**(218)**	(263)	(1,933)
Cost recognised in the income statement	**(219)**	(316)	(283)
Remeasurement and foreign exchange effects recognised in the statement of other comprehensive income	**(821)**	(33)	1,488
Employer contributions	**327**	419	475
Other movements	**(22)**	(25)	(10)
Closing net defined benefit liability	**(953)**	(218)	(263)

The geographical split of pensions and other post-retirement benefits is as shown below:

	UK pensions			US pensions			US other post-retirement benefits		
	2020 £m	2019 £m	2018 £m	2020 £m	2019 £m	2018 £m	2020 £m	2019 £m	2018 £m
Opening net defined benefit asset/(liability)	**1,231**	1,104	(156)	**(509)**	(552)	(728)	**(940)**	(815)	(1,049)
Cost recognised in the income statement	**(13)**	(103)	(67)	**(127)**	(132)	(134)	**(79)**	(81)	(82)
Remeasurement and foreign exchange effects recognised in the statement of other comprehensive income	**143**	57	1,177	**(630)**	(56)	102	**(334)**	(34)	209
Employer contributions	**156**	174	150	**153**	231	208	**18**	14	117
Other movements	**3**	(1)	–	**–**	–	–	**(25)**	(24)	(10)
Closing net defined benefit asset/(liability)	**1,520**	1,231	1,104	**(1,113)**	(509)	(552)	**(1,360)**	(940)	(815)

Changes in the present value of defined benefit obligations (including unfunded obligations)

	2020 £m	2019 £m	2018 £m
Opening defined benefit obligations	**(24,939)**	(24,054)	(26,230)
Current service cost	**(178)**	(193)	(193)
Interest cost	**(751)**	(771)	(775)
Actuarial gains/(losses) – experience	**148**	(69)	(100)
Actuarial gains – demographic assumptions	**452**	266	671
Actuarial (losses)/gains – financial assumptions	**(84)**	(619)	174
Past service credit – redundancies	**–**	7	1
Special termination benefit cost – redundancies	**(2)**	(55)	(9)
Past service cost – augmentations	**–**	(5)	(1)
Past service cost – plan amendments	**–**	(34)	–
Medicare subsidy received	**(22)**	(19)	(21)
Employee contributions	**(1)**	(1)	(1)
Benefits paid	**1,282**	1,376	1,285
Exchange adjustments	**(531)**	(768)	1,145
Closing defined benefit obligations	**(24,626)**	(24,939)	(24,054)

The geographical split of pensions and other post-retirement benefits is as shown below:

	UK pensions			US pensions			US other post-retirement benefits		
	2020 £m	2019 £m	2018 £m	2020 £m	2019 £m	2018 £m	2020 £m	2019 £m	2018 £m
Opening defined benefit obligations	**(14,276)**	(14,226)	(15,645)	**(7,155)**	(6,582)	(7,050)	**(3,508)**	(3,246)	(3,535)
Current service cost	**(33)**	(41)	(49)	**(100)**	(104)	(98)	**(45)**	(48)	(46)
Interest cost	**(335)**	(358)	(366)	**(280)**	(277)	(273)	**(136)**	(136)	(136)
Actuarial gains/(losses) – experience	**113**	(56)	(95)	**(45)**	(52)	(38)	**80**	39	33
Actuarial gains – demographic assumptions	**140**	224	565	**78**	–	30	**234**	42	76
Actuarial gains/(losses) – financial assumptions	**798**	(568)	604	**(595)**	(24)	(279)	**(287)**	(27)	(151)
Past service credit – redundancies	**–**	7	1	**–**	–	–	**–**	–	–
Special termination benefit cost – redundancies	**(2)**	(55)	(9)	**–**	–	–	**–**	–	–
Past service cost – augmentations	**–**	(5)	(1)	**–**	–	–	**–**	–	–
Past service cost – plan amendments	**–**	(34)	–	**–**	–	–	**–**	–	–
Medicare subsidy received	**–**	–	–	**–**	–	–	**(22)**	(19)	(21)
Employee contributions	**(1)**	(1)	(1)	**–**	–	–	**–**	–	–
Benefits paid	**752**	837	770	**374**	398	362	**156**	141	153
Exchange adjustments	**–**	–	–	**(362)**	(514)	764	**(169)**	(254)	381
Closing defined benefit obligations	**(12,844)**	(14,276)	(14,226)	**(8,085)**	(7,155)	(6,582)	**(3,697)**	(3,508)	(3,246)

25. Pensions and other post-retirement benefits continued

Changes in the value of plan assets

	2020 £m	2019 £m	2018 £m
Opening fair value of plan assets	**24,793**	23,858	24,375
Interest income	**728**	749	710
Return on plan assets (less than)/in excess of interest[1]	**(1,240)**	490	568
Administration costs	**(16)**	(14)	(16)
Employer contributions	**327**	419	475
Employee contributions	**1**	1	1
Benefits paid	**(1,279)**	(1,377)	(1,285)
Exchange adjustments	**434**	667	(970)
Closing fair value of plan assets	**23,748**	24,793	23,858
Actual return on plan assets	**(512)**	1,239	1,278
Expected contributions to plans in the following year	**269**	307	363

1. For the year ended 31 March 2020, this includes an actuarial loss from the purchase of buy-in policies of £0.7 billion.

The geographical split of pensions and other post-retirement benefits is as shown below:

	UK pensions			US pensions			US other post-retirement benefits		
	2020 £m	2019 £m	2018 £m	2020 £m	2019 £m	2018 £m	2020 £m	2019 £m	2018 £m
Opening fair value of plan assets	**15,507**	15,330	15,489	**6,646**	6,030	6,322	**2,640**	2,498	2,564
Interest income	**366**	389	363	**259**	256	246	**103**	104	101
Return on plan assets (less than)/ in excess of interest[1]	**(908)**	457	103	**(26)**	62	314	**(306)**	(29)	151
Administration costs	**(9)**	(6)	(6)	**(6)**	(7)	(9)	**(1)**	(1)	(1)
Employer contributions	**156**	174	150	**153**	231	208	**18**	14	117
Employee contributions	**1**	1	1	**–**	–	–	**–**	–	–
Benefits paid	**(749)**	(838)	(770)	**(374)**	(398)	(362)	**(156)**	(141)	(153)
Exchange adjustments	**–**	–	–	**320**	472	(689)	**114**	195	(281)
Closing fair value of plan assets	**14,364**	15,507	15,330	**6,972**	6,646	6,030	**2,412**	2,640	2,498
Actual return on plan assets	**(542)**	846	466	**233**	318	560	**(203)**	75	252
Expected contributions to plans in the following year	**137**	148	140	**125**	150	221	**7**	9	2

1. For the year ended 31 March 2020, UK pensions includes an actuarial loss from the purchase of buy-in policies of £0.7 billion.

The markets for unquoted investments are illiquid and the valuations that have been provided by fund managers as at 31 March 2020 may be based on valuation models that have unobservable inputs. Given the current market volatility that has arisen as a result of COVID-19, this means that the prices provided are subject to additional estimation uncertainty. Sensitivity analyses for changes in private equity, property and diversified alternative valuations have been provided in note 35.

Asset allocation strategy

Each plan's investment strategy is formulated in order to target specific asset allocations and returns, and to manage risk. The asset allocation of the plans is as follows:

	2020			2019		
	UK pensions %	US pensions %	US other post-retirement benefits %	UK pensions %	US pensions %	US other post-retirement benefits %
Equities	**10.2**	**36.0**	**57.6**	12.7	40.8	60.2
Corporate bonds	**26.7**	**31.0**	**0.6**	23.4	26.4	0.7
Government securities	**14.3**	**18.2**	**22.9**	39.4	16.0	20.6
Property	**4.8**	**4.4**	**–**	5.5	4.7	–
Diversified alternatives	**6.2**	**9.0**	**13.4**	5.0	10.1	12.9
Liability matching assets	**34.3**	**–**	**–**	11.1	–	–
Infrastructure	**–**	**1.7**	**–**	–	1.5	–
Cash and cash equivalents	**1.8**	**0.3**	**–**	1.9	0.3	–
Other	**1.7**	**(0.6)**	**5.5**	1.0	0.2	5.6
	100.0	**100.0**	**100.0**	100.0	100.0	100.0

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

25. Pensions and other post-retirement benefits continued

Defined benefit investment strategies and risks

DB pension plans can pose a significant risk to future cash flows, as National Grid underwrites the financial and demographic risks associated with these plans. Although the governing bodies have sole responsibility for setting investment strategies and managing risks, National Grid closely works with and supports the governing bodies of each plan, to assist them in mitigating the risks associated with their plans and to ensure that the plans are funded to meet their obligations.

In the UK, each plan has a Trustee that is the governing body. The Trustees' responsibilities are set out in the Trust Deed and Rules. In the US, the fiduciary committee for all the retirement plans is the Retirement Plan Committee (RPC). The RPC is structured in accordance with US laws governing retirement plans under the Employee Retirement Income Security Act (ERISA).

The Trustees and RPC, after taking advice from professional investment advisors and in consultation with National Grid, set the key principles, including expected returns, risk and liquidity requirements. In setting these they take into account expected contributions, maturity of the pension liabilities, and in the UK, the strength of the covenant. The Trustees and RPC formulate an investment strategy to manage risk through diversification, including the use of liability-matching assets, which move in line with the long-term liabilities of the plan, and return-seeking assets, some of which are designed to mitigate downside risk. Where appropriate, the strategies may include interest rate and inflation hedging instruments, and currency hedging to hedge overseas holdings.

Investments are usually grouped into:

- Return-seeking assets: equities, property and diversified funds where the objective is to achieve growth within the constraints of the plans' risk profiles. These assets should produce returns greater than the liability increase, so improving the funding position, and are assessed by reference to benchmarks and performance targets agreed with the investment managers; and
- Liability-matching assets: liability-driven investment (LDI) funds, buy-ins, government securities, corporate bonds and swaps, where the objective is to secure fixed or inflation-adjusted cash flows in future. These investments are generally expected to match the change in liability valuation, so protecting the funding position. Bonds and securities are also measured against certain market benchmarks.

Investments are predominantly made in assets considered to be of investment grade. Where investments are made in non-investment grade assets, the higher volatility involved is carefully judged and balanced against the expected higher returns. Similarly, investments are made predominantly in regulated markets. Where investments are made either in non-investment grade assets or outside of regulated markets, investment levels are kept to prudent levels and subject to agreed control ranges, to control the risk. Should these investments fall outside the pre-agreed ranges, corrective actions and timescales are agreed with the investment manager to remedy the position.

The governing bodies ensure that the performance of investment managers is regularly reviewed against measurable objectives, consistent with each pension plan's long-term objectives and accepted risk levels. Where required, the portfolios are amended, or investment managers changed.

The Trustees and RPC can generally delegate responsibility for the selection of specific bonds, securities and other investments to appointed investment managers. Investment managers are selected based on the required skills, expertise of those markets, process and financial security to manage the investments. The investment managers use their skill and expertise to manage the investments competently. In some cases, they may further delegate this responsibility, through appointing sub-managers.

The pension plans hold sufficient cash to meet benefit requirements, with other investments being held in liquid or realisable assets to meet unexpected cash flow requirements. The plans do not borrow money, or act as guarantor, to provide liquidity to other parties (unless it is temporary).

In the UK, both NGUKPS and NGEG of ESPS have Responsible Investment (RI) Policies, which take into account Environmental, Social and Governance (ESG) areas. The NGUKPS RI also incorporates the six UN-backed Principles for Responsible Investment (UNPRI). The Trustees believe that ESG factors can be material to financial outcomes and therefore these should and will be considered alongside other factors. The Trustees recognise that their primary responsibility remains a fiduciary one, i.e. their first duty is to ensure the best possible return on investments with the appropriate level of risk. However, the Trustees also recognise the increasing materiality of ESG factors and that they have a fiduciary and regulatory duty to consider RI, including ESG factors and the potential impact on the quality and sustainability of long-term investment returns and therefore on the Trustees' primary fiduciary duty.

Whilst in the US there is no regulatory requirement to have ESG-specific principles embedded in investment policies, investment managers often utilise ESG principles to inform their decision-making process.

The most significant risks associated with the DB plans are:

- Asset volatility – the plans invest in a variety of asset classes, but principally in government securities, bulk annuities, corporate bonds, equities and property. Consequently, actual returns will differ from the underlying discount rate adopted, impacting on the funding position of the plan through the net balance sheet asset or liability. Each plan seeks to balance the level of investment return required with the risk that it can afford to take, to design the most appropriate investment portfolio. Volatility will be controlled through using liability-matching asset strategies including bulk annuities, as well as interest rate hedging and management of foreign exchange exposure, and diversification of the return-seeking assets;
- Changes in bond yields – liabilities are calculated using discount rates set with reference to the yields in high-quality corporate bonds prevailing in the UK and US debt markets and will fluctuate as yields change;
- Member longevity – longevity is a key driver of liabilities and changes in life expectancy have a direct impact on liabilities. The NGEG of ESPS holds a longevity insurance contract ("longevity swap") and NGUKPS holds buy-in policies for both Sections A and B, which covers exposure to improvement in longevity, providing long-term protection in the event that members live longer than expected;
- Counterparty risk – is managed by having a diverse range of counterparties and through having a strong collateralisation process (including for the longevity swap held by NGEG of ESPS). Measurement and management of counterparty risk is delegated to the relevant investment managers. For our bulk annuity policies, various termination provisions were introduced in the contracts, managing our exposure to counterparty risk. The insurers' operational performance and financial strength are monitored on a regular basis;
- Deficit risk – the risk that the increase in the liability will outpace the growth in assets is managed through assessing the progress of the actual growth of the liabilities relative to the selected investment policy and adjusting the policy as required;
- Manager risk – expected deviation of the return, relative to the benchmark, is carefully monitored, as is the process, team and expertise of the manager. Where appropriate, the Trustee or RPC will move assets under management to a more robust manager, whom they consider will have a better expectation of performing well in the future;
- Currency risk – fluctuations in the value of foreign denominated assets due to exposure to currency exchange rates is managed through a combination of segregated currency hedging overlay and currency hedging carried out by some of the investment managers;

25. Pensions and other post-retirement benefits continued

Defined benefit investment strategies and risks continued

- Interest rate and inflation risk – changes in inflation will affect the current and future pensions but are partially mitigated through investing in inflation-matching assets and hedging instruments as well as bulk annuity buy-in policies;
- Investment funds – the credit risk arising from investing in investment funds is mitigated by the underlying assets of the investment funds being ring-fenced from the fund managers, the regulatory environments in which the fund managers operate and diversification of investments among investment fund arrangements;
- Political risk – an adverse influence on asset values arising from political intervention in a specific country or region is managed through regular review of the asset distribution and through ensuring geographical diversification of investments within the managers; and
- Custodian risk – the creditworthiness and ability of the custodians to settle trades on time and provide secure safekeeping of the assets under custody is managed by ongoing monitoring of the custodial arrangements against pre-agreed service levels and credit ratings.

Asset allocations

Within the asset allocations below, there is significant diversification across regions, asset managers, currencies and bond categories.

UK pensions

	2020			2019			2018		
	Quoted £m	Unquoted £m	Total £m	Quoted £m	Unquoted £m	Total £m	Quoted £m	Unquoted £m	Total £m
Equities	732	732	1,464	1,181	784	1,965	1,420	813	2,233
Corporate bonds	3,837	–	3,837	3,625	–	3,625	3,949	–	3,949
Government securities	2,051	–	2,051	6,114	–	6,114	5,629	–	5,629
Property	103	585	688	108	749	857	129	834	963
Diversified alternatives	–	893	893	–	771	771	99	690	789
Liability-matching assets	1,704[1]	3,278[2]	4,982	1,751	–	1,751	1,174	–	1,174
Longevity swap	–	(51)	(51)	–	(35)	(35)	–	–	–
Cash and cash equivalents	29	222	251	40	259	299	211	215	426
Other (including net current assets and liabilities)	–	249	249	–	160	160	–	167	167
	8,456	5,908	14,364	12,819	2,688	15,507	12,611	2,719	15,330

1. Consists of pooled funds which invests mainly in fixed interest securities.
2. Comprises the buy-in policies held by NGUKPS.

US pensions

	2020			2019			2018		
	Quoted £m	Unquoted £m	Total £m	Quoted £m	Unquoted £m	Total £m	Quoted £m	Unquoted £m	Total £m
Equities	467	2,043	2,510	533	2,178	2,711	577	1,954	2,531
Corporate bonds	1,640	518	2,158	1,329	425	1,754	1,085	413	1,498
Government securities	535	732	1,267	422	640	1,062	414	565	979
Property	–	307	307	–	316	316	–	279	279
Diversified alternatives	162	464	626	183	487	670	198	421	619
Infrastructure	–	121	121	–	99	99	–	77	77
Cash and cash equivalents	24	–	24	21	–	21	14	–	14
Other (including net current assets and liabilities)	(44)	3	(41)	(8)	21	13	6	27	33
	2,784	4,188	6,972	2,480	4,166	6,646	2,294	3,736	6,030

US other post-retirement benefits

	2020			2019			2018		
	Quoted £m	Unquoted £m	Total £m	Quoted £m	Unquoted £m	Total £m	Quoted £m	Unquoted £m	Total £m
Equities	353	1,037	1,390	404	1,184	1,588	412	1,110	1,522
Corporate bonds	15	–	15	19	–	19	24	–	24
Government securities	551	1	552	540	3	543	508	2	510
Diversified alternatives	162	161	323	175	166	341	161	144	305
Other[1]	–	132	132	–	149	149	–	137	137
	1,081	1,331	2,412	1,138	1,502	2,640	1,105	1,393	2,498

1. Other primarily comprises insurance contracts.

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

26. Provisions

We make provisions when an obligation exists resulting from a past event, and it is probable that cash will be paid to settle it, but the exact amount of cash required can only be estimated.

The main estimates relate to environmental remediation and decommissioning costs for various sites we own or have owned and other provisions, including restructuring plans and lease contracts we have entered into that are now loss making. The evaluation of the likelihood of the contingent events has required best judgement by management regarding the probability of exposure to potential loss. Should circumstances change following unforeseeable developments, the likelihood could alter.

Provisions are recognised where a legal or constructive obligation exists at the reporting date, as a result of a past event, where the amount of the obligation can be reliably estimated and where the outflow of economic benefit is probable.

Provision is made for decommissioning and environmental costs, based on future estimated expenditures, discounted to present values. An initial estimate of decommissioning and environmental costs attributable to property, plant and equipment is recorded as part of the original cost of the related property, plant and equipment.

Changes in the provision arising from revised estimates, discount rates or changes in the expected timing of expenditure that relates to property, plant and equipment, are recorded as adjustments to their carrying value and depreciated prospectively over their remaining estimated useful economic lives; otherwise such changes are recognised in the income statement.

The unwinding of the discount is included within the income statement within finance costs.

	Environmental £m	Decommissioning £m	Restructuring £m	Emissions £m	Other £m	Total provisions £m
At 1 April 2018	1,531	194	3	8	316	2,052
Exchange adjustments	103	7	–	–	14	124
Additions[1]	32	18	125	16	35	226
Unused amounts reversed	(36)	(10)	(3)	(6)	(10)	(65)
Unwinding of discount	62	5	–	–	7	74
Utilised[2]	(53)	(26)	(42)	(9)	(79)	(209)
Transfers[3]	–	–	–	–	(3)	(3)
At 31 March 2019	1,639	188	83	9	280	2,199
Exchange adjustments	82	5	–	1	9	97
Additions[1]	437	93	7	12	40	589
Unused amounts reversed	(29)	(16)	(16)	–	(9)	(70)
Unwinding of discount	65	5	–	–	7	77
Utilised[2]	(123)	(21)	(39)	(5)	(50)	(238)
At 31 March 2020	**2,071**	**254**	**35**	**17**	**277**	**2,654**

	2020 £m	2019 £m
Current	**348**	316
Non-current	**2,306**	1,883
	2,654	2,199

1. For the year ended 31 March 2020, £402 million (2019: £nil) of additions relate to exceptional environmental provisions, of which £76 million relates to the impact of the change in the real discount rate from 1% to 0.5% during the year (see note 5 for details). Additions to other provisions include £15 million (2019: £nil) in relation to discontinued operations.
2. Utilised amounts for other provisions include £8 million (2019: £20 million) in relation to discontinued operations.
3. Represents net amounts transferred to trade and other payables (see note 22) of £nil (2019: £3 million).

26. Provisions continued

Environmental provisions

The environmental provision represents the estimated restoration and remediation costs relating to a number of sites owned and managed by subsidiary undertakings, together with certain US sites that National Grid no longer owns. The environmental provision is as follows:

	2020			2019		
	Discounted £m	**Undiscounted £m**	**Real discount rate**	Discounted £m	Undiscounted £m	Real discount rate
UK sites	**175**	**184**	**0.5%**	189	210	1%
US sites	**1,896**	**1,955**	**0.5%**	1,450	1,555	1%
	2,071	**2,139**		1,639	1,765	

The remediation expenditure in the UK relates to old gas manufacturing sites and also to electricity transmission sites. Cash flows are expected to be incurred until 2075 although the weighted average duration of the cash flows is 11 years. A number of estimation uncertainties affect the calculation of the provision, including the impact of regulation, the accuracy of site surveys, unexpected contaminants, transportation costs, the impact of alternative technologies and changes in the real discount rate. This provision incorporates our best estimate of the financial effect of these uncertainties, but future changes in any of the assumptions could materially impact the calculation of the provision. The undiscounted amount is the undiscounted best estimate of the liability having regard to these uncertainties.

The remediation expenditure in the US is expected to be incurred until 2069, of which the majority relates to three Superfund sites (being sites where hazardous substances are present as a result of the historic operations of manufactured gas plants in Brooklyn, New York). The weighted average duration of the cash flows is nine years. The uncertainties regarding the calculation of this provision are similar to those considered in respect of UK sites. Under the terms of our rate plans, we are entitled to recovery of environmental clean-up costs from rate payers.

Decommissioning provisions

The decommissioning provisions represent £174 million (2019: £80 million) of expenditure relating to asset retirement obligations estimated to be incurred until 2115, with additional amounts being recognised in the year relating to both interconnectors and other assets commissioned in the year. In addition, £74 million (2019: £90 million) of expenditure relating to the demolition of gas holders is estimated to be incurred until 2026.

Restructuring provisions

In 2019, a cost-efficiency and restructuring programme was undertaken in both our UK and US businesses, as detailed in note 5, which resulted in the recognition of a £125 million charge in that year. £39 million (2019: £42 million) was utilised during the current year, resulting in a closing provision of £35 million (2019: £83 million).

Other provisions

Included within other provisions at 31 March 2020 are the following amounts:

- £37 million (2019: £30 million) in respect of legacy provisions recognised following the sale of UK Gas Distribution;
- £31 million (2019: £29 million) in respect of onerous lease commitments and rates payable on surplus properties with expenditure expected to be incurred until 2039;
- £164 million (2019: £164 million) of estimated liabilities in respect of past events insured by insurance subsidiary undertakings, including employer liability claims. In accordance with insurance industry practice, these estimates are based on experience from previous years, but we currently expect that cash flows will be incurred until 2049; and
- £nil (2019: £13 million) in respect of obligations associated with investments in joint ventures and associates.

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

27. Share capital

Ordinary share capital represents the total number of shares issued which are publicly traded. We also disclose the number of treasury shares the Company holds, which are shares that the Company has bought itself, predominantly to actively manage scrip issuances and settle employee share option and reward plan liabilities.

Share capital is accounted for as an equity instrument. An equity instrument is any contract that includes a residual interest in the consolidated assets of the Company after deducting all its liabilities and is recorded at the proceeds received, net of direct issue costs, with an amount equal to the nominal amount of the shares issued included in the share capital account and the balance recorded in the share premium account.

	Allotted, called-up and fully paid	
	million	£m
At 1 April 2018	3,638	452
Issued during the year in lieu of dividends[1]	49	6
At 31 March 2019	3,687	458
Issued during the year in lieu of dividends[1]	93	12
At 31 March 2020	**3,780**	**470**

1. The issue of shares under the scrip dividend programme is considered to be a bonus issue under the terms of the Companies Act 2006, and the nominal value of the shares is charged to the share premium account.

The share capital of the Company consists of ordinary shares of $12^{204/473}$ pence nominal value each including ADSs. The ordinary shares and ADSs allow holders to receive dividends and vote at general meetings of the Company. The Company holds treasury shares but may not exercise any rights over these shares including the entitlement to vote or receive dividends. There are no restrictions on the transfer or sale of ordinary shares.

In line with the provisions of the Companies Act 2006, the Company has amended its Articles of Association and ceased to have authorised share capital.

Treasury shares
At 31 March 2020, the Company held 272 million (2019: 277 million) of its own shares. The market value of these shares as at 31 March 2020 was £2,574 million (2019: £2,359 million).

For the benefit of employees and in connection with the operation of the Company's various share plans, the Company made the following transactions in respect of its own shares during the year ended 31 March 2020:

i. During the year, 3 million (2019: 3 million) treasury shares were gifted to National Grid Employee Share Trusts and 2 million (2019: 3 million) treasury shares were re-issued in relation to employee share schemes, in total representing approximately 0.1% (2019: 0.2%) of the ordinary shares in issue as at 31 March 2020. The nominal value of these shares was £1 million (2019: £1 million) and the total proceeds received were £17 million (2019: £18 million). National Grid settles share awards under its Long Term Incentive Plan and the Save As You Earn scheme, by the transfer of treasury shares to its employee share trusts.
ii. During the year, the Company made payments totalling £6 million (2019: £2 million) to National Grid Employee Share Trusts to enable the trustees to make purchases of National Grid plc shares to settle share awards in relation to all employee share plans and discretionary reward plans. The cost of such purchases is deducted from retained earnings in the period that the transaction occurs.

The maximum number of ordinary shares held in treasury during the year was 277 million (2019: 283 million) representing approximately 7.3% (2019: 7.7%) of the ordinary shares in issue as at 31 March 2020 and having a nominal value of £34 million (2019: £35 million).

28. Other equity reserves

Other equity reserves are different categories of equity as required by accounting standards and represent the impact of a number of our historical transactions.

Other equity reserves comprise the translation reserve (see accounting policy D in note 1), cash flow hedge reserve and the cost of hedging reserve (see note 32), available-for-sale reserve, debt instruments at fair value through other comprehensive income reserve (FVOCI debt) and equity investments at fair value through other comprehensive income reserve (FVOCI equity) (see note 15), the capital redemption reserve and the merger reserve.

The merger reserve arose as a result of the application of merger accounting principles under the then prevailing UK GAAP, which under IFRS 1 was retained for mergers that occurred prior to the IFRS transition date. Under merger accounting principles, the difference between the carrying amount of the capital structure of the acquiring vehicle and that of the acquired business was treated as a merger difference and included within reserves. The merger reserve represents the difference between the carrying value of subsidiary undertaking investments and their respective capital structures following the Lattice demerger from BG Group plc and the 1999 Lattice refinancing.

The cash flow hedge reserve will amortise as the committed future cash flows from borrowings are paid or capitalised in fixed assets (as described in note 32). Cost of hedging, FVOCI debt, and FVOCI equity reserves arose as a result of the adoption of IFRS 9 on 1 April 2018. See note 15 for further detail on available-for-sale, FVOCI debt and FVOCI equity reserves and note 32 in respect of cost of hedging reserve.

As the amounts included in other equity reserves are not attributable to any of the other classes of equity presented, they have been disclosed as a separate classification of equity.

	Translation £m	Cash flow hedge £m	Cost of hedging £m	Available-for-sale £m	FVOCI equity £m	FVOCI debt £m	Own credit £m	Capital redemption £m	Merger £m	Total £m
At 1 April 2017	894	103	–	162	–	–	–	19	(5,165)	(3,987)
Exchange adjustments[1]	(504)	–	–	–	–	–	–	–	–	(504)
Net gains/(losses) taken to equity[2]	–	296	–	(30)	–	–	–	–	–	266
Share of net gains of associates taken to equity	–	5	–	–	–	–	–	–	–	5
Transferred from profit or loss[2]	–	(280)	–	(73)	–	–	–	–	–	(353)
Tax	–	4	–	29	–	–	–	–	–	33
At 31 March 2018 (as previously reported)	390	128	–	88	–	–	–	19	(5,165)	(4,540)
Transfer on transition to IFRS 9	–	(3)	76	(88)	34	46	7	–	–	72
At 1 April 2018 (as restated)	390	125	76	–	34	46	7	19	(5,165)	(4,468)
Exchange adjustments[1]	346	–	–	–	–	–	–	–	–	346
Net (losses)/gains taken to equity[2]	–	(206)	(107)	–	–	2	7	–	–	(304)
Share of net gains of associates taken to equity	–	1	–	–	–	–	–	–	–	1
Transferred to profit or loss[2]	–	166	41	–	–	–	–	–	–	207
Net losses in respect of cash flow hedging of capital expenditure	–	(13)	–	–	–	–	–	–	–	(13)
Tax	–	6	7	–	–	–	(1)	–	–	12
Cash flow hedges transferred to the statement of financial position, net of tax	–	(18)	–	–	–	–	–	–	–	(18)
At 1 April 2019	736	61	17	–	34	48	13	19	(5,165)	(4,237)
Exchange adjustments[1]	550	–	–	–	–	–	–	–	–	550
Net losses taken to equity	–	(142)	(33)	–	(13)	(15)	(3)	–	–	(206)
Share of net losses of associates taken to equity	–	(5)	–	–	–	–	–	–	–	(5)
Transferred to profit or loss	–	14	(45)	–	–	–	–	–	–	(31)
Net losses in respect of cash flow hedging of capital expenditure	–	(17)	–	–	–	–	–	–	–	(17)
Tax	–	29	11	–	4	(2)	–	–	–	42
Cash flow hedges transferred to the statement of financial position, net of tax	–	(15)	–	–	–	–	–	–	–	(15)
At 31 March 2020	**1,286**	**(75)**	**(50)**	**–**	**25**	**31**	**10**	**19**	**(5,165)**	**(3,919)**

1. The exchange adjustments recorded in the translation reserve comprise a gain of £545 million (2019: gain of £896 million; 2018: loss of £1,304 million) relating to the translation of foreign operations offset by a gain of £5 million (2019: loss of £550 million; 2018: gain of £800 million) relating to borrowings, cross-currency swaps and foreign exchange forward contracts used to hedge the net investment in non-sterling denominated subsidiaries.
2. Following a review in the year, we have changed our presentation of spot foreign exchange movements on derivatives designated in cash flow hedges of foreign currency risk and interest rates. This has no net impact on the consolidated statement of comprehensive income. It has resulted in a prior year gross up to £166 million (2018: £277 million) to ‘Net losses taken to equity’ with an equal and offsetting gross up to ‘Transferred to profit or loss’.

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

29. Net debt

Net debt represents the amount of borrowings and overdrafts less cash, current financial investments and related financing derivatives.

Funding and liquidity risk management is carried out by the treasury function under policies and guidelines approved by the Finance Committee of the Board. The Finance Committee is responsible for the regular review and monitoring of treasury activity and for the approval of specific transactions, the authority for which fall outside the delegation of authority to management.

The primary objective of the treasury function is to manage our funding and liquidity requirements. A further important objective is to manage the associated financial risks, in the form of interest rate risk and foreign exchange risk, to within pre-authorised parameters. Details of the main risks arising from our financing and commodity hedging activities are included in note 32.

Investment of surplus funds, usually in short-term fixed deposits or placements with money market funds that invest in highly liquid instruments of high credit quality, is subject to our counterparty risk management policy.

(a) Reconciliation of net cash flow to movement in net debt

	2020 £m	2019 £m	2018 £m
Decrease in cash and cash equivalents	(183)	(80)	(807)
Decrease in financial investments	(7)	(822)	(5,953)
Increase/(decrease) in borrowings and related derivatives[1]	(23)	(708)	1,209
Net interest paid on the components of net debt[2]	888	866	808
Change in debt resulting from cash flows	675	(744)	(4,743)
Changes in fair value of financial assets and liabilities and exchange movements	(1,081)	(1,648)	2,098
Net interest charge on the components of net debt	(1,097)	(1,076)	(1,017)
Other non-cash movements	(84)	(27)	(66)
Movement in net debt (net of related derivative financial instruments) in the year	(1,587)	(3,495)	(3,728)
Net debt (net of related derivative financial instruments) at start of year	(26,529)	(23,002)	(19,274)
Impact of transition to IFRS 16 (2019: IFRS 9)	(474)	(32)	–
Net debt (net of related derivative financial instruments) at end of year	**(28,590)**	(26,529)	(23,002)

Composition of net debt
Net debt is comprised as follows:

	2020 £m	2019 £m	2018 £m
Cash, cash equivalents and financial investments	2,071	2,233	3,023
Borrowings	(30,794)	(28,730)	(26,625)
Financing derivatives[1]	133	(32)	600
	(28,590)	(26,529)	(23,002)

1. The financing derivatives balance included in net debt excludes the commodity derivatives (see note 17).
2. Excludes £6 million (2019: £23 million; 2018: £27 million) cash interest from the Quadgas shareholder loan included within discontinued operations in the cash flow statement.

29. Net debt continued

(b) Analysis of changes in net debt

	Cash and cash equivalents £m	Financial investments £m	Borrowings £m	Financing derivatives £m	Total[1] £m
At 1 April 2017	1,139	8,741	(28,638)	(516)	(19,274)
Cash flow	(807)	(5,983)	2,108	(61)	(4,743)
Fair value gains and losses and exchange movements	(3)	(149)	1,088	1,162	2,098
Interest income/(charges)	–	85	(1,117)	15	(1,017)
Other non-cash movements	–	–	(66)	–	(66)
At 31 March 2018	329	2,694	(26,625)	600	(23,002)
Impact of transition to IFRS 9	–	–	(32)	–	(32)
At 1 April 2018 (as restated)	329	2,694	(26,657)	600	(23,034)
Cash flow	(80)	(846)	(240)	422	(744)
Fair value gains and losses and exchange movements	3	93	(733)	(1,011)	(1,648)
Interest income/(charges)	–	29	(1,062)	(43)	(1,076)
Other non-cash movements	–	11	(38)	–	(27)
At 1 April 2019	252	1,981	(28,730)	(32)	(26,529)
Impact of transition to IFRS 16	–	–	(474)	–	(474)
Cash flow	(183)	(42)	450	450	675
Fair value gains and losses and exchange movements	4	25	(864)	(246)	(1,081)
Interest income/(charges)	–	34	(1,092)	(39)	(1,097)
Other non-cash movements	–	–	(84)	–	(84)
At 31 March 2020	**73**	**1,998**	**(30,794)**	**133**	**(28,590)**
Balances at 31 March 2020 comprise:					
Non-current assets	–	–	–	1,205	1,205
Current assets	73	1,998	–	62	2,133
Current liabilities	–	–	(4,072)	(254)	(4,326)
Non-current liabilities	–	–	(26,722)	(880)	(27,602)
	73	**1,998**	**(30,794)**	**133**	**(28,590)**

1. Includes accrued interest at 31 March 2020 of £246 million (2019: £223 million; 2018: £197 million).

(c) Reconciliation of cash flow from financing liabilities to cash flow statement

	2020 £m	2019 £m	2018 £m
Cash flows per financing activities section of cash flow statement:			
Proceeds received from loans	**4,218**	2,932	1,941
Repayment of loans	**(3,253)**	(1,969)	(2,156)
Payments of lease liabilities	**(121)**	(70)	(71)
Net movements in short-term borrowings	**(424)**	179	(764)
Net movements in derivatives	**(187)**	35	(267)
Interest paid	**(957)**	(914)	(853)
Cash flows per financing activities section of cash flow statement	**(724)**	193	(2,170)
Adjustments:			
Non-net debt-related items	**34**	24	12
Derivative cash inflow in relation to capital expenditure	**13**	13	12
Derivative cash flows per investing section of cash flow statement	**(223)**	(412)	330
Discontinued operations	**–**	–	(231)
Cash flows relating to financing liabilities within net debt	**(900)**	(182)	(2,047)
Analysis of changes in net debt:			
Borrowings	**(450)**	240	(2,108)
Financing derivatives	**(450)**	(422)	61
Cash flow movements relating to financing liabilities within net debt	**(900)**	(182)	(2,047)

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

29. Net debt continued

(d) Reconciliation of changes in liabilities arising from financing activities

The table below reconciles changes in liabilities arising from financing activities, including both changes arising from cash flows and non-cash changes. Liabilities arising from financing activities are those for which cash flows were, or future cash flows will be, classified in the statement of cash flows within financing activities.

Following a review in the year, we have changed our accounting policy in relation to the presentation of certain derivatives in the cash flow statement to be presented as investing activities rather than financing activities (further detail is disclosed in note 1). The reclassified cash flows are in relation to derivatives associated with our net investment hedges, and given they are designated in a hedge relationship, the Group has decided to present them together with the underlying hedged item rather than as part of our overall financing activities.

As a result we have separately disclosed the reconciliation below, excluding derivatives associated with our net investment hedges, given that they are classified in the statement of cash flows within investing activities.

	Borrowings £m	Financing derivatives £m	Total £m
At 1 April 2017	(28,638)	16	(28,622)
Cash flow	2,108	281	2,389
Fair value gains and losses and exchange movements	1,088	222	1,310
Interest income/(charges)	(1,117)	34	(1,083)
Other non-cash movements	(66)	–	(66)
At 31 March 2018	(26,625)	553	(26,072)
Impact of transition to IFRS 9	(32)	–	(32)
At 1 April 2018 (as restated)	(26,657)	553	(26,104)
Cash flow	(240)	23	(217)
Fair value gains and losses and exchange movements	(733)	(334)	(1,067)
Interest charges	(1,062)	(14)	(1,076)
Other non-cash movements	(38)	–	(38)
At 1 April 2019	(28,730)	228	(28,502)
Impact of transition to IFRS 16	(474)	–	(474)
Cash flow	450	240	690
Fair value gains and losses and exchange movements	(864)	(231)	(1,095)
Interest charges	(1,092)	(9)	(1,101)
Other non-cash movements	(84)	–	(84)
At 31 March 2020	**(30,794)**	**228**	**(30,566)**

Notes to the consolidated financial statements
– supplementary information

This section includes information that is important to enable a full understanding of our financial position, particularly areas of potential uncertainty that could affect us in the future.

We also include specific disclosures for Niagara Mohawk Power Corporation in accordance with various rules including Rule 3-10 of Regulation S-X (a US SEC requirement), as they have issued public debt securities which have been guaranteed by National Grid plc. Additional disclosures have also been included in respect of the guarantor company. These disclosures are in lieu of publishing separate financial statements for these companies (see note 36 for further information).

30. Commitments and contingencies

Commitments are those amounts that we are contractually required to pay in the future as long as the other party meets its obligations. These commitments primarily relate to energy purchase agreements and contracts for the purchase of assets which, in many cases, extend over a long period of time. Commitments previously included operating lease commitments but on transition to IFRS 16, which was effective from 1 April 2019, substantially all lease commitments are included on the balance sheet as right-of-use assets (see note 13) and lease liabilities (see note 21). Therefore, only low-value leases and short-term leases are off-balance sheet commitments, both of which are immaterial. We also disclose any contingencies, which include guarantees that companies have given, where we pledge assets against current obligations that will remain for a specific period.

	2020 £m	2019 £m
Future capital expenditure		
Contracted for but not provided	**2,629**	1,973
Energy purchase commitments[1]		
Less than 1 year	**1,365**	1,353
In 1 to 2 years	**890**	779
In 2 to 3 years	**973**	651
In 3 to 4 years	**955**	827
In 4 to 5 years	**861**	862
More than 5 years	**11,314**	11,237
	16,358	15,709
Guarantees[2]		
Guarantee of sublease for US property (expires 2040)	**173**	173
Guarantees of certain obligations of Grain LNG (expire up to 2025)	**34**	39
Guarantees of certain obligations for construction of HVDC West Coast Link (expected expiry 2020)	**92**	139
Guarantees of certain obligations of Nemo Link Limited (expired 2019)	**–**	19
Guarantees of certain obligations of National Grid North Sea Link Limited (various expiry dates)[2]	**683**	865
Guarantees of certain obligations of St William Homes LLP (various expiry dates)[3]	**30**	22
Guarantees of certain obligations for construction of IFA 2 (expected expiry 2022)[2]	**564**	505
Guarantees of certain obligations of National Grid Viking Link Limited (expected expiry 2024)	**1,096**	872
Other guarantees and letters of credit (various expiry dates)	**150**	341
	2,822	2,975

	2019 £m
Operating lease commitments	
Less than 1 year	43
In 1 to 2 years	39
In 2 to 3 years	34
In 3 to 4 years	35
In 4 to 5 years	27
More than 5 years	123
	301

1. Energy purchase commitments relate to contractual commitments to purchase electricity or gas that are used to satisfy physical delivery requirements to our customers or for energy that we use ourselves (i.e. normal purchase, sale or usage) and hence are accounted for as ordinary purchase contracts (see note 32(f)). Details of commodity contract derivatives that do not meet the normal purchase, sale or usage criteria, and hence are accounted for as derivative contracts, are shown in note 17(b).
2. Included within total guarantees are guarantees to both joint ventures and Engineering, Procurement and Construction contractors regarding the construction of interconnectors of £358 million (2019: £470 million).
3. Includes guarantees to related parties.

Through the ordinary course of our operations, we are party to various litigation, claims and investigations. We do not expect the ultimate resolution of any of these proceedings to have a material adverse effect on our results of operations, cash flows or financial position.

Notes to the consolidated financial statements
– supplementary information continued

31. Related party transactions

Related parties include joint ventures, associates, investments and key management personnel.

The following significant transactions with related parties were in the normal course of business. Amounts receivable from and payable to related parties are due on normal commercial terms:

	2020 £m	2019 £m	2018 £m
Sales: Goods and services supplied to a pension plan	**5**	5	3
Sales: Goods and services supplied to joint ventures[1]	**101**	151	14
Sales: Goods and services supplied to associates[2]	**33**	192	220
Purchases: Goods and services received from joint ventures[3]	**61**	26	135
Purchases: Goods and services received from associates[3]	**56**	141	160
Receivable from joint ventures[4]	**255**	584	160
Receivable from associates[4]	**1**	368	376
Payable to joint ventures	**72**	8	–
Payable to associates	**4**	12	17
Interest income from joint ventures	**2**	5	4
Interest income from associates	**8**	23	27
Dividends received from joint ventures[5]	**34**	30	43
Dividends received from associates[6]	**41**	171	170

1. During the year, £38 million (2019: £139 million) of property sites were sold to a joint venture, St William Homes LLP. A further £32 million of sales were made to NGET/SPT Upgrades Limited in 2020.
2. Sales relate to transactions with Quadgas, until the date it ceased to be a related party following the disposal of our 39% stake in June 2019 (see note 10). Included within this is other income of £31 million (2019: £52 million) relating to a Transitional Service Agreement following the sale of the UK Gas Distribution business to Quadgas.
3. During the year, the Group received goods and services from a number of US associates, both for the transportation of gas and for pipeline services in the US, most notably, £31 million (2019: £30 million) of purchases from Millennium Pipeline Company LLC. The Group also purchased capitalised assets of £58 million (2019: £26 million) from NGET/SPT Upgrades Limited (a joint venture).
4. Amounts receivable from associates includes a loan receivable balance of £242 million (2019: £325 million) in relation to St William Homes LLP (a joint venture). There is no longer a loan receivable from Quadgas (2019: £352 million) and Nemo Link (a joint venture) (2019: £258 million). The loan receivable balance from Nemo Link was transferred to equity during 2020 (see note 16 for details).
5. Dividends of £25 million (2019: £30 million) were received from BritNed Development Limited.
6. Includes £32 million (2019: £24 million) of dividend income from Millennium Pipeline Company LLC. No dividends were received from Quadgas this year (2019: £133 million).

Details of investments in principal subsidiary undertakings, joint ventures and associates are disclosed in note 34, and information relating to pension fund arrangements is disclosed in note 25. For details of Directors' and key management remuneration, refer to the Directors' Remuneration Report on pages 88 – 108 and note 4(c).

32. Financial risk management

Our activities expose us to a variety of financial risks including credit risk, liquidity risk, capital risk, currency risk, interest rate risk, inflation risk and commodity price risk. Our risk management programme focuses on the unpredictability of financial markets and seeks to minimise potential volatility of financial performance from these risks. We use financial instruments, including derivative financial instruments, to manage these risks.

Risk management related to financing activities is carried out by a central treasury department under policies approved by the Finance Committee of the Board. The objective of the treasury department is to manage funding and liquidity requirements, including managing associated financial risks, to within acceptable boundaries. The Finance Committee provides written principles for overall risk management, and written policies covering the following specific areas: foreign exchange risk, interest rate risk, credit risk, liquidity risk, use of derivative financial instruments and non-derivative financial instruments, and investment of excess liquidity. The Finance Committee has delegated authority to administer the commodity price risk policy and credit policy for US-based commodity transactions to the Energy Procurement Risk Management Committee and the National Grid USA Board of Directors. Details of key activities in the current year are set out in the Finance Committee report on page 82.

We have exposure to the following risks, which are described in more detail below:
- credit risk;
- liquidity risk;
- currency risk;
- interest rate risk;
- commodity price risk; and
- capital risk.

Where appropriate, derivatives and other financial instruments used for hedging currency and interest rate risk exposures are formally designated as fair value, cash flow or net investment hedges as defined in IFRS 9. Hedge accounting allows the timing of the profit or loss impact of qualifying hedging instruments to be recognised in the same reporting period as the corresponding impact of hedged exposures. To qualify for hedge accounting, documentation is prepared specifying the risk management objective and strategy, the component transactions and methodology used for measurement of effectiveness.

32. Financial risk management continued

Hedge accounting relationships are designated in line with risk management activities further described below. Categories designated at National Grid are as follows:

- currency risk arising from our forecasted foreign currency transactions (capital expenditure or revenues) is designated in cash flow hedges;
- currency risk arising from our net investments in foreign operations is designated in net investment hedges; and
- currency and interest rate risk arising from borrowings are designated in cash flow or fair value hedges.

Critical terms of hedging instruments and hedged items are transacted to match on a 1:1 ratio by notional values. Hedge ineffectiveness can nonetheless arise from inherent differences between derivatives and non-derivative instruments and other market factors including credit, correlations, supply and demand, and market volatilities. Ineffectiveness is recognised in the remeasurements component of finance income and costs (see note 6). Hedge accounting is discontinued when a hedging relationship no longer qualifies for hedge accounting.

Certain hedging instrument components are treated separately as costs of hedging with the gains and losses deferred in a component of other equity reserves and released systematically into profit or loss to correspond with the timing and impact of hedged exposures, or released in full to finance costs upon an early discontinuation of a hedging relationship.

Refer to sections (c) currency risk and (d) interest rate risk below for further details about hedge accounting.

(a) Credit risk

We are exposed to the risk of loss resulting from counterparties' default on their commitments including failure to pay or make a delivery on a contract. This risk is inherent in our commercial business activities. Exposure arises from derivative financial instruments, deposits with banks and financial institutions, trade receivables and committed transactions with wholesale and retail customers.

Treasury credit risk

Counterparty risk arises from the investment of surplus funds and from the use of derivative financial instruments. As at 31 March 2020, the following limits were in place for investments held with banks and financial institutions:

	Maximum limit £m	Long-term limit £m
Triple 'A' G7 sovereign entities (AAA)	2,049	1,024
Triple 'A' vehicles (AAA)	500	–
Triple 'A' range institutions and non-G7 sovereign entities (AAA)	1,118	559
Double 'A+' G7 sovereign entities (AA+)	1,863	931
Double 'A' range institutions (AA)	745 to 931	372 to 465
Single 'A' range institutions (A)	261 to 373	130 to 186

The maximum limit applies to all transactions, including long-term transactions. The long-term limit applies to transactions which mature in more than 12 months' time.

As at 31 March 2020 and 2019, we had a number of exposures to individual counterparties. In accordance with our treasury policies, counterparty credit exposure utilisations are monitored daily against the counterparty credit limits. Counterparty credit ratings and market conditions are reviewed continually with limits being revised and utilisation adjusted, if appropriate. Management does not expect any significant losses from non-performance by these counterparties. Further information on financial investments subject to impairment provisioning is included in note 15.

Commodity credit risk

The credit policy for US-based commodity transactions is owned by the Finance Committee to the Board, which establishes controls and procedures to determine, monitor and minimise the credit exposure to counterparties.

Wholesale and retail credit risk

Our principal commercial exposure in the UK is governed by the credit rules within the regulated codes: Uniform Network Code and Connection and Use of System Code. These set out the level of credit relative to the RAV for each credit rating. In the US, we are required to supply electricity and gas under state regulations. Our policies and practices are designed to limit credit exposure by collecting security deposits prior to providing utility services, or after utility service has commenced if certain applicable regulatory requirements are met. Collection activities are managed on a daily basis. Sales to retail customers are usually settled in cash, cheques, electronic bank payments or by using major credit cards. We are committed to measuring, monitoring, minimising and recording counterparty credit risk in our wholesale business. The utilisation of credit limits is regularly monitored, and collateral is collected against these accounts when necessary. In March 2020, the Group's US distribution business ceased certain cash collection and termination activities in response to regulatory instructions following the COVID-19 pandemic. This has resulted in the recognition of expected credit losses as at 31 March 2020 (see note 19 for further details).

Notes to the consolidated financial statements – supplementary information continued

32. Financial risk management continued

(a) Credit risk continued

Offsetting financial assets and liabilities

The following tables set out our financial assets and liabilities which are subject to offset and to enforceable master netting arrangements or similar agreements. The tables show the amounts which are offset and reported net in the statement of financial position. Amounts which cannot be offset under IFRS, but which could be settled net under terms of master netting arrangements if certain conditions arise, and with collateral received or pledged, are shown to present National Grid's net exposure.

Financial assets and liabilities on different transactions are only reported net if the transactions are with the same counterparty, a currently enforceable legal right of offset exists, and the cash flows are intended to be settled on a net basis.

Amounts which do not meet the criteria for offsetting on the statement of financial position, but could be settled net in certain circumstances, principally relate to derivative transactions under ISDA agreements, where each party has the option to settle amounts on a net basis in the event of default of the other party.

Commodity contract derivatives that have not been offset on the balance sheet may be settled net in certain circumstances under ISDA or North American Energy Standards Board (NAESB) agreements.

For bank account balances and bank overdrafts, the 'Gross amounts offset' under cash pooling arrangements is £23 million as at 31 March 2020 (2019: £19 million). Our UK bank accounts for National Grid subsidiaries participate in GBP, EUR and USD Composite Accounting System overdraft facilities subject to offsetting gross and net overdraft limits. In the US, no offsetting arrangements exist, and cash transactions are settled through Service Company bank accounts with subsequent intercompany payables and receivables reported by subsidiaries with the Service Company.

The gross amounts offset for trade payables and receivables, which are subject to general terms and conditions, are insignificant.

				Related amounts available to be offset but not offset in statement of financial position		
At 31 March 2020	**Gross carrying amounts £m**	**Gross amounts offset £m**	**Net amount presented in statement of financial position £m**	**Financial instruments £m**	**Cash collateral received/ pledged £m**	**Net amount £m**
Assets						
Financing derivatives	**1,267**	**–**	**1,267**	**(351)**	**(694)**	**222**
Commodity contract derivatives	**75**	**–**	**75**	**(5)**	**(3)**	**67**
	1,342	**–**	**1,342**	**(356)**	**(697)**	**289**
Liabilities						
Financing derivatives	**(1,134)**	**–**	**(1,134)**	**351**	**646**	**(137)**
Commodity contract derivatives	**(200)**	**–**	**(200)**	**5**	**8**	**(187)**
	(1,334)	**–**	**(1,334)**	**356**	**654**	**(324)**
	8	**–**	**8**	**–**	**(43)**	**(35)**

				Related amounts available to be offset but not offset in statement of financial position		
At 31 March 2019	Gross carrying amounts £m	Gross amounts offset £m	Net amount presented in statement of financial position £m	Financial instruments £m	Cash collateral received/ pledged £m	Net amount £m
Assets						
Financing derivatives	1,052	–	1,052	(299)	(551)	202
Commodity contract derivatives	101	–	101	29	–	130
	1,153	–	1,153	(270)	(551)	332
Liabilities						
Financing derivatives	(1,084)	–	(1,084)	299	615	(170)
Commodity contract derivatives	(99)	–	(99)	(29)	–	(128)
	(1,183)	–	(1,183)	270	615	(298)
	(30)	–	(30)	–	64	34

32. Financial risk management continued

(b) Liquidity risk

Our policy is to determine our liquidity requirements by the use of both short-term and long-term cash flow forecasts. These forecasts are supplemented by a financial headroom analysis which is used to assess funding requirements for at least a 24-month period and maintain adequate liquidity for a continuous 12-month period.

We believe our contractual obligations, including those shown in commitments and contingencies in note 30, can be met from existing cash and investments, operating cash flows and other financing that we reasonably expect to be able to secure in the future, together with the use of committed facilities if required.

Our debt agreements and banking facilities contain covenants, including those relating to the periodic and timely provision of financial information by the issuing entity and financial covenants such as restrictions on the level of subsidiary indebtedness. Failure to comply with these covenants, or to obtain waivers of those requirements, could in some cases trigger a right, at the lender's discretion, to require repayment of some of our debt and may restrict our ability to draw upon our facilities or access the capital markets.

The following is a maturity profile of our financial liabilities and derivatives:

At 31 March 2020	Less than 1 year £m	1 to 2 years £m	2 to 3 years £m	More than 3 years £m	Total £m
Non-derivative financial liabilities					
Borrowings, excluding lease liabilities	**(3,672)**	**(2,150)**	**(1,611)**	**(22,214)**	**(29,647)**
Interest payments on borrowings[1]	**(765)**	**(750)**	**(714)**	**(12,002)**	**(14,231)**
Lease liabilities	**(132)**	**(114)**	**(99)**	**(629)**	**(974)**
Other non-interest-bearing liabilities	**(3,149)**	**(318)**	**–**	**–**	**(3,467)**
Contingent consideration	**(32)**	**(16)**	**(32)**	**(16)**	**(96)**
Derivative financial liabilities					
Financing derivatives – receipts[2]	**2,249**	**986**	**1,208**	**3,510**	**7,953**
Financing derivatives – payments[2]	**(2,582)**	**(1,136)**	**(1,463)**	**(4,067)**	**(9,248)**
Commodity contract derivatives – receipts[2]	**4**	**2**	**–**	**–**	**6**
Commodity contract derivatives – payments[2]	**(116)**	**(50)**	**(24)**	**(12)**	**(202)**
Derivative financial assets					
Financing derivatives – receipts[2]	**2,469**	**1,063**	**570**	**1,775**	**5,877**
Financing derivatives – payments[2]	**(2,271)**	**(527)**	**(375)**	**(1,478)**	**(4,651)**
Commodity contract derivatives – receipts[2]	**20**	**1**	**1**	**–**	**22**
Commodity contract derivatives – payments[2]	**(21)**	**–**	**–**	**–**	**(21)**
	(7,998)	**(3,009)**	**(2,539)**	**(35,133)**	**(48,679)**

At 31 March 2019	Less than 1 year £m	1 to 2 years £m	2 to 3 years £m	More than 3 years £m	Total £m
Non-derivative financial liabilities					
Borrowings, excluding lease liabilities	(4,129)	(2,348)	(1,998)	(19,673)	(28,148)
Interest payments on borrowings[1]	(800)	(733)	(721)	(13,465)	(15,719)
Lease liabilities	(72)	(63)	(52)	(123)	(310)
Other non-interest-bearing liabilities	(3,306)	(340)	–	–	(3,646)
Derivative financial liabilities					
Financing derivatives – receipts[2]	3,045	1,703	163	2,560	7,471
Financing derivatives – payments[2]	(3,421)	(2,029)	(223)	(3,276)	(8,949)
Commodity contract derivatives – receipts[2]	2	3	1	–	6
Commodity contract derivatives – payments[2]	(98)	(26)	(4)	(1)	(129)
Derivative financial assets					
Financing derivatives – receipts[2]	1,928	561	863	1,112	4,464
Financing derivatives – payments[2]	(1,251)	(459)	(783)	(875)	(3,368)
Commodity contract derivatives – receipts[2]	23	9	2	–	34
Commodity contract derivatives – payments[2]	–	(5)	(1)	–	(6)
	(8,079)	(3,727)	(2,753)	(33,741)	(48,300)

1. The interest on borrowings is calculated based on borrowings held at 31 March without taking account of future issues. Floating rate interest is estimated using a forward interest rate curve as at 31 March. Payments are included on the basis of the earliest date on which the Company can be required to settle.
2. The receipts and payments line items for derivatives comprise gross undiscounted future cash flows, after considering any contractual netting that applies within individual contracts. Where cash receipts and payments within a derivative contract are settled net, and the amount to be received/(paid) exceeds the amount to be paid/(received), the net amount is presented within derivative receipts/(payments).

Notes to the consolidated financial statements
– supplementary information continued

32. Financial risk management continued

(c) Currency risk

National Grid operates internationally with mainly the pound sterling as the functional currency for the UK companies and the US dollar for the US businesses. Currency risk arises from three major areas: funding activities, capital investment and related revenues, and holdings in foreign operations. This risk is managed using financial instruments including derivatives as approved by policy, typically cross-currency interest rate swaps, foreign exchange swaps and forwards.

Funding activities – our policy is to borrow in the most advantageous market available. Foreign currency funding gives rise to risk of volatility in the amount of functional currency cash to be repaid. This risk is reduced by swapping principal and interest back into the functional currency of the issuer. All foreign currency debt and transactions are hedged except where they provide a natural offset to assets elsewhere in the Group.

Capital investment and related revenues – capital projects often incur costs or generate revenues in a foreign currency, most often euro transactions done by the UK business. Our policy for managing foreign exchange transaction risk is to hedge contractually committed foreign currency cash flows over a prescribed minimum size, typically by buying euro forwards to hedge future expenditure, and selling euro forwards to hedge future revenues. For hedges of forecast cash flows our policy is to hedge a proportion of highly probable cash flows.

Holdings in foreign operations – we are exposed to fluctuations on the translation into pounds sterling of our foreign operations. The policy for managing this translation risk is to issue foreign currency debt or to replicate foreign debt using derivatives that pay cash flows in the currency of the foreign operation. The primary managed exposure arises from dollar denominated assets and liabilities held by our US operations, with a smaller euro exposure in respect of joint venture investments.

Derivative financial instruments were used to manage foreign currency risk as follows:

	2020					2019				
	Sterling £m	Euro £m	Dollar £m	Other £m	Total £m	Sterling £m	Euro £m	Dollar £m	Other £m	Total £m
Cash and cash equivalents	18	–	55	–	73	97	2	153	–	252
Financial investments	813	–	1,185	–	1,998	965	–	1,016	–	1,981
Borrowings	(12,407)	(4,150)	(13,217)	(1,020)	(30,794)	(10,591)	(4,787)	(12,126)	(1,226)	(28,730)
Pre-derivative position	(11,576)	(4,150)	(11,977)	(1,020)	(28,723)	(9,529)	(4,785)	(10,957)	(1,226)	(26,497)
Derivative effect	(1,169)	4,341	(4,214)	1,175	133	(1,055)	4,803	(5,245)	1,465	(32)
Net debt position	(12,745)	191	(16,191)	155	(28,590)	(10,584)	18	(16,202)	239	(26,529)

The exposure to dollars largely relates to our net investment hedge activities; exposure to euros largely relates to hedges for our future non-sterling capital expenditure.

The currency exposure on other financial instruments is as follows:

	2020					2019				
	Sterling £m	Euro £m	Dollar £m	Other £m	Total £m	Sterling £m	Euro £m	Dollar £m	Other £m	Total £m
Trade and other receivables	306	–	1,403	–	1,709	398	–	1,635	–	2,033
Trade and other payables	(1,177)	–	(2,002)	–	(3,179)	(1,221)	–	(2,085)	–	(3,306)
Other non-current liabilities	(85)	–	(277)	–	(362)	(93)	–	(247)	–	(340)

The carrying amounts of other financial instruments are denominated in the above currencies, which in most instances are the functional currency of the respective subsidiaries. Our exposure to dollars is due to activities in our US subsidiaries. We do not have any other significant exposure to currency risk on these balances.

Hedge accounting for currency risk

Where available, derivatives transacted for hedging are designated for hedge accounting. Economic offset is qualitatively determined because the critical terms (currency and volume) of the hedging instrument match the hedged exposure. If a forecast transaction was no longer expected to occur, the cumulative gain or loss previously reported in equity would be transferred to the income statement. This has not occurred in the current or comparative years.

Cash flow hedging of currency risk of capital expenditure and revenues is designated as hedging the exposure to movements in the spot translation rates only; the timing of forecasted transactions is not designated as a hedged risk. Gains and losses on hedging instruments arising from forward points and foreign currency basis spreads are excluded from designation and are recognised immediately in profit or loss, along with any hedge ineffectiveness. On recognition of the hedged purchase or sale in the financial statements, the associated hedge gains and losses, deferred in the cash flow hedge reserve in other equity reserves, are transferred out of reserves and included with the recognition of the underlying transaction. Where a non-financial asset or a non-financial liability results from a forecast transaction or firm commitment being hedged, the amounts deferred in reserves are included directly in the initial measurement of that asset or liability.

Net investment hedging is also designated as hedging the exposure to movements in spot translation rates only: spot-related gains and losses on hedging instruments are presented in the cumulative translation reserve within other equity reserves to offset gains or losses on translation of the hedged balance sheet exposure. Any ineffectiveness is recognised immediately in the income statement. Gains and losses arising from forward points and foreign currency basis spreads are excluded from designation and are treated as a cost of hedging, deferred initially in other equity reserves and released into profit or loss over the life of the hedging relationship. Amounts deferred in the cumulative translation reserve with respect to net investment hedges are subsequently recognised in the income statement in the event of disposal of the overseas operations concerned. Any remaining amounts deferred in the cost of hedging reserve are also released to the income statement.

Hedges of foreign currency funding are designated as cash flow hedges or fair value hedges of forward exchange risk (hedging both currency and interest rate risk together, where applicable). Hedge accounting for funding is described further in the interest rate risk section below.

32. Financial risk management continued

(d) Interest rate risk

National Grid's interest rate risk arises from our long-term borrowings. Our interest rate risk management policy is to seek to minimise total financing costs (being interest costs and changes in the market value of debt). Hedging instruments principally consist of interest rate and cross-currency swaps that are used to translate foreign currency debt into functional currency and to adjust the proportion of fixed-rate and floating-rate in the borrowings portfolio to within a range set by the Finance Committee of the Board. The benchmark interest rates hedged are currently based on LIBOR.

LIBOR is being replaced as an interest rate benchmark by alternative reference rates in certain currencies including our functional currencies, USD and GBP, and foreign currencies in which we operate. This impacts contracts including financial liabilities that pay LIBOR-based cash flows, and derivatives that receive or pay LIBOR-based cash flows. The change in benchmark also affects discount rates which can impact valuations. We are managing the risk by planning to replace LIBOR cash flows with alternative reference rates on our affected contracts.

We also consider inflation risk and hold some inflation-linked borrowings. We believe that these provide a partial economic offset to the inflation risk associated with our UK inflation-linked revenues.

The table in note 21 sets out the carrying amount, by contractual maturity, of borrowings that are exposed to interest rate risk before taking into account interest rate swaps.

Net debt was managed using derivative financial instruments to hedge interest rate risk as follows:

	2020					2019				
	Fixed rate £m	**Floating rate £m**	**Inflation linked £m**	**Other[1] £m**	**Total £m**	Fixed rate £m	Floating rate £m	Inflation linked £m	Other[1] £m	Total £m
Cash and cash equivalents	**71**	**10**	**–**	**(8)**	**73**	59	104	–	89	252
Financial investments	**–**	**1,966**	**–**	**32**	**1,998**	6	1,944	–	31	1,981
Borrowings	**(20,969)**	**(3,085)**	**(6,740)**	**–**	**(30,794)**	(19,043)	(3,045)	(6,642)	–	(28,730)
Pre-derivative position	**(20,898)**	**(1,109)**	**(6,740)**	**24**	**(28,723)**	(18,978)	(997)	(6,642)	120	(26,497)
Derivative effect	**2,259**	**(1,892)**	**(234)**	**–**	**133**	1,740	(1,559)	(213)	–	(32)
Net debt position	**(18,639)**	**(3,001)**	**(6,974)**	**24**	**(28,590)**	(17,238)	(2,556)	(6,855)	120	(26,529)

1. Represents financial instruments which are not directly affected by interest rate risk, such as investments in equity or other similar financial instruments.

Hedge accounting for interest rate risk

Borrowings paying variable or floating-rates expose National Grid to cash flow interest rate risk, partially offset by cash held at variable rates. Where a hedging instrument results in paying a fixed-rate, it is designated as a cash flow hedge because it has reduced the cash flow volatility of the hedged borrowing. Changes in the fair value of the derivative are initially recognised in other comprehensive income as gains or losses in the cash flow hedge reserve, with any ineffective portion recognised immediately in the income statement.

Borrowings paying fixed-rates expose National Grid to fair value interest rate risk. Where the hedging instrument pays a floating-rate, it is designated as a fair value hedge because it has reduced the fair value volatility of the borrowing. Changes in the fair value of the derivative and changes in the fair value of the hedged item in relation to the risk being hedged are both adjusted on the balance sheet and offset in the income statement to the extent the fair value hedge is effective, with the residual difference remaining as ineffectiveness.

Both types of hedges are designated as hedging the currency and interest rate risk arising from changes in forward points. Amounts accumulated in the cash flow hedge reserve (cash flow hedges only) and the deferred cost of hedging reserve (both cash flow and fair value hedges) are reclassified from reserves to the income statement on a systematic basis as hedged interest expense is recognised. Adjustments made to the carrying value of hedged items in fair value hedges are similarly released to the income statement to match the timing of the hedged interest expense.

When hedge accounting is discontinued, any remaining cumulative hedge accounting balances continue to be released to the income statement to match the impact of outstanding hedged items. Any remaining amounts deferred in the cost of hedging reserve are released immediately to the income statement as finance costs.

The Group early-adopted IFRS Interest Rate Benchmark Reform amendments related to hedge accounting, with effect from 1 April 2019. The amendments allow existing hedge designations to continue unchanged during the period of uncertainty relating to the timing and method of benchmark migrations.

The amendments will be applied until the earlier point in time where affected cash flows are amended, the relationship is formally discontinued, and any cash flow hedge reserve balance has been released, or formal market conventions ending uncertainty are published and widely adopted. If amended cash flows do not cause a hedging relationship to be discontinued, then the amendments will cease to be applied only when that relationship is discontinued under IFRS 9.

The IFRS amendments impact fair value and cash flow hedges of interest rate risk and related hedging instruments, and certain net investment hedges that use cross-currency interest rate swaps to pay a foreign currency floating rate and receive a functional currency floating rate. The notional values of hedging instruments, for each type of hedging relationship impacted, are shown in the hedge accounting tables in note 32(e). These amounts also correspond to the exposures designated as hedged.

Notes to the consolidated financial statements – supplementary information continued

32. Financial risk management continued

(e) Hedge accounting

In accordance with the requirements of IFRS 9, certain additional information about hedge accounting is disaggregated by risk type and hedge designation type in the tables below:

Year ended 31 March 2020	Fair value hedges of foreign currency and interest rate risk £m	Cash flow hedges of foreign currency and interest rate risk £m	Cash flow hedges of foreign currency risk £m	Net investment hedges £m
Consolidated statement of comprehensive income				
Net losses in respect of:				
Cash flow hedges		(143)	(17)	–
Cost of hedging	5	(7)	–	(30)
Transferred to profit or loss in respect of:				
Cash flow hedges	–	14	–	–
Cost of hedging	1	(1)	–	(45)
Consolidated statement of changes in equity				
Other equity reserves – cost of hedging balances	2	(8)	–	(43)
Consolidated statement of financial position				
Derivatives – carrying value of hedging instruments[1]				
Assets – current	1	–	4	9
Assets – non-current	247	106	8	–
Liabilities – current	(1)	(105)	(8)	(82)
Liabilities – non-current	(39)	(264)	(12)	(19)
Profiles of the significant timing, price and rate information of hedging instruments				
Maturity range	May 2020 – Feb 2040	Jul 2020 – Dec 2039	Apr 2020 – Dec 2024	Jun 2020 – Sep 2027
Spot foreign exchange range:				
GBP:USD	1.64	1.30 – 1.66	1.24 – 1.41	1.21 – 1.49
GBP:EUR	1.19 – 1.24	1.10 – 1.24	1.04 – 1.30	1.14
EUR:USD	1.13 – 1.17	1.13 – 1.14	n/a	n/a
Interest rate range:				
GBP	LIBOR +30bps/+408bps	1.331% – 5.850%	n/a	n/a
USD	LIBOR -44bps/+ 115bps	1.103% – 3.864%	n/a	n/a

1. The use of derivatives may entail a derivative transaction qualifying for more than one hedge type designation under IFRS 9. Therefore, the derivative amounts in the table above are grossed up by hedge type, whereas they are presented net at an instrument level in the statement of financial position.

32. Financial risk management continued

(e) Hedge accounting continued

Year ended 31 March 2019	Fair value hedges of foreign currency and interest rate risk £m	Cash flow hedges of foreign currency and interest rate risk £m	Cash flow hedges of foreign currency risk £m	Net investment hedges £m
Consolidated statement of comprehensive income				
Net losses in respect of:				
Cash flow hedges[1]	–	(206)	(12)	–
Cost of hedging	(6)	(12)	–	(90)
Transferred to profit or loss in respect of:				
Cash flow hedges[1]	–	166	–	–
Cost of hedging	3	–	–	39
Consolidated statement of changes in equity				
Other equity reserves – cost of hedging balances	(4)	–	–	32
Consolidated statement of financial position				
Derivatives – carrying value of hedging instruments[2]				
Assets – current	17	–	9	–
Assets – non-current	168	78	23	–
Liabilities – current	(9)	(28)	(3)	(43)
Liabilities – non-current	(25)	(134)	(4)	(249)
Profiles of the significant timing, price and rate information of hedging instruments				
Maturity range	Nov 2019 – May 2038	Aug 2019 – Feb 2039	Apr 2019 – Dec 2023	Mar 2020 – Jun 2025
Spot foreign exchange range:				
GBP:USD	1.64 – 1.65	1.52 – 1.66	1.29 – 1.41	1.49
GBP:EUR	1.19 – 1.24	1.14 – 1.24	1.07 – 1.32	1.15
EUR:USD	1.13 – 1.16	1.13 – 1.14	n/a	n/a
Interest rate range:				
GBP	LIBOR +30bps/+561bps	1.795% – 5.850%	n/a	n/a
USD	LIBOR -44bps/+115bps	1.103% – 3.864%	n/a	n/a

1. Following a review in the year, we have changed our presentation of spot foreign exchange movements on derivatives designated in cash flow hedges of foreign currency risk and interest rates. This has no net impact on the consolidated statement of comprehensive income. It has resulted in a prior year gross up of £166 million to net losses in respect of cash flow hedges with an equal and offsetting gross up to transferred to profit and loss in respect of cash flow hedges.
2. The use of derivatives may entail a derivative transaction qualifying for more than one hedge type designation under IFRS 9. Therefore, the derivative amounts in the table above are grossed up by hedge type, whereas they are presented net at an instrument level in the statement of financial position.

Notes to the consolidated financial statements – supplementary information continued

32. Financial risk management continued

(e) Hedge accounting continued

The following tables show the effects of hedge accounting on financial position and year-to-date performance for each type of hedge. These tables also present notional values of hedging instruments (and equal hedged exposures) impacted by IFRS 9 Interest Rate Benchmark Reform amendments.

(i) Fair value hedges of foreign currency and interest rate risk on recognised borrowings:

As at 31 March 2020		Balance of fair value hedge adjustments in borrowings		Change in value used for calculating ineffectiveness		
Hedge type	**Hedging instrument notional £m**	**Continuing hedges £m**	**Discontinued hedges £m**	**Hedged item £m**	**Hedging instrument £m**	**Hedge ineffectiveness £m**
Foreign currency and interest rate risk on borrowings[1,2]	**(1,751)**	**(31)**	**(95)**	**(42)**	**48**	**6**

1. The carrying value of the hedged borrowings is £1,883 million, of which £72 million is current and £1,811 million is non-current.
2. Included within the hedging instrument notional balance is £1,675 million impacted by Interest Rate Benchmark Reform amendments.

As at 31 March 2019		Balance of fair value hedge adjustments in borrowings		Change in value used for calculating ineffectiveness		
Hedge type	Hedging instrument notional £m	Continuing hedges £m	Discontinued hedges £m	Hedged item £m	Hedging instrument £m	Hedge ineffectiveness £m
Foreign currency and interest rate risk on borrowings[1]	(1,707)	11	(117)	15	(10)	5

1. The carrying value of the hedged borrowings was £1,810 million, of which £202 million was current and £1,608 million was non-current. Following a review in the year, we have changed our presentation of spot foreign exchange movements on derivatives designated in fair value hedges of foreign currency risk and interest rates. It has resulted in a prior year equal and offsetting impact of £4 million to the balances used for the 'Change in value used for calculating ineffectiveness'.

(ii) Cash flow hedges of foreign currency and interest rate risk:

As at 31 March 2020		Balance in cash flow hedge reserve		Change in value used for calculating ineffectiveness		
Hedge type	**Hedging instrument notional £m**	**Continuing hedges £m**	**Discontinued hedges £m**	**Hedged item £m**	**Hedging instrument £m**	**Hedge ineffectiveness £m**
Foreign currency and interest rate risk on borrowings[1]	**(4,127)**	**(69)**	**(22)**	**142**	**(143)**	**(1)**
Foreign currency risk on forecasted cash flows	**(794)**	**8**	**–**	**17**	**(17)**	**–**

1. Included within the hedging instrument notional balance is £176 million impacted by Interest Rate Benchmark Reform amendments.

As at 31 March 2019		Balance in cash flow hedge reserve		Change in value used for calculating ineffectiveness		
Hedge type	Hedging instrument notional £m	Continuing hedges £m	Discontinued hedges £m	Hedged item £m	Hedging instrument £m	Hedge ineffectiveness £m
Foreign currency and interest rate risk on borrowings[1]	(3,804)	(17)	51	206	(206)	–
Foreign currency risk on forecasted cash flows	(697)	45	–	12	(12)	–

1. Following a review in the year, we have changed our presentation of spot foreign exchange movements on derivatives designated in cash flow hedges of foreign currency risk and interest rates. This has no net impact on the consolidated statement of comprehensive income. It has resulted in a prior year equal and offsetting impact of £167 million to the balances used for the 'Change in value used for calculating ineffectiveness'.

(iii) Net investment hedges of foreign currency risk:

As at 31 March 2020		Balance in translation reserve		Change in value used for calculating ineffectiveness		
Hedge type	**Hedging instrument notional £m**	**Continuing hedges £m**	**Discontinued hedges £m**	**Hedged item £m**	**Hedging instrument £m**	**Hedge ineffectiveness £m**
Currency risk on foreign operations[1]	**(3,064)**	**45**	**(2,871)**	**(6)**	**6**	**–**

1. Included within the hedging instrument notional balance is £nil impacted by Interest Rate Benchmark Reform amendments.

As at 31 March 2019		Balance in translation reserve		Change in value used for calculating ineffectiveness		
Hedge type	Hedging instrument notional £m	Continuing hedges £m	Discontinued hedges £m	Hedged item £m	Hedging instrument £m	Hedge ineffectiveness £m
Currency risk on foreign operations	(2,974)	(329)	(2,502)	550	(550)	–

32. Financial risk management continued

(f) Commodity price risk

We purchase electricity and gas to supply our customers in the US and to meet our own energy needs. Substantially all our costs of purchasing electricity and gas for supply to customers are recoverable at an amount equal to cost. The timing of recovery of these costs can vary between financial periods leading to an under- or over-recovery within any particular year that can lead to large fluctuations in the income statement. We follow approved policies to manage price and supply risks for our commodity activities.

Our energy procurement risk management policy and delegations of authority govern our US commodity trading activities for energy transactions. The purpose of this policy is to ensure we transact within pre-defined risk parameters and only in the physical and financial markets where we or our customers have a physical market requirement. In addition, state regulators require National Grid to manage commodity risk and cost volatility prudently through diversified pricing strategies. In some jurisdictions we are required to file a plan outlining our strategy to be approved by regulators. In certain cases, we might receive guidance with regard to specific hedging limits.

Energy purchase contracts for the forward purchase of electricity or gas that are used to satisfy physical delivery requirements to customers, or for energy that the Group uses itself, meet the expected purchase or usage requirements of IFRS 9. They are, therefore, not recognised in the financial statements until they are realised. Disclosure of commitments under such contracts is made in note 30.

US states have introduced a variety of legislative requirements with the aim of increasing the proportion of our electricity that is derived from renewable or other forms of clean energy. Annual compliance filings regarding the level of Renewable Energy Certificates (and other similar environmental certificates) are required by the relevant department of utilities. In response to the legislative requirements, National Grid has entered into long-term, typically fixed-price, energy supply contracts to purchase both renewable energy and environmental certificates. We are entitled to recover all costs incurred under these contracts through customer billing.

Under IFRS, where these supply contracts are not accounted for as finance leases, they are considered to comprise two components, being a forward purchase of power at spot prices, and a forward purchase of environmental certificates at a variable price (being the contract price less the spot power price). With respect to our current contracts, neither of these components meets the requirement to be accounted for as a derivative. The environmental certificates are currently required for compliance purposes, and at present there are no liquid markets for these attributes. Accordingly, this component meets the expected purchase or usage exemption of IFRS 9. We expect to enter into an increasing number of these contracts, in order to meet our compliance requirements in the short to medium term. It is possible that in future, if and when liquid markets develop, and to the extent that we are in receipt of environmental certificates in excess of our required levels, this exemption may cease to apply, and we may be required to account for forward purchase commitments for environmental certificates as derivatives at fair value through profit and loss.

Notes to the consolidated financial statements
– supplementary information continued

32. Financial risk management continued

(g) Fair value analysis

Included in the statement of financial position are financial instruments which are measured at fair value. These fair values can be categorised into hierarchy levels that are representative of the inputs used in measuring the fair value. The best evidence of fair value is a quoted price in an actively traded market. In the event that the market for a financial instrument is not active, a valuation technique is used.

	2020				2019			
	Level 1 £m	**Level 2 £m**	**Level 3 £m**	**Total £m**	Level 1 £m	Level 2 £m	Level 3 £m	Total £m
Assets								
Investments held at FVTPL	**1,278**	**–**	**108**	**1,386**	1,311	–	62	1,373
Investments held at FVOCI	**83**	**352**	**–**	**435**	93	343	–	436
Investments in associates[1]	**–**	**–**	**103**	**103**	–	–	90	90
Financing derivatives	**–**	**1,257**	**10**	**1,267**	–	1,050	2	1,052
Commodity contract derivatives	**–**	**9**	**66**	**75**	–	33	68	101
	1,361	**1,618**	**287**	**3,266**	1,404	1,426	222	3,052
Liabilities								
Financing derivatives	**–**	**(889)**	**(245)**	**(1,134)**	–	(868)	(216)	(1,084)
Commodity contract derivatives	**–**	**(136)**	**(64)**	**(200)**	–	(32)	(67)	(99)
Liabilities held at fair value	**(741)**	**–**	**–**	**(741)**	(667)	–	–	(667)
Contingent consideration[2]	**–**	**–**	**(74)**	**(74)**	–	–	–	–
	(741)	**(1,025)**	**(383)**	**(2,149)**	(667)	(900)	(283)	(1,850)
	620	**593**	**(96)**	**1,117**	737	526	(61)	1,202

1. Our Level 3 investments include investments relating to Sunrun Neptune 2016 LLC accounted for at FVTPL.
2. Contingent consideration relates to the acquisition of Geronimo (see note 38).

Level 1: Financial instruments with quoted prices for identical instruments in active markets.

Level 2: Financial instruments with quoted prices for similar instruments in active markets or quoted prices for identical or similar instruments in inactive markets, and financial instruments valued using models where all significant inputs are based directly or indirectly on observable market data.

Level 3: Financial instruments valued using valuation techniques where one or more significant inputs are based on unobservable market data.

Our Level 1 financial investments and liabilities held at fair value are valued using quoted prices from liquid markets.

Our Level 2 financial investments held at fair value are valued using quoted prices for similar instruments in active markets, or quoted prices for identical or similar instruments in inactive markets. Alternatively, they are valued using models where all significant inputs are based directly or indirectly on observable market data.

Our Level 2 financing derivatives include cross-currency, interest rate and foreign exchange derivatives. We value these by discounting all future cash flows by externally sourced market yield curves at the reporting date, taking into account the credit quality of both parties. These derivatives can be priced using liquidly traded interest rate curves and foreign exchange rates, and therefore we classify our vanilla trades as Level 2 under the IFRS 13 framework.

Our Level 2 commodity contract derivatives include over-the-counter gas and power swaps as well as forward physical gas deals. We value our contracts based on market data obtained from the New York Mercantile Exchange (NYMEX) and the Intercontinental Exchange (ICE) where monthly prices are available. We discount based on externally sourced market yield curves at the reporting date, taking into account the credit quality of both parties and liquidity in the market. Our commodity contracts can be priced using liquidly traded swaps. Therefore, we classify our vanilla trades as Level 2 under the IFRS 13 framework.

Our Level 3 financing derivatives include cross-currency swaps, inflation-linked swaps and equity options, where the market is illiquid. In valuing these instruments, we use in-house valuation models and obtain external valuations to support each reported fair value.

Our Level 3 commodity contract derivatives primarily consist of our forward purchases of electricity and gas that we value using proprietary models. Derivatives are classified as Level 3 where significant inputs into the valuation technique are neither directly nor indirectly observable (including our own data, which are adjusted, if necessary, to reflect the assumptions market participants would use in the circumstances).

Our Level 3 investments include equity instruments accounted for at fair value through profit and loss. These equity holdings are part of our corporate venture capital portfolio held by National Grid Partners and comprise a series of small unquoted investments where prices or valuation inputs are unobservable. These investments are either recently acquired or there have been recent funding rounds with third parties and therefore the valuation is based on the latest transaction price and any subsequent investment-specific adjustments.

Our Level 3 investments in associates include our investment in Sunrun Neptune 2016 LLC, which is accounted for at fair value. The investment is fair valued by discounting expected cash flows using a weighted average cost of capital specific to Sunrun Neptune 2016 LLC.

In light of the current ongoing impact of the COVID-19 pandemic, the valuations of certain assets and liabilities can be more subjective. While there have been significant movements in market indices, we are satisfied that there has been no significant impact on the fair values of our financial instruments measured at fair value, and that any impact is reflected in the fair values in the table above.

32. Financial risk management continued

(g) Fair value analysis continued

The changes in value of our Level 3 financial instruments are as follows:

	Financing derivatives		Commodity contract derivatives		Other[3,4]		Total	
	2020 £m	2019 £m	**2020 £m**	2019 £m	**2020 £m**	2019 £m	**2020 £m**	2019 £m
At 1 April	**(214)**	(219)	**1**	(1)	**152**	194	**(61)**	(26)
Net (losses)/gains for the year[1,2]	**(20)**	4	**6**	(16)	**26**	15	**12**	3
Purchases	**–**	–	**26**	44	**51**	57	**77**	101
Acquisition of Geronimo	**–**	–	**–**	–	**(74)**	–	**(74)**	–
Settlements	**(1)**	1	**(31)**	(26)	**(18)**	(4)	**(50)**	(29)
Reclassification to held for sale[3]	**–**	–	**–**	–	**–**	(110)	**–**	(110)
At 31 March	**(235)**	(214)	**2**	1	**137**	152	**(96)**	(61)

1. Loss of £20 million (2019: £4 million gain) is attributable to derivative financial instruments held at the end of the reporting period and has been recognised in finance costs in the income statement.
2. Loss of £17 million (2019: £21 million loss) is attributable to commodity contract derivative financial instruments held at the end of the reporting period.
3. Relates to our put and call options over our interests in Quadgas, that were classified as held for sale at 31 March 2019.
4. Other comprises our investments in Sunrun Neptune 2016 LLC, Enbala and the investments made by National Grid Partners, which are accounted for at fair value through profit and loss as well as the contingent consideration arising from the acquisition of Geronimo (see note 38).

The impacts on a post-tax basis of reasonably possible changes in significant Level 3 assumptions are as follows:

	Financing derivatives		Commodity contract derivatives		Other[3]	
	2020 £m	2019 £m	**2020 £m**	2019 £m	**2020 £m**	2019 £m
10% increase in commodity prices[1]	**–**	–	**2**	(1)	**–**	–
10% decrease in commodity prices[1]	**–**	–	**–**	2	**–**	–
+10% market area price change	**–**	–	**(4)**	(10)	**–**	–
-10% market area price change	**–**	–	**4**	10	**–**	–
+20 basis points change in Limited Price Inflation (LPI) market curve[2]	**(95)**	(88)	**–**	–	**–**	–
-20 basis points change in LPI market curve[2]	**90**	83	**–**	–	**–**	–
+50 basis points change in discount rate	**–**	–	**–**	–	**(3)**	(3)
-50 basis points change in discount rate	**–**	–	**–**	–	**4**	3

1. Level 3 commodity price sensitivity is included within the sensitivity analysis disclosed in note 35.
2. A reasonably possible change in assumption of other Level 3 derivative financial instruments is unlikely to result in a material change in fair values.
3. The investments acquired in the period were on market terms, and sensitivity is considered insignificant at 31 March 2020.

The impacts disclosed above were considered on a contract-by-contract basis with the most significant unobservable inputs identified.

Notes to the consolidated financial statements
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32. Financial risk management continued

(h) Capital risk management

The capital structure of the Group consists of shareholders' equity, as disclosed in the consolidated statement of changes in equity, and net debt (note 29). National Grid's objectives when managing capital are: to safeguard our ability to continue as a going concern; to remain within regulatory constraints of our regulated operating companies; and to maintain an efficient mix of debt and equity funding thus achieving an optimal capital structure and cost of capital. We regularly review and manage the capital structure as appropriate in order to achieve these objectives.

Maintaining appropriate credit ratings for our operating and holding companies is an important aspect of our capital risk management strategy and balance sheet efficiency. We monitor our balance sheet efficiency using several metrics including retained cash flow/net debt (RCF), regulatory gearing and interest cover. For the year ended 31 March 2020, these metrics for the Group were 9.2% (2019: 9.4%), 63% (2019: 66%) and 4.1x (2019: 4.4x), respectively – see pages 28 and 244 – 245. We believe these are consistent with the current credit ratings for National Grid plc in respect of the main companies of the Group, based on guidance from the rating agencies.

We monitor the RAV gearing within NGET and the regulated transmission businesses within NGG. This is calculated as net debt expressed as a percentage of RAV, and indicates the level of debt employed to fund our UK regulated businesses. It is compared with the level of RAV gearing indicated by Ofgem as being appropriate for these businesses, at around 60% to 62.5%. We also monitor net debt as a percentage of rate base for our US operating companies, comparing this with the allowed rate base gearing inherent within each of our agreed rate plans, typically around 50%.

The majority of our regulated operating companies in the US and the UK are subject to certain restrictions on the payment of dividends by administrative order, contract and/or licence. The types of restrictions that a company may have that would prevent a dividend being declared or paid unless they are met include:

- dividends must be approved in advance by the relevant US state regulatory commission;
- subsidiary must have at least two recognised rating agency credit ratings of at least investment grade;
- dividends must be limited to cumulative retained earnings, including pre-acquisition retained earnings;
- the securities of National Grid plc must maintain an investment grade credit rating, and if that rating is the lowest investment grade bond rating it cannot have a negative watch/review for downgrade notice by a credit rating agency;
- the subsidiary must not carry on any activities other than those permitted by the licences;
- the subsidiary must not create any cross-default obligations or give or receive any intra-group cross-subsidies; and
- the percentage of equity compared with total capital of the subsidiary must remain above certain levels.

There is a further restriction relating only to The Narragansett Electric Company, which is required to maintain its consolidated net worth above certain levels.

These restrictions are subject to alteration in the US as and when a new rate case or rate plan is agreed with the relevant regulatory bodies for each operating company and in the UK through the normal licence review process.

As most of our business is regulated, at 31 March 2020 the majority of our net assets are subject to some of the restrictions noted above. These restrictions are not considered to be significantly onerous, nor do we currently expect they will prevent the planned payment of dividends in future in line with our dividend policy.

All the above requirements are monitored on a regular basis in order to ensure compliance. The Group has complied with all externally imposed capital requirements to which it is subject.

33. Borrowing facilities

To support our liquidity requirements and provide backup to commercial paper and other borrowings, we agree loan facilities with financial institutions over and above the value of borrowings that may be required. These committed credit facilities have never been drawn, and our undrawn amounts are listed below.

At 31 March 2020, we had bilateral committed credit facilities of £5,495 million (2019: £5,463 million). In addition, we had committed credit facilities from syndicates of banks of £277 million at 31 March 2020 (2019: £264 million). All committed credit facilities were undrawn in 2020 and 2019. An analysis of the maturity of these undrawn committed facilities is shown below:

	2020 £m	2019 £m
Undrawn committed borrowing facilities expiring:		
Less than 1 year	**–**	–
In 1 to 2 years	**1,940**	–
In 2 to 3 years	**1,668**	2,190
In 3 to 4 years	**277**	1,668
In 4 to 5 years	**1,887**	1,869
More than 5 years	**–**	–
	5,772	5,727

Of the unused facilities at 31 March 2020, £5,495 million (2019: £5,463 million) is available for liquidity purposes, while £277 million (2019: £264 million) is available as backup to specific US borrowings. £1,923 million of the undrawn bilateral facilities due to mature in one to two years, were renegotiated between 1 April and 17 June 2020 with new expiry dates to June 2024. Of the £1,887 million of undrawn committed borrowings facilities due to expire within four to five years, £110 million was renegotiated before 31 March 2020, with the expiry extended by a further year, with effect from 1 June 2020.

For the separately regulated business of National Grid Electricity System Operator Limited, the Group has a facility of £550 million (2019: £550 million). This facility is not available as Group general liquidity support and is not represented in the table above.

In addition to the above, the Group has Export Credit Agreements (ECAs) totalling £901 million (2019: £859 million), of which £233 million (2019: £510 million) is undrawn. Subsequent to the year end, two new ECAs totalling £598 million have been made available and have not been drawn.

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34. Subsidiary undertakings, joint ventures and associates

While we present consolidated results in these financial statements as if we were one company, our legal structure is such that there are a number of different operating and holding companies that contribute to the overall result. This structure has evolved through acquisitions as well as regulatory requirements to have certain activities within separate legal entities.

Subsidiary undertakings

A list of the Group's subsidiaries as at 31 March 2020 is given below. The entire share capital of subsidiaries is held within the Group except where the Group's ownership percentages are shown. These percentages give the Group's ultimate interest and therefore allow for the situation where subsidiaries are owned by partly owned intermediate subsidiaries. Where subsidiaries have different classes of shares, this is largely for historical reasons, and the effective percentage holdings given represent both the Group's voting rights and equity holding. Shares in National Grid (US) Holdings Limited, National Grid Holdings One plc and NGG Finance plc are held directly by National Grid plc. All other holdings in subsidiaries are owned by other subsidiaries within the Group. All subsidiaries are consolidated in the Group's financial statements.

Principal Group companies are identified in bold. These companies are incorporated and principally operate in the countries under which they are shown.

Incorporated in England and Wales

Registered office: 1 – 3 Strand, London WC2N 5EH, UK (unless stated otherwise in footnotes).

Beegas Nominees Limited
Birch Sites Limited
Carbon Sentinel Limited
Droylsden Metering Services Limited
Gridcom Limited
Icelink Interconnector Limited
Landranch Limited
Lattice Group Employee Benefit Trust Limited
Lattice Group Limited
Lattice Group Trustees Limited
Natgrid Limited
NatGrid One Limited
NatgridTW1 Limited
National Grid Belgium Limited[1*]
National Grid Blue Power Limited[1*]
National Grid Carbon Limited
National Grid Commercial Holdings Limited
National Grid Distributed Energy Limited
National Grid Electricity Group Trustee Limited
National Grid Electricity System Operator Limited
National Grid Electricity Transmission plc
National Grid Energy Metering Limited
National Grid Four Limited[1*]
National Grid Fourteen Limited[1*]
National Grid Gas Holdings Limited
National Grid Gas plc
National Grid Grain LNG Limited
National Grid Holdings Limited
National Grid Holdings One plc
National Grid IFA 2 Limited
National Grid Interconnector Holdings Limited
National Grid Interconnectors Limited
National Grid International Limited
National Grid Metering Limited
National Grid North Sea Link Limited
National Grid Offshore Limited (previously NG Shetland Link Limited)
National Grid Partners Limited
National Grid Plus Limited (previously National Grid Offshore Limited)
National Grid Property Holdings Limited
National Grid Seventeen Limited[1*]
National Grid Smart Limited
National Grid Ten
National Grid Thirty Five Limited[1*]
National Grid Thirty Six Limited
National Grid Twelve Limited
National Grid Twenty Eight Limited
National Grid Twenty-Five Limited[1*]
National Grid Twenty Seven Limited
National Grid Twenty Three Limited
National Grid UK Limited
National Grid UK Pension Services Limited
National Grid (US) Holdings Limited
National Grid (US) Investments 2 Limited
National Grid (US) Investments 4 Limited
National Grid (US) Partner 1 Limited
National Grid Ventures Limited
National Grid Viking Link Limited
National Grid William Limited
NG Nominees Limited
NGC Employee Shares Trustee Limited
NGG Finance plc
Ngrid Intellectual Property Limited
NGT Telecom No. 1 Limited[1*]
NGT Two Limited
Port Greenwich Limited
Stargas Nominees Limited
Supergrid Electricity Limited
Supergrid Energy Transmission Limited
Supergrid Limited
Thamesport Interchange Limited
The National Grid Group Quest Trustee Company Limited
The National Grid YouPlan Trustee Limited
Transco Limited
Warwick Technology Park Management Company (No 2) Limited (60.56%)[2]

1. Registered office: c/o KPMG, 15 Canada Square, London E14 5GL, UK
2. Registered office: Shire Hall, PO Box 9, Warwick CV34 4RL, UK
* In liquidation.

34. Subsidiary undertakings, joint ventures and associates continued

Subsidiary undertakings continued

Incorporated in the US
Registered office: National Registered Agents, Inc., 1209 Orange Street, Wilmington, DE 19801, USA (unless stated otherwise in footnotes).

Alden Solar, LLC
Altona Solar, LLC
Apple River Solar, LLC
Apple Solar, LLC
Arapahoe Solar, LLC
Argenta Solar, LLC
Armenia Solar, LLC
Artemisia Solar, LLC[1]
Ashland Solar, LLC
Athens Solar, LLC
Audubon Wind Farm, LLC
Banner Solar, LLC
Bee Hollow Solar, LLC
Benevolent Solar, LLC
Blaze Solar, LLC
Blue Ridge Wind, LLC
Blues Solar, LLC
Blue Stone Solar Energy, LLC
Bluewater Solar, LLC
Boone Solar, LLC
Boston Gas Company[2]
Brewster Solar, LLC
Brilliance Solar, LLC
British Transco Capital Inc.[3]
British Transco Finance, Inc.[3]
Brock Solar, LLC
Broken Bridge Corp.[4]
Brook Trout Solar, LLC
Brookside Solar, LLC
Burlington Solar, LLC
Burr Ridge Wind, LLC
Cage Ranch Solar, LLC
Cage Ranch Solar II, LLC
Cage Ranch Solar III, LLC
Caldwell Solar, LLC
Caldwell Solar II, LLC
Canby Solar, LLC
Cattle Ridge Wind Farm 2, LLC
Cepheus Community Solar Gardens LLC[1]
Claddagh Solar, LLC[1]
Clear Creek Solar, LLC
Clermont Solar, LLC
Clinton County Solar, LLC
Commonwealth Solar, LLC
Conestoga Wind, LLC
Copperhead Solar, LLC
Crocker Wind Farm 2, LLC
Cygnus Community Solar Garden, LLC[1]
Daybreak Solar, LLC
Deer Trail Solar, LLC
Dekalb Solar, LLC
Desoto Solar, LLC
Dodson Creek Solar, LLC
Dorado Community Solar Gardens, LLC[1]
Dorsey Road Solar, LLC
East Galesburg Solar, LLC
East Macomb Solar, LLC
Eastern Hemlock Solar, LLC
Elba Solar, LLC
Elburn Solar, LLC
Eldena Solar, LLC
Elk Creek Solar, LLC
Elk Creek Solar 2, LLC
Empire Solar, LLC
EUA Energy Investment Corporation[2]
Falls City Solar, LLC
Firstview Wind Farm, LLC
Franklin Solar, LLC
Front Range Wind Farm, LLC
Fulton Solar, LLC
Galesburg Solar, LLC
Genesee Solar Energy, LLC
Geronimo Energy LLC
Geronimo E Wind LLC[5]
Geronimo Solar Energy, LLC[1]
Geronimo Stutsman Wind Farm, LLC
Geronimo White Pine Solar, LLC
Gladiolus Solar, LLC[1]
Glenwood Solar, LLC
Glen Rock Solar, LLC
Golden Solar, LLC
Goldendale Solar, LLC
Goldfinch Solar, LLC
Granite State Power Link LLC[3]
Grant Solar, LLC
Grant Solar 2, LLC
Grayson Solar, LLC
Greenbrier Creek Solar, LLC
Greentown Solar, LLC
Greenwood Solar, LLC
Grid NY, LLC[6]
Grindstone Wind Farm, LLC[7]
Hale Solar, LLC
Hampton Solar, LLC
Handley Road Solar, LLC
Hardeman County Solar, LLC
Harmony Solar ND, LLC
Harmony Solar ND 2, LLC
Harrington Solar, LLC
Hartley Solar, LLC
Hearth Solar, LLC
Henderson Solar, LLC
Heyworth Solar, LLC
Honeybee Solar, LLC
Hoosier Solar, LLC[1]
Hyacinth Solar, LLC[1]
Illumination Solar, LLC
Innovation Solar, LLC
Irwin Solar, LLC
Itasca Energy Development, LLC[8]
Itasca Energy Services, LLC
Jack Rabbit Wind, LLC
Jackson County Solar, LLC
Jantz Solar, LLC
Junction Solar, LLC
Kankakee Solar, LLC
Keslinger Solar, LLC
KeySpan CI Midstream Limited[3]
KeySpan Energy Corporation[6]
KeySpan Energy Services Inc.[3]
KeySpan Gas East Corporation[6]
KeySpan International Corporation[3]
KeySpan MHK, Inc.[3]
KeySpan Midstream Inc.[3]
KeySpan Plumbing Solutions, Inc.[6]
Kindle Solar, LLC
KSI Contracting, LLC[3]
KSI Electrical, LLC[3]
KSI Mechanical, LLC[3]
Lake Iris Solar, LLC
Lakeside Solar, LLC
Lamdin Solar, LLC
Lamplight Solar, LLC
Land Management & Development, Inc.[6]
Landwest, Inc.[6]
Lansing Solar, LLC
Lawrence Solar, LLC
Leola Wind Farm, LLC
Lilac Solar, LLC[1]
Lindy Solar, LLC
Lockport Solar, LLC
Lordsburg Solar, LLC
Lydia Solar, LLC
Madden Creek Solar, LLC
Marigold Community Solar Garden, LLC[1]
Massachusetts Electric Company[2]
Maverick Wind Farm, LLC
Mazon Solar, LLC
McFadden Solar, LLC
Merton Solar, LLC
Metro Energy, LLC[6]
Metrowest Realty LLC[3]
Miller Creek Solar, LLC
Morning Glory Solar, LLC[1]
Mottville Solar, LLC
Mountain Laurel Solar, LLC
Mustang Ridge Wind Farm, LLC
Mystic Steamship Corporation[3]
Nantucket Electric Company[2]
National Grid Algonquin LLC[3]
National Grid Connect Inc.3
National Grid Development Holdings Corp.[3]
National Grid Electric Services, LLC[6]
National Grid Energy Management, LLC[3]
National Grid Energy Services LLC[3]
National Grid Energy Trading Services LLC[6]
National Grid Engineering & Survey Inc.[6]
National Grid Generation LLC[6]
National Grid Generation Ventures LLC[6]
National Grid Glenwood Energy Center, LLC[3]
National Grid IGTS Corp.[6]
National Grid Insurance USA Ltd[6]
National Grid Islander East Pipeline LLC[3]
National Grid LNG GP LLC[3]

Notes to the consolidated financial statements
– supplementary information continued

34. Subsidiary undertakings, joint ventures and associates continued
Subsidiary undertakings continued

Incorporated in the US continued

National Grid LNG LLC[3]
National Grid LNG LP LLC[3]
National Grid Millennium LLC[3]
National Grid NE Holdings 2 LLC[2]
National Grid North America Inc.[3]
National Grid North East Ventures Inc.[3]
National Grid Partners Inc.[6]
National Grid Partners LLC[3]
National Grid Port Jefferson Energy Center LLC[3]
National Grid Services Inc.[3]
National Grid Transmission Services Corporation[2]
National Grid US 6 LLC[3]
National Grid US LLC[3]
National Grid USA[3]
National Grid USA Service Company, Inc.[2]
Nees Energy, Inc.[2]
New Bremen Solar, LLC
New England Electric Transmission Corporation[4]
New England Energy Incorporated[2]
New England Hydro Finance Company, Inc. (53.704%)[2]
New England Hydro-Transmission Corporation (53.704%)[4]
New England Hydro-Transmission Electric Company Inc. (53.704%)[2]
New England Power Company[2]
Newport America Corporation[9]
NGNE LLC[3]
NGV Emerald Acquisition Co. LLC[3]
NGV Emerald Energy Venture Holdings LLC[3]
NGV Emerald Holdings LLC[3]
NGV US Distributed Energy Inc.[3] (previously National Grid Green Homes Inc.)
NGV US Transmission Inc.[3] (previously Grid America Holdings Inc.)
Niagara Falls Solar, LLC
Niagara Mohawk Energy, Inc.[3]
Niagara Mohawk Holdings, Inc.[6]
Niagara Mohawk Power Corporation[6]
Niobrara Wind, LLC
NM Properties, Inc.[6]
Nordic Vos, LLC
North Adair Solar, LLC
Northeast Renewable Link LLC[3]
North East Transmission Co., Inc.[3]
North Fork Wind, LLC
North Rock Solar, LLC
North Wonder Lake Solar, LLC
Onton Solar, LLC
Opinac North America, Inc.[3]
Oreana Solar, LLC
Patriotic Solar, LLC
Pennington Solar, LLC
Peony Solar, LLC
Perseus Community Solar Garden, LLC[1]
Philadelphia Coke Co., Inc.[3]
Piper Solar, LLC
Pipestone Solar, LLC
Pleasant Plains Solar, LLC
Plum Creek Wind Farm, LLC
Plum Creek Wind Farm 2, LLC
Polaris Community Solar Garden, LLC[1]
Port of the Islands North, LLC[6]
Prairie Oasis Solar, LLC
Prairie Rose Wind 2, LLC[1]
Prairie Wolf Solar, LLC
Prosperity Wind Farm, LLC
Prosperity Wind Farm 2, LLC
Radiance Solar, LLC[1]
Red Rock Solar SD, LLC
Regal Solar, LLC
Regulus Community Solar Gardens, LLC[1]
Rising Solar, LLC
River North Solar, LLC
River Run Solar, LLC
Riverside Solar, LLC
Rochester Solar, LLC[1]
Rock Falls Solar, LLC
Rock Ridge Wind Farm, LLC
Ross County Solar, LLC
Royal Solar, LLC
Royal Solar 2, LLC
Royerton Solar, LLC
Saginaw Bay Solar, LLC
Sandstone Creek Solar, LLC
Sandstone Creek Solar 2, LLC
Sawmill Wind Farm, LLC
Silver City Solar, LLC
Scorpius Community Solar Garden, LLC[1]
Serenity Solar, LLC[1]
Sheas Lake Solar, LLC
Sherco Solar, LLC[1]
Silver Lake Solar, LLC
Sirius Community Solar Gardens, LLC[1]
Snowdrop Solar, LLC[1]
Somerset Solar, LLC
South Belleville Solar, LLC
South Macomb Solar, LLC
Spotlight Solar, LLC
Spring Brook Solar, LLC
Springfield Solar Farm, LLC
Springfield Wind Farm, LLC[1]
Springville Solar, LLC
St. Thomas Solar, LLC
Stockton Solar, LLC
Stony Brook Wind, LLC
Stove Creek Solar, LLC
Sturgis Solar, LLC
Sugar Maple Solar, LLC
Summit Lake Solar, LLC
Sunbeam Solar, LLC
Sunray Solar, LLC
Sunrise Solar, LLC
Sycamore Creek Solar, LLC
The Brooklyn Union Gas Company[6]
The Narragansett Electric Company[9]
Tilton Solar, LLC
Torchlight Solar, LLC[1]
Transgas, Inc.[2]
Uintah Solar, LLC
Upper Hudson Development Inc.[6]
Valley Appliance and Merchandising Company[9]
Vermont Green Line Devco, LLC3 (90%)
Vibrant Solar, LLC
Virgo Community Solar Gardens, LLC[1]
Virtue Solar, LLC
Vivid Solar, LLC
Vulpecula Community Solar Garden, LLC[1]
Wayfinder Group, Inc.[2]
Wheatfield Solar, LLC
Wild Springs Solar, LLC[1]
Wildcat Ridge Wind Farm, LLC
Wilder Junction Wind Farm, LLC
Wildhorse Creek Solar, LLC
Willard Solar, LLC
Wiregrass Solar, LLC
Wonder Lake Solar, LLC
Woodlands Solar, LLC
Yellowbud Solar, LLC

34. Subsidiary undertakings, joint ventures and associates continued

Subsidiary undertakings continued

Incorporated in Australia
Registered office: Level 7, 330 Collins Street, Melbourne, VIC 3000, Australia

National Grid Australia Pty Limited

Incorporated in Canada
Registered office: Stewart McKelvey Stirling Scales, c/o Charles Reagh, 1959 Upper Water Street, Suite 900, Halifax Nova Scotia, B3J 2N2, Canada

KeySpan Energy Development Co.

Incorporated in Hong Kong
Registered office: Level 54, Hopewell Centre, 183 Queen's Road East, Hong Kong

National Grid Hong Kong Limited (previously HK NewCo 2019 Limited)

Incorporated in the Isle of Man
Registered office: Third Floor, St George's Court, Upper Church Street, Douglas, IM1 1EE, Isle of Man, UK

National Grid Insurance Company (Isle of Man) Limited
NGT Holding Company (Isle of Man) Limited*

Incorporated in Jersey
Registered office: 44 Esplanade, St Helier, Jersey JE4 9WG, UK

National Grid Jersey Investments Limited**
NG Jersey Limited**

Incorporated in Luxembourg
Registered office: 412F, Route d'Esch, L-2086, Luxembourg, Grand Duchy of Luxembourg

National Grid Luxembourg Sarl (previously 21 June Sarl)

Incorporated in the Netherlands
Registered office: Westblaak 89, 3012 KG Rotterdam, PO Box 21153, 3001 AD, Rotterdam, Netherlands
British Transco International Finance B.V.

Registered office: Prins Bernhardplein 200, 1097 JB, Amsterdam, Netherlands
National Grid Holdings B.V.*

Incorporated in the Republic of Ireland
Registered office: c/o Moore Stephens Nathans, Third Floor, Ulysses House, 23/24 Foley Street, Dublin 1, D01 W2T2, Ireland

National Grid Company (Ireland) Designated Activity Company (previously National Grid Insurance Company (Ireland) Designated Activity Company)*

1. Registered office: c/o Geronimo Energy LLC, 8400 Normandale Lake Bvld. Suite 1200, Bloomington, MN 55437, USA.
2. Registered office: Corporation Service Company, 84 State Street, Boston MA 02109, USA.
3. Registered office: Corporation Service Company, 251 Little Falls Drive, Wilmington DE 19808, USA.
4. Registered office: Lawyers Incorporating Service, 10 Ferry Street, Suite 313, Concord NH 03301, USA.
5. Registered office: National Registered Agents, Inc., 301 S. Bedford St. Suite 1 Madison, WI 53703, USA.
6. Registered office: Corporation Service Company, 80 State Street, Albany NY 12207-2543, USA.
7. Registered office: National Registered Agents, Inc., 30600 Telegraph Road, Suite2345, Bingham Farms, MI 48025-5720, USA.
8. Registered office: 10710 Town Square Drive NE, Suite 201 Minneapolis, MN 55449, USA.
9. Registered office: Corporation Service Company, 222 Jefferson Boulevard, Suite 200, Warwick RI 02888, USA.

* In liquidation.
** Entered liquidation 29 April 2020.

Notes to the consolidated financial statements
– supplementary information continued

34. Subsidiary undertakings, joint ventures and associates continued

Joint ventures

A list of the Group's joint ventures as at 31 March 2020 is given below. All joint ventures are included in the Group's financial statements using the equity method of accounting. Principal joint ventures are identified in **bold**.

Incorporated in England and Wales
Registered office: 1–3 Strand, London WC2N 5EH, UK (unless stated otherwise in footnotes).

BritNed Development Limited (50%)*
Joint Radio Company Limited (50%)[1]**
Nemo Link Limited (50%)
NGET/SPT Upgrades Limited (50%)†
St William Homes LLP (50%)[2]

Incorporated in the US
Registered office: Corporation Service Company, 251 Little Falls Drive, Wilmington, DE 19808, USA (unless stated otherwise in footnotes).

Clean Energy Generation, LLC (50%)
Emerald Energy Venture LLC (51%)
Goldendale Energy Storage LLC (50%)
Island Park Energy Center, LLC (50%)
Islander East Pipeline Company, LLC (50%)[3]
LI Energy Storage System, LLC (50%)
LI Solar Generation, LLC (50%)
Swan Lake North Holdings LLC (50%)

Incorporated in France
Registered office: 1 Terrasse Bellini, Tour Initiale, TSA 41000 – 9291, Paris La Defense, CEDEX, France

IFA2 SAS (50%)

Associates

A list of the Group's associates as at 31 March 2020 is given below. Unless otherwise stated, all associates are included in the Group's financial statements using the equity method of accounting. Principal associates are identified in bold.

Incorporated in the US
Registered office: Corporation Service Company, 251 Little Falls Drive, Wilmington, DE 19808, USA (unless stated otherwise in footnotes).

Clean Line Energy Partners LLC (32%)[3]
Connecticut Yankee Atomic Power Company (19.5%)[4]
Direct Global Power, Inc. (26%)[3]
Energy Impact Fund LP (9.42%)[5]
Greeneru, Inc. (21.6%)[3]
KHB Venture LLC (33%)[6]
Maine Yankee Atomic Power Company (24%)[7]
Millennium Pipeline Company, LLC (26.25%)[3]
New York Transco LLC (28.3%)[8]
Nysearch RMLD, LLC (22.63%)
Sunrun Neptune Investor 2016 LLC[3]***
Yankee Atomic Electric Company (34.5%)[9]

Incorporated in Belgium
Registered office: Avenue de Cortenbergh 71, 1000 Brussels, Belgium

Coreso SA (15.84%)

Other investments

A list of the Group's other investments as at 31 March 2020 is given below.

Incorporated in England and Wales
Registered office: 1 More London Place, London SE1 2AF, UK

Energis plc (33.06%)‡

1. Registered office: Friars House, Manor House Drive, Coventry CV1 2TE, UK.
2. Registered office: Berkeley House, 19 Portsmouth Road, Cobham, Surrey KT11 1JG, UK.
3. Registered office: Corporation Trust Company, 1209 Orange, Wilmington DE 19808, New Castle County, USA.
4. Registered office: Carla Pizzella, 362 Injun Hollow Road, East Hampton CT 06424, USA.
5. Registered office: Harvard Business Services, Inc., 16192 Coastal Highway, Lewes DE 19958, Sussex County, USA.
6. Registered office: De Maximus Inc., 135 Beaver Street, 4th Floor, Waltham MA 02452, USA.
7. Registered office: Joseph D Fay, 321 Old Ferry Road, Wiscasset ME 04578, USA.
8. Registered office: Corporation Service Company, 80 State Street, Albany NY 12207, USA.
9. Registered office: Karen Sucharzewski, 49 Yankee Road, Rowe MA 01367, USA.

* National Grid Interconnector Holdings Limited owns 284,500,000 €0.20 C Ordinary shares and one £1.00 Ordinary A share.
** National Grid Gas plc owns all £1.00 A Ordinary shares.
*** NGV US Distributed Energy Inc. owns 1,000 Class A Membership Interests.
† National Grid Electricity Transmission plc owns 50 £1.00 A Ordinary shares.
‡ In administration.

Our interests and activities are held or operated through the subsidiaries, joint arrangements or associates as disclosed above. These interests and activities (and their branches) are established in – and subject to the laws and regulations of – these jurisdictions.

35. Sensitivities

In order to give a clearer picture of the impact on our results or financial position of potential changes in significant estimates and assumptions, the following sensitivities are presented. These sensitivities are based on assumptions and conditions prevailing at the year-end and should be used with caution. The effects provided are not necessarily indicative of the actual effects that would be experienced because our actual exposures are constantly changing.

The sensitivities in the tables below show the potential impact in the income statement (and consequential impact on net assets) for a reasonably possible range of different variables each of which have been considered in isolation (i.e. with all other variables remaining constant). There are a number of these sensitivities which are mutually exclusive, and therefore if one were to happen, another would not, meaning a total showing how sensitive our results are to these external factors is not meaningful.

The sensitivities included in the tables below broadly have an equal and opposite effect if the sensitivity increases or decreases by the same amount unless otherwise stated.

(a) Sensitivities on areas of estimation uncertainty

The table below sets out the sensitivity analysis for certain areas of estimation uncertainty set out in note 1E. These estimates are those that have a significant risk of resulting in a material adjustment to the carrying values of assets and liabilities in the next year. Note that the sensitivity analysis for the useful economic lives of our gas network assets is included in note 13.

	2020		2019	
	Income statement £m	**Net assets £m**	Income statement £m	Net assets £m
Pensions and other post-retirement benefit liabilities (pre-tax)[1]:				
UK discount rate change of 0.5%[2]	**6**	**877**	6	1,064
US discount rate change of 0.5%[2]	**10**	**514**	16	688
UK RPI rate change of 0.5%[3]	**4**	**670**	4	908
UK long-term rate of increase in salaries change of 0.5%	**1**	**39**	1	56
US long-term rate of increase in salaries change of 0.5%	**2**	**47**	2	46
UK change of one year to life expectancy at age 65[4]	**1**	**545**	1	610
US change of one year to life expectancy at age 65	**4**	**456**	4	406
Assumed US healthcare cost trend rates change of 1%	**31**	**507**	32	503
Pension assets:				
Change in value of unquoted equities by 10%	**–**	**381**	–	415
Change in value of unquoted properties by 10%	**–**	**89**	–	107
Change in value of unquoted diversified alternatives by 10%	**–**	**152**	–	142
Environmental provision:				
10% change in estimated future cash flows	**210**	**210**	165	165

1. The changes shown are a change in the annual pension or other post-retirement benefit service charge and change in the defined benefit obligations.
2. A change in the discount rate is likely to occur as a result of changes in bond yields and as such would be expected to be offset to a significant degree by a change in the value of the bond assets held by the plans. In the UK, there would also be a £205 million net assets offset from the buy-in policies purchased in the year, where the accounting value of the buy-in asset is set equal to the associated liabilities.
3. The projected impact resulting from a change in RPI reflects the underlying effect on pensions in payment, pensions in deferment and resultant increases in salary assumptions. The buy-in policies purchased during the year would have a £152 million net assets offset to the above.
4. In the UK, the buy-in policies purchased during the year, and the longevity swap entered into previously, would have a £223 million net assets offset to the above.

Pensions and other post-retirement benefits assumptions

Sensitivities have been prepared to show how the defined benefit obligations and annual service costs could potentially be impacted by changes in the relevant actuarial assumption that were reasonably possible as at 31 March 2020. In preparing sensitivities, the potential impact has been calculated by applying the change to each assumption in isolation and assuming all other assumptions remain unchanged. This is with the exception of RPI in the UK where the corresponding change to increases to pensions in payment, increases to pensions in deferment and increases in salary are recognised.

Notes to the consolidated financial statements – supplementary information continued

35. Sensitivities continued

(b) Sensitivities on financial instruments

We are further required to show additional sensitivity analysis under IFRS 7 and these are shown separately in the subsequent table due to the additional assumptions that are made in order to produce meaningful sensitivity disclosures.

Our net debt as presented in note 29 is sensitive to changes in market variables, primarily being UK and US interest rates, the UK RPI and the dollar to sterling exchange rate. These impact the valuation of our borrowings, deposits and derivative financial instruments. The analysis illustrates the sensitivity of our financial instruments to reasonably possible changes in these market variables.

The following main assumptions were made in calculating the sensitivity analysis for continuing operations:

- the amount of net debt, the ratio of fixed to floating interest rates of the debt and derivatives portfolio, and the proportion of financial instruments in foreign currencies are all constant and on the basis of the hedge designations in place at 31 March 2020 and 2019 respectively;
- the statement of financial position sensitivity to interest rates relates to items presented at their fair values: derivative financial instruments; our investments measured at fair value through profit and loss (FVTPL) and fair value through other comprehensive income; and our liability measured at FVTPL. Further debt and other deposits are carried at amortised cost and so their carrying value does not change as interest rates move;
- the sensitivity of interest to movements in interest rates is calculated on net floating rate exposures on debt, deposits and derivative instruments;
- changes in the carrying value of derivatives from movements in interest rates of designated cash flow hedges are assumed to be recorded fully within equity; and
- changes in the carrying value of derivative financial instruments designated as net investment hedges from movements in interest rates are presented in equity as costs of hedging, with a one-year release to the income statement. The impact of movements in the dollar to sterling exchange rate are recorded directly in equity.

	2020		2019	
	Income statement £m	**Other equity reserves £m**	Income statement £m	Other equity reserves £m
Financial risk (post-tax):				
UK RPI change of 0.5%[1]	**27**	**–**	27	–
UK interest rates change of 0.5%	**14**	**47**	16	13
US interest rates change of 0.5%	**5**	**27**	11	44
US dollar exchange rate change of 10%[2]	**49**	**216**	53	246

1. Excludes sensitivities to LPI curve. Further details on sensitivities are provided in note 32(g).
2. The other equity reserves impact does not reflect the exchange translation in our US subsidiaries' net assets. It is estimated this would change by £1,319 million (2019: £1,119 million) in the opposite direction if the dollar exchange rate changed by 10%.

Our commodity contract derivatives are sensitive to price risk. Additional sensitivities in respect to commodity price risk and to our derivative fair values are as follows:

	2020		2019	
	Income statement £m	**Net assets £m**	Income statement £m	Net assets £m
Commodity price risk (post-tax):				
10% increase in commodity prices	**26**	**26**	26	26
10% decrease in commodity prices	**(27)**	**(27)**	(27)	(27)
Assets and liabilities carried at fair value (post-tax):				
10% fair value change in derivative financial instruments[1]	**12**	**12**	(3)	(3)
10% fair value change in commodity contract derivative liabilities	**9**	**9**	–	–

1. The effect of a 10% change in fair value assumes no hedge accounting.

36. Additional disclosures in respect of guaranteed securities

We have preferred shares that are listed on a US national securities exchange and are guaranteed by other companies in the Group. These guarantors commit to honour any liabilities should the company issuing the debt have any financial difficulties. In order to provide debt holders with information on the financial stability of the companies providing the guarantees, we are required to disclose individual financial information for these companies. We have chosen to include this information in the Group financial statements rather than submitting separate stand-alone financial statements.

Niagara Mohawk Power Corporation, a wholly owned subsidiary of the Group, has issued preferred shares that are listed on a US national securities exchange and are guaranteed by National Grid plc. In order to provide preferred shareholders with information on the financial stability of the company providing the guarantee, we are required to disclose individual financial information for these companies. We have chosen to include this information in the Group financial statements rather than submitting separate stand-alone financial statements.

The following summarised financial information is given in respect of Niagara Mohawk Power Corporation as a result of National Grid plc's guarantee, dated 29 October 2007, of Niagara Mohawk Power Corporation's 3.6% and 3.9% issued preferred shares, which amount to £29 million. National Grid plc's guarantee of Niagara Mohawk Power Corporation's preferred shares is full and unconditional. There are no restrictions on the payment of dividends by Niagara Mohawk Power Corporation or limitations on National Grid plc's guarantee of the preferred shares, and there are no factors that may affect payments to holders of the guaranteed securities.

The following summarised financial information for National Grid plc and Niagara Mohawk Power Corporation is presented on a combined basis and is intended to provide investors with meaningful and comparable financial information, and is provided pursuant to the early adoption of Rule 13-01 of Regulation S-X in lieu of the separate financial statements of Niagara Mohawk Power Corporation.

Summarised financial information is presented, on a combined basis, as at 31 March 2020. The combined amounts are presented under IFRS measurement principles. Inter-company transactions have been eliminated. Investments in other non-issuer and non-guarantor subsidiaries are included at cost, subject to impairment.

Summarised financial information for the year ended 31 March 2020 – IFRS

	National Grid plc and Niagara Mohawk Power Corporation combined £m
Combined statement of financial position	
Non-current loans to other subsidiaries	363
Non-current assets	8,939
Current loans to other subsidiaries	12,435
Current assets	1,378
Current loans from other subsidiaries	(16,226)
Current liabilities	(1,648)
Non-current loans from other subsidiaries	(2,105)
Non-current liabilities	(5,460)
Net liabilities[1]	(2,324)
Equity	(2,324)
Combined income statement – continuing operations	
Revenue	2,365
Operating costs	(2,131)
Operating profit	234
Other income from other subsidiaries	3,888
Other income and costs, including taxation	(428)
Profit after tax	3,694

1. Excluded from net liabilities above are investments in other consolidated subsidiaries with a carrying value of £14,362 million.

37. Transition to new accounting standards

(a) Transition to IFRS 16

The Group has adopted IFRS 16 'Leases', with effect from 1 April 2019. IFRS 16 introduces a single lease accounting model for lessees (rather than the current distinction between operating and finance leases). A contract is, or contains, a lease, if it provides the right to control the use of an identified asset for a specific period of time in exchange for consideration. The new standard results in our operating leases being accounted for in the consolidated statement of financial position as 'right-of-use' assets with corresponding lease liabilities also recognised. It therefore increases both our assets and liabilities (including net debt). It also changes the timing and presentation in the consolidated income statement as it results in an increase in finance costs and depreciation largely offset by a reduction in the previously straight-line operating costs.

Transition options

We have applied IFRS 16 using the modified retrospective approach. Comparatives have not been restated on adoption. Instead, on the opening balance sheet date, right-of-use assets (net of accrued rent or rent-free periods, and reported within property, plant and equipment), additional lease liabilities (reported within borrowings) and any associated deferred tax have been recognised, with no cumulative transition adjustment to reflect through retained earnings. For short-term leases (lease term of 12 months or less) and leases of low-value assets (such as computers), the Group continues to recognise a lease expense on a straight-line basis as permitted by IFRS 16.

Notes to the consolidated financial statements – supplementary information continued

37. Transition to new accounting standards continued

(a) Transition to IFRS 16 continued

We elected to apply the practical expedient to grandfather our previous assessments of whether contracts were previously accounted for as a lease, as permitted by the standard, instead of reassessing all significant contracts as at the date of initial application to determine whether they met the IFRS 16 definition of a lease.

We have elected to apply the practical expedient on transition, which permits right-of-use assets to be measured at an amount equal to the lease liability on adoption of the standard (adjusted for any prepaid or accrued lease expenses).

In addition, we have also elected the option to adjust the carrying amounts of the right-of-use assets as at 1 April 2019 for any onerous lease provisions that had been recognised on the Group consolidated statement of financial position as at 31 March 2019, rather than performing impairment assessments on transition.

Impact of transition

At 31 March 2019, the Group disclosed non-cancellable operating lease commitments of £0.3 billion, of which the majority were in the US. A further £0.4 billion of lease liabilities were recognised due to the requirement in IFRS 16 to recognise lease liabilities for the term that we are reasonably certain to exercise lease extension or lease termination options for, rather than only for the period of the minimum contractual term that was used in determining our lease liability commitments. This was partially offset by the £0.2 billion impact of discounting our lease liabilities at the incremental borrowing rate for each lease. The weighted average discount rate applied to lease liabilities recognised on the transition date was 2.8%.There were some immaterial short-term and low-value leases, which will be recognised on a straight-line basis as an expense in the consolidated income statement over the remaining lease term.

As a result, the Group has recognised additional right-of-use assets of £0.5 billion and lease liabilities (which are included within net debt) of £0.5 billion at 1 April 2019. No additional net deferred tax has arisen. The transition adjustment is in addition to the £270 million of finance leases already recognised on the consolidated statement of financial position under IAS 17. There has been no impact on net assets as shown in the table below, which shows the impacted balances from the Group consolidated statement of financial position.

Impact of transition	31 March 2019 As previously reported £m	IFRS 16 transition adjustments £m	**1 April 2019 As restated £m**
Property, plant and equipment – Right-of-use assets			
Land and buildings	2,560	381	**2,941**
Plant and machinery	36,589	67	**36,656**
Assets in the course of construction	4,425	–	**4,425**
Motor vehicles and office equipment	339	20	**359**
Total property, plant and equipment	43,913	468	**44,381**
Borrowings – Lease liabilities			
Current	(65)	(48)	**(113)**
Non-current	(205)	(426)	**(631)**
Total lease liabilities	(270)	(474)	**(744)**
Other liabilities			
Trade and other payables	(3,769)	3	**(3,766)**
Other non-current liabilities	(808)	3	**(805)**
Net assets	19,369	–	**19,369**
Equity			
Total equity	19,369	–	**19,369**

The impact of IFRS 16 on profit after tax as a result of adopting the new standard is not material. However, it has resulted in an increase in operating profit due to the operating costs now being replaced with depreciation and interest charges.

The impact on the cash flow statement has also not been material, although there has been an increase in operating cash flows and decrease in financing cash flows, because repayment of the principal portion of the lease liabilities is now classified as cash flows from financing activities rather than operating cash flows.

Ongoing accounting policy

With effect from 1 April 2019, new lease arrangements entered into 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. The right-of-use asset and associated lease liability arising from a lease are initially measured at the present value of the lease payments expected over the lease term, plus any other costs. The discount rate applied is the rate implicit in the lease or if that is not available, then the incremental rate of borrowing for a similar term and similar security.

The lease term takes account of exercising any extension options that are at our option if we are reasonably certain to exercise the option and any lease termination options unless we are reasonably certain not to exercise the option.

Each lease payment is allocated between the liability and finance cost. The finance cost is charged to the income statement over the lease period using the effective interest rate method. The right-of-use asset is depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis. For short-term leases (lease term of 12 months or less) and leases of low-value assets (such as computers), the Group continues to recognise a lease expense on a straight-line basis.

37. Transition to new accounting standards continued

(b) Transition to IFRS 9 and IFRS 15

On 1 April 2018, the Group adopted IFRS 9 and IFRS 15. Both standards were applied using the modified retrospective approach whereby comparative amounts were not restated on transition, but a cumulative adjustment was made to retained earnings in the opening consolidated statement of financial position as at 1 April 2018. The impact of the transition on the opening consolidated statement of financial position is set out in the following table:

Impact of transition	31 March 2018 As previously reported £m	Transition adjustments IFRS 9 £m	Transition adjustments IFRS 15 £m	**1 April 2018 £m**
Non-current assets				
Goodwill	5,444	–	–	**5,444**
Other intangible assets	899	–	–	**899**
Property, plant and equipment	39,853	–	–	**39,853**
Other non-current assets	115	–	–	**115**
Pension assets	1,409	–	–	**1,409**
Financial and other investments	899	–[1]	–	**899**
Investments in joint ventures and associates	2,168	–	–	**2,168**
Derivative financial assets	1,319	–	–	**1,319**
Total non-current assets	52,106	–	–	**52,106**
Current assets				
Inventories and current intangible assets	341	–	–	**341**
Trade and other receivables	2,798	–[2]	(3)	**2,795**
Current tax assets	114	–	–	**114**
Financial and other investments	2,694	–[1]	–	**2,694**
Derivative financial assets	405	–	–	**405**
Cash and cash equivalents	329	–	–	**329**
Total current assets	6,681	–	(3)	**6,678**
Total assets	58,787	–	(3)	**58,784**
Current liabilities				
Borrowings	(4,447)	–	–	**(4,447)**
Derivative financial liabilities	(401)	–	–	**(401)**
Trade and other payables	(3,453)	–	59[7]	**(3,394)**
Contract liabilities	–	–	(53)[7]	**(53)**
Current tax liabilities	(123)	–	–	**(123)**
Provisions	(273)	–	–	**(273)**
Total current liabilities	(8,697)	–	6	**(8,691)**
Non-current liabilities				
Borrowings	(22,178)	(32)[3]	–	**(22,210)**
Derivative financial liabilities	(660)	–	–	**(660)**
Other non-current liabilities	(1,317)	–	567[7]	**(750)**
Contract liabilities	–	–	(813)[7]	**(813)**
Deferred tax liabilities	(3,636)	5[4]	74[8]	**(3,557)**
Pensions and other post-retirement benefit obligations	(1,672)	–	–	**(1,672)**
Provisions	(1,779)	–	–	**(1,779)**
Total non-current liabilities	(31,242)	(27)	(172)	**(31,441)**
Total liabilities	(39,939)	(27)	(166)	**(40,132)**
Net assets	18,848	(27)	(169)	**18,652**
Equity				
Share capital	452	–	–	**452**
Share premium account	1,321	–	–	**1,321**
Retained earnings	21,599	(99)[5]	(169)[9]	**21,331**
Other equity reserves	(4,540)	72[6]	–	**(4,468)**
Total shareholders' equity	18,832	(27)	(169)	**18,636**
Non-controlling interests	16	–	–	**16**
Total equity	18,848	(27)	(169)	**18,652**

Notes to the consolidated financial statements
– supplementary information continued

37. Transition to new accounting standards continued
(b) Transition to IFRS 9 and IFRS 15 continued

IFRS 9: Financial Instruments
IFRS 9 has changed the rules concerning the classification and measurement of financial instruments, impairment of financial assets, and hedge accounting. Details of the impact of applying IFRS 9 for the year ended 31 March 2019 are set out below.

Adjustments arising in the year ended 31 March 2019 as a result of the transition to IFRS 9:

1. The available-for-sale category for financial assets was replaced with investments held at fair value through profit and loss (FVTPL) and investments held at fair value through other comprehensive income (FVOCI). Changes to the classification and measurement of financial assets did not alter the carrying value of any financial assets held by the Group. The net impact to retained earnings of the reclassification on transition was an £8 million gain.

   As described in note 15, all recognised financial assets that are within the scope of IFRS 9 are initially recorded at fair value and subsequently measured at amortised cost or fair value based on the Group's business model for managing the financial assets and the contractual cash flow characteristics of the financial assets. Therefore on 1 April 2018, the Group reclassified its investments as follows:
   - Money market funds and fund investments held by captive insurance companies were classified as financial assets at FVTPL because their contractual cash flows are not solely payments of principal and interest;
   - Investments in debt securities that have contractual payments that are solely payments of principal and interest, and which are held as part of the liquidity portfolio or to back employee benefit liabilities, were classified as financial assets at FVOCI because they are held in a business model whose objective is to collect the contractual cash flows and to sell the debt instruments;
   - The Group has elected to hold investments in equity securities, which are held to back employee benefit liabilities, as financial assets at FVOCI as the Group does not believe that changes in their fair value is reflective of the financial performance of the Group; and
   - Loans to joint ventures and associates, cash at bank, and short-term deposits are classified at amortised cost as they have contractual cash flows which are solely payments of principal and interest and the Group holds them to collect contractual cash flows.

   Aside from derivative financial instruments, which remain classified as FVTPL, the Group did not previously have any financial assets or liabilities classified at FVTPL.

   The table below illustrates those financial assets and liabilities that were reclassified at 1 April 2018:

Financial asset/liability	Note	Original measurement category under IAS 39	New measurement category under IFRS 9	Original carrying amount under IAS 39 £m	Change to measurement basis under IFRS 9 £m	New carrying amount under IFRS 9 £m
Money market funds and fund investments in equities and bonds	15	Available-for-sale investments	Financial assets at FVTPL	2,294	–	2,294
Cash surrender value of life insurance policies and investments in debt securities	15	Available-for-sale investments	Financial assets at FVOCI	343	–	343
Investments in equity securities	15	Available-for-sale investments	Financial assets at FVOCI (equity instruments)	84	–	84
Loans to joint ventures and associates and restricted balances	15	Loans and receivables	Financial assets at amortised cost	872	–	872
Borrowings	21	Financial liabilities at amortised cost	Financial liabilities at fair value through profit and loss	(570)	(32)	(602)

   Note that the table above does not include derivative assets, derivative liabilities, trade receivables, cash at bank and short-term deposits, borrowings measured at amortised cost or trade payables. This is because neither the classification nor the measurement of these items has changed on transition to IFRS 9.

2. The change from the incurred loss impairment model of IAS 39 to the expected loss model in IFRS 9 did not have a material impact on the Group's credit loss provision. The Group calculates its impairment provision on trade receivables using a sophisticated provisions matrix. The inclusion of forward-looking information did not have a significant impact on the matrix as the relevant short-term future economic conditions affecting our retail customers in the US are expected to be similar to recent experience.

3. The Group elected to reclassify an existing liability with a carrying value of £570 million from amortised cost to fair value through profit and loss to reduce a measurement mismatch. At transition, the resultant impacts included an increase in the carrying value of the liability of £32 million, a reduction in retained earnings of £40 million and the establishment of an own credit reserve (within other equity reserves) of £7 million.

4. Deferred tax was recognised on the adjustments recorded on the transition to IFRS 9. Reserve impacts are stated net of related deferred tax.

5. Retained earnings included the impact from adjustments 1, 3 and 6.

6. The Group adopted the hedge accounting requirements of IFRS 9, which more closely align with the Group's risk management policies. On transition, it was concluded that all IAS 39 hedge relationships are qualifying IFRS 9 relationships with the treatment of the cost of hedging being the main change. The effect was a reclassification in reserves of a £67 million gain from retained earnings and a £10 million gain from the cash flow hedge reserve, into a new cost of hedging reserve (within other equity reserves). In this reserve, qualifying unrealised gains and losses excluded from hedging relationships are deferred and released systematically into profit or loss to match the timing of hedged items.

37. Transition to new accounting standards continued

(b) Transition to IFRS 9 and IFRS 15 continued

IFRS 15: Revenue from Contracts with Customers

IFRS 15 has primarily changed the accounting for our connection and diversion revenues in our regulated businesses. No practical expedients on transition were applied.

The accounting for revenue under IFRS 15 did not represent a substantive change from the Group's previous practice under IAS 18 for recognising revenue from sales to customers with the exception of the following items:

- Certain pass-through revenues (principally revenues collected on behalf of the Scottish and Offshore transmission operators) were recorded net of operating costs, whereas previously they were recognised gross of operating costs. Had we not adopted IFRS 15, our revenues and operating costs for the year ended 31 March 2019 would have been £1,197 million higher, with no impact to operating profits;
- Contributions for capital works relating to connections for our customers were deferred as contract liabilities on our consolidated statement of financial position on transition, and released over the life of the connection assets. This was a change for our US Regulated business and our UK Gas Transmission business, where previously revenues were recorded once the work was completed. Had we not adopted IFRS 15, our revenues and operating profit for the year ended 31 March 2019 would have been £57 million higher; and
- In the UK, contributions for capital works relating to diversions were recognised as the works are completed. This was a change for the UK regulated businesses where revenues were previously deferred over the life of the asset. Had we not adopted IFRS 15, our revenues and operating profit for the year ended 31 March 2019 would have been £26 million and £23 million lower, respectively.

Adjustments arising in the year ended 31 March 2019 as a result of the transition to IFRS 15:

7. Deferred income from contributions for capital works were reclassified to contract liabilities. In addition, these liabilities for capital works relating to connections have increased as these capital contributions for connections were cumulatively adjusted for on 1 April 2018 and are now deferred and released over the life of the connection assets. This was a change for our US Regulated business and our UK Gas Transmission business where previously revenues were recorded once the work was completed.

   Partially offsetting the increase in contract liabilities for connections was the change in accounting treatment for contributions relating to diversions in our UK businesses. These contributions are recognised as revenue as the works are completed where previously revenue was recognised over the life of the assets.

8. Deferred tax was recorded on the incremental amounts recorded against capital contributions and contract liabilities on the transition to IFRS 15. Deferred tax balances have been calculated at the rate substantially enacted at the balance sheet date.

9. The transition adjustment reflected the net of adjustments 7 and 8 above.

Notes to the consolidated financial statements
– supplementary information continued

38. Acquisition of Geronimo Energy LLC and Emerald Energy Venture LLC

On 11 July 2019, National Grid Ventures acquired 100% of the share capital of Geronimo Energy LLC (Geronimo) and 51% of Emerald Energy Venture LLC (Emerald), which is jointly controlled by National Grid and Washington State Investment Board (WSIB). Geronimo is a leading developer of wind and solar generation based in Minneapolis in the US, and the acquisition is a significant step in National Grid's commitment to the decarbonisation agenda, towards developing and growing a large-scale renewable generation business in the US, and delivering sustainable, reliable and efficient energy. This is National Grid's first ownership stake in wind generation and an expansion of our activities in solar generation. Whilst Geronimo develops the assets, Emerald has a right of first refusal to buy, build and operate those assets.

The total consideration was £209 million, satisfied by a combination of cash and contingent consideration. The contingent consideration has been recorded within trade and other payables for the amount payable within one year, with the remainder recorded within other non-current liabilities. The fair value of contingent consideration recognised is determined as the present value of our best estimate of the value that we will be required to pay, taking into consideration management's estimates of the volume of successful development activity by Geronimo over the relevant period.

The fair values of the assets and liabilities recognised from both the acquisition of the subsidiary, Geronimo, and the joint venture, Emerald, are set out below.

	£m
Intangible assets	5
Property, plant and equipment	1
Investment in joint venture – Emerald	90
Cash	2
Other identifiable assets and liabilities	30
Total identifiable assets	128
Goodwill	81
Total consideration transferred	209
Satisfied by:	
Contingent consideration – Geronimo	70
Cash consideration – Geronimo	49
Cash consideration – Emerald	90
	209

The goodwill arising from the acquisition comprises the value associated with the potential future projects that will be developed by Geronimo as well as the expertise of the management team that have been acquired, neither of which qualify for recognition as tangible or intangible assets. At the acquisition date, there were no material contingent liabilities.

Subsequent to the acquisition date, we made an additional capital contribution of £50 million into Emerald.

Total acquisition-related costs of £3 million have been recognised within operating costs within the consolidated income statement, of which £1 million was recognised in the year ended 31 March 2020.

Geronimo earns revenue from selling its development stage assets to Emerald and other third parties. Emerald generates revenue from the assets it purchases from Geronimo once they are operational and has no other business (see note 16). Neither entity has generated significant revenues or profits for the period between the acquisition date and the reporting date. Even if the acquisition had completed on 1 April 2019, there would have been no significant revenues or profits.

39. Post balance sheet events

In the period between 31 March 2020 and 17 June 2020, there have continued to be substantial environmental, economic and social changes in both the UK and US. As described elsewhere in these Annual Report and Accounts, these have had, and will continue to have, significant ramifications for the Group. Other than as disclosed in respect of those areas where forward-looking forecasts are relevant (notably goodwill impairment reviews (note 11), expected credit losses on financial instruments including trade receivables (notes 19 and 32) and the presumption of the going concern basis generally (note 1)), none of these developments have impacted or caused adjustment to the financial statements.

Company accounting policies

We are required to include the stand-alone balance sheet of our ultimate Parent Company, National Grid plc, under the Companies Act 2006. This is because the publicly traded shares are actually those of National Grid plc (the Company) and the following disclosures provide additional information to shareholders.

A. Basis of preparation
National Grid plc is the Parent Company of the National Grid Group, which is engaged in the transmission and distribution of electricity and gas in Great Britain and northeastern US. The Company is a public limited company, limited by shares. The Company is incorporated and domiciled in England, with its registered office at 1–3 Strand, London, WC2N 5EH.

The financial statements of National Grid plc for the year ended 31 March 2020 were approved by the Board of Directors on 17 June 2020. The Company meets the definition of a qualifying entity under Financial Reporting Standard 100 (FRS 100) issued by the Financial Reporting Council. Accordingly, these individual financial statements of the Company have been prepared in accordance with Financial Reporting Standard 101 'Reduced Disclosure Framework' (FRS 101). In preparing these financial statements the Company applies the recognition and measurement requirements of International Financial Reporting Standards (IFRS) as adopted by the EU, but makes amendments where necessary in order to comply with the provisions of the Companies Act 2006 and sets out below where advantage of the FRS 101 disclosure exemptions has been taken.

These individual financial statements have been prepared on an historical cost basis, except for the revaluation of financial instruments, and are presented in pounds sterling, which is the currency of the primary economic environment in which the Company operates. The 2019 comparative financial information has also been prepared on this basis.

These individual financial statements have been prepared on a going concern basis, which presumes that the Company has adequate resources to remain in operation, and that the Directors intend it to do so, for at least one year from the date the financial statements are signed. As the Company is part of a larger group it participates in the Group's centralised treasury arrangements and so shares banking arrangements with its subsidiaries. The Company is expected to generate positive cash flows or be in a position to obtain finance via intercompany loans to continue to operate for the foreseeable future.

As described further in note 1 to the consolidated financial statements, the Directors have considered the impact of COVID-19 on the Group and on the Company, and have concluded that the Company will have adequate resources to continue in operation for at least 12 months from the signing date of these financial statements. Therefore, they continue to adopt the going concern basis of accounting in preparing the financial statements.

In accordance with the exemption permitted by section 408 of the Companies Act 2006, the Company has not presented its own profit and loss account or statement of comprehensive income.

The following exemptions from the requirements of IFRS have been applied in the preparation of these financial statements of the Company in accordance with FRS 101:

- a cash flow statement and related notes;
- disclosures in respect of transactions with wholly owned subsidiaries;
- disclosures in respect of capital management; and
- the effects of new but not yet effective IFRS standards.

The exemption from disclosing key management personnel compensation has not been taken as there are no costs borne by the Company in respect of employees, and no related costs are recharged to the Company.

As the consolidated financial statements of National Grid plc, which are available from the registered office, include the equivalent disclosures, the Company has also taken the exemptions under FRS 101 in respect of certain disclosures required by IFRS 13 'Fair value measurement' and the disclosures required by IFRS 7 'Financial instruments: Disclosures'.

The Company has adopted IFRS 16 with effect from 1 April 2019. The adoption of IFRS 16 has had no impact on the Company.

There are no areas of judgement or key sources of estimation uncertainty that are considered to have a significant effect on the amounts recognised in the financial statements.

The balance sheet has been prepared in accordance with the Company's accounting policies approved by the Board and described below.

B. Fixed asset investments
Investments held as fixed assets are stated at cost less any provisions for impairment. Investments are reviewed for impairment if events or changes in circumstances indicate that the carrying amount may not be recoverable. Impairments are calculated such that the carrying value of the fixed asset investment is the lower of its cost or recoverable amount. Recoverable amount is the higher of its net realisable value and its value-in-use. The Company accounts for common control transactions at cost.

C. Tax
Current tax for the current and prior periods is provided at the amount expected to be paid or recovered using the tax rates and tax laws that have been enacted or substantively enacted by the balance sheet date.

Deferred tax is provided in full on temporary differences which result in an obligation at the balance sheet date to pay more tax, or the right to pay less tax, at a future date, at tax rates expected to apply when the temporary differences reverse based on tax rates and tax laws that have been enacted or substantively enacted by the balance sheet date. Deferred tax is provided for using the balance sheet liability method and is recognised on temporary differences between the carrying amount of assets and liabilities in the financial statements and the corresponding tax bases used in the computation of taxable profit.

Deferred tax assets are recognised to the extent that it is regarded as more likely than not that they will be recovered. Deferred tax assets and liabilities are not discounted.

Company accounting policies continued

D. Foreign currencies
Transactions in currencies other than the functional currency of the Company are recorded at the rates of exchange prevailing on the dates of the transactions. At each balance sheet date, monetary assets and liabilities that are denominated in foreign currencies are retranslated at closing exchange rates. Gains and losses arising on retranslation of monetary assets and liabilities are included in the profit and loss account.

E. Financial instruments
The Company's accounting policies are the same as the Group's accounting policies under IFRS, namely IAS 32 'Financial Instruments: Presentation', IFRS 9 'Financial Instruments' and IFRS 7 'Financial Instruments: Disclosures'. The Company applies these policies only in respect of the financial instruments that it has, namely investments, derivative financial instruments, debtors, cash at bank and in hand, borrowings and creditors.

The policies are set out in notes 15, 17, 19, 20, 21 and 22 to the consolidated financial statements. The Company is taking the exemption for financial instruments disclosures, because IFRS 7 disclosures are given in notes 32 and 35 to the consolidated financial statements.

F. Hedge accounting
The Company applies the same accounting policy as the Group in respect of fair value hedges and cash flow hedges. This policy is set out in note 32 to the consolidated financial statements.

G. Parent Company guarantees
The Company has guaranteed the repayment of the principal sum, any associated premium and interest on specific loans due by certain subsidiary undertakings primarily to third parties. Such guarantees are accounted for by the Company as insurance contracts. In the event of default or non-performance by the subsidiary, a liability is recorded in accordance with IAS 37 with a corresponding increase in the carrying value of the investment.

H. Share awards to employees of subsidiary undertakings
The issuance by the Company to employees of its subsidiaries of a grant over the Company's options represents additional capital contributions by the Company to its subsidiaries. An additional investment in subsidiaries results in a corresponding increase in shareholders' equity. The additional capital contribution is based on the fair value of the option at the date of grant, allocated over the underlying grant's vesting period. Where payments are subsequently received from subsidiaries, these are accounted for as a return of a capital contribution and credited against the Company's investments in subsidiaries. The Company has no employees.

I. Dividends
Interim dividends are recognised when they are paid to the Company's shareholders. Final dividends are recognised when they are approved by shareholders.

J. Directors' remuneration
Full details of Directors' remuneration are disclosed on pages 88 to 108.

Company balance sheet
as at 31 March

	Notes	2020 £m	2019 £m
Fixed assets			
Investments	1	**14,362**	9,923
Current assets			
Debtors (amounts falling due within one year)	2	**12,427**	12,625
Debtors (amounts falling due after more than one year)	2	**398**	358
Investments	5	**752**	895
Cash at bank and in hand		**2**	75
Total current assets		**13,579**	13,953
Creditors (amounts falling due within one year)	3	**(16,836)**	(15,529)
Net current liabilities		**(3,257)**	(1,576)
Total assets less current liabilities		**11,105**	8,347
Creditors (amounts falling due after more than one year)	3	**(2,620)**	(2,648)
Net assets		**8,485**	5,699
Equity			
Share capital	7	**470**	458
Share premium account		**1,301**	1,314
Cash flow hedge reserve		**(28)**	1
Cost of hedging reserve		**(6)**	–
Other equity reserves		**399**	380
Profit and loss account	8	**6,349**	3,546
Total shareholders' equity		**8,485**	5,699

The Company's profit after tax for the year was £3,684 million (2019: £202 million loss). Profits available for distribution by the Company to shareholders were in excess of £5 billion at 31 March 2020. The financial statements of the Company on pages 209 to 215 were approved by the Board of Directors on 17 June 2020 and were signed on its behalf by:

Sir Peter Gershon Chairman
Andy Agg Chief Financial Officer

National Grid plc
Registered number: 4031152

Company statement of changes in equity
for the years ended 31 March

	Share capital £m	Share premium account £m	Cash flow hedge reserve £m	Cost of hedging reserve £m	Other equity reserves £m	Profit and loss account £m	Total shareholders' equity £m
At 1 April 2018	452	1,321	2	–	353	4,892	7,020
Loss for the year	–	–	–	–	–	(202)	(202)
Other comprehensive loss for the year							
Transferred from equity (net of tax)	–	–	(1)	–	–	–	(1)
Total comprehensive loss for the year	–	–	(1)	–	–	(202)	(203)
Other equity movements							
Scrip dividend-related share issue[1]	6	(7)	–	–	–	–	(1)
Issue of treasury shares	–	–	–	–	–	18	18
Purchase of own shares	–	–	–	–	–	(2)	(2)
Share awards to employees of subsidiary undertakings	–	–	–	–	27	–	27
Equity dividends	–	–	–	–	–	(1,160)	(1,160)
At 31 March 2019	458	1,314	1	–	380	3,546	5,699
Profit for the year[2]	–	–	–	–	–	3,684	3,684
Other comprehensive (loss)/profit for the year							
Transferred from equity (net of tax)	–	–	(29)	(6)	–	–	(35)
Total comprehensive (loss)/profit for the year	–	–	(29)	(6)	–	3,684	3,649
Other equity movements							
Scrip dividend-related share issue[1]	12	(13)	–	–	–	–	(1)
Issue of treasury shares	–	–	–	–	–	17	17
Purchase of own shares	–	–	–	–	–	(6)	(6)
Share awards to employees of subsidiary undertakings	–	–	–	–	19	–	19
Equity dividends	–	–	–	–	–	(892)	(892)
At 31 March 2020	**470**	**1,301**	**(28)**	**(6)**	**399**	**6,349**	**8,485**

1. Included within the share premium account are costs associated with scrip dividends.
2. Included within profit for the year is dividend income from subsidiaries of £3,887 million (2019: £nil).

Notes to the Company financial statements

1. Fixed asset investments

	Shares in subsidiary undertakings £m
At 1 April 2018	9,896
Additions	27
At 31 March 2019	9,923
Additions	7,011
Disposals	(2,572)
At 31 March 2020	**14,362**

During the year there was a capital contribution of £19 million (2019: £27 million) which represents the fair value of equity instruments granted to subsidiaries' employees arising from equity-settled employee share schemes.

Furthermore, the Company made a further investment of £2,000 million in National Grid (US) Holdings Limited, following a rights issue by that company; acquired National Grid (US) Investments 2 Limited from an indirect subsidiary undertaking for £2,420 million; and disposed of its investments in National Grid Holdings One plc and National Grid (US) Investments 2 Limited in exchange for an investment in National Grid Luxembourg Sarl at a cost of £2,572 million.

The Company's direct subsidiary undertakings as at 31 March 2020 were as follows: National Grid (US) Holdings Limited; NGG Finance plc; and National Grid Luxembourg Sarl. The names of indirect subsidiary undertakings, joint ventures and associates are included in note 34 to the consolidated financial statements.

The Directors believe that the carrying value of the investments is supported by the fair value of their underlying net assets.

2. Debtors

	2020 £m	2019 £m
Amounts falling due within one year		
Derivative financial instruments (see note 4)	**37**	110
Amounts owed by subsidiary undertakings	**12,390**	12,514
Prepayments and accrued income	**–**	1
	12,427	12,625
Amounts falling due after more than one year		
Derivative financial instruments (see note 4)	**27**	–
Amounts owed by subsidiary undertakings	**363**	358
Deferred tax	**8**	–
	398	358

The carrying values stated above are considered to represent the fair values of the assets. For the purposes of the impairment assessment, loans to subsidiary undertakings are considered low credit risk as the subsidiaries are solvent and are covered by the Group's liquidity arrangements.

A reconciliation of the movement in deferred tax in the year is shown below:

	Deferred tax £m
At 1 April 2018	(1)
Credited to equity	1
At 31 March 2019	–
Charged to equity	8
At 31 March 2020	**8**

Notes to the Company financial statements continued

3. Creditors

	2020 £m	2019 £m
Amounts falling due within one year		
Borrowings (see note 6)	**666**	1,275
Derivative financial instruments (see note 4)	**278**	92
Amounts owed to subsidiary undertakings	**15,834**	14,104
Other creditors	**58**	58
	16,836	15,529
Amounts falling due after more than one year		
Borrowings (see note 6)	**355**	346
Derivative financial instruments (see note 4)	**160**	228
Amounts owed to subsidiary undertakings	**2,105**	2,074
	2,620	2,648
Amounts owed to subsidiary undertakings falling due after more than one year are repayable as follows:		
In 1 to 2 years	**–**	1,077
In 4 to 5 years	**443**	–
More than 5 years	**1,662**	997
	2,105	2,074

The carrying values stated above are considered to represent the fair values of the liabilities.

4. Derivative financial instruments

The fair values of derivative financial instruments are:

	2020			2019		
	Assets £m	**Liabilities £m**	**Total £m**	Assets £m	Liabilities £m	Total £m
Amounts falling due within one year	**37**	**(278)**	**(241)**	110	(92)	18
Amounts falling due after more than one year	**27**	**(160)**	**(133)**	–	(228)	(228)
	64	**(438)**	**(374)**	110	(320)	(210)

For each class of derivative, the notional contract[1] amounts are as follows:

	2020 £m	2019 £m
Interest rate swaps	**–**	(1,208)
Cross-currency interest rate swaps	**(3,804)**	(2,900)
Foreign exchange forward contracts	**(7,886)**	(7,920)
	(11,690)	(12,028)

1. The notional contract amounts of derivatives indicate the gross nominal value of transactions outstanding at the balance sheet date.

5. Investments

	2020 £m	2019 £m
Investments in short-term money funds	**572**	672
Restricted balances – collateral	**180**	223
	752	895

6. Borrowings

The following table analyses the Company's total borrowings:

	2020 £m	2019 £m
Amounts falling due within one year		
Bank loans	**46**	–
Bonds	**2**	435
Commercial paper	**618**	840
	666	1,275
Amounts falling due after more than one year		
Bonds	**355**	346
	1,021	1,621

The maturity of total borrowings is as follows:

	2020 £m	2019 £m
Total borrowings are repayable as follows:		
Less than 1 year	**666**	1,275
In 1 to 2 years	**355**	–
In 2 to 3 years	**–**	346
In 3 to 4 years	**–**	–
In 4 to 5 years	**–**	–
More than 5 years	**–**	–
	1,021	1,621

The notional amount of borrowings outstanding as at 31 March 2020 was £1,018 million (2019: £1,618 million).

7. Share capital

The called-up share capital amounting to £470 million (2019: £458 million) consists of 3,780,237,016 ordinary shares of $12^{204/473}$ pence each (2019: 3,687,483,073 ordinary shares of $12^{204/473}$ pence each). For further information on share capital, refer to note 27 of the consolidated financial statements.

8. Shareholders' equity and reserves

At 31 March 2020, the profit and loss account reserve stood at £6,349 million (2019: £3,546 million) of which profits available for distribution by the Company to shareholders were in excess of £5 billion at 31 March 2020. The Company bore no employee costs in either the current or prior year.

For further details of dividends paid and payable to shareholders, refer to note 9 of the consolidated financial statements.

9. Parent Company guarantees

The Company has guaranteed the repayment of the principal sum, any associated premium and interest on specific loans due by certain subsidiary undertakings primarily to third parties. At 31 March 2020, the sterling equivalent amounted to £2,169 million (2019: £2,152 million). The guarantees are for varying terms from less than one year to open-ended.

In addition, as part of the sectionalisation of the National Grid UK Pension Scheme on 1 January 2017, a guarantee of £1 billion has been provided to Section A. This payment is contingent on insolvency or on failure to pay pensions obligations to Section A and can be claimed against National Grid plc, National Grid Holdings One plc or Lattice Group Limited (up to £1 billion in total). Refer to note 25 of the consolidated financial statements.

10. Audit fees

The audit fee in respect of the Parent Company was £27,000 (2019: £26,000). Fees payable to Deloitte for non-audit services to the Company are not required to be disclosed as they are included within note 4 to the consolidated financial statements.

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The business in detail

Key milestones

Some of the key dates and actions in the corporate history of National Grid are listed below. Our full history goes back much further.

1986

British Gas (BG) privatisation

1990

Electricity transmission network in England and Wales transfers to National Grid on electricity privatisation

1995

National Grid listed on the London Stock Exchange

1997

Centrica demerges from BG

Energis demerges from National Grid

2000

Lattice Group demerges from BG and is listed separately

New England Electric System and Eastern Utilities Associates acquired

2002

Niagara Mohawk Power Corporation merges with National Grid in US

National Grid and Lattice Group merge to form National Grid Transco

2004

UK wireless infrastructure network acquired from Crown Castle International Corp

2005

Four UK regional gas distribution networks sold and we adopt National Grid as our name

2006

Rhode Island gas distribution network acquired

2007

UK and US wireless infrastructure operations and the Basslink electricity interconnector in Australia sold

KeySpan Corporation acquired

2008

Ravenswood generation station sold

2010

Rights issue raises £3.2 billion

2012

New Hampshire electricity and gas distribution businesses sold

2016

National Grid separates the UK Gas Distribution business

2017

National Grid sells a 61% equity interest in the UK Gas Distribution business

2019

National Grid separates the UK Electricity System Operator business

National Grid sells its remaining 39% equity interest in UK Gas Distribution business

Acquisition of Geronimo

The business in detail continued

Where we operate
Our UK network

St Fergus
to/from Northern Ireland
to Ballylumford
to Dublin
Barrow
Teesside
Easington
to/from Ireland
Burton Point
Theddlethorpe
from the Netherlands
Bacton
to/from Belgium
South Hook
Dragon
BritNed to/from the Netherlands
Grain LNG
to/from Belgium
to/from France

UK Transmission[1]

- Scottish electricity transmission system
- English and Welsh electricity transmission system

Approximately 4,481 miles (7,212 kilometres) of overhead line, 1,391 miles (2,239 kilometres) of the underground cable and 347 substations.

- Gas transmission system

Approximately 4,740 miles (7,630 kilometres) of high-pressure pipe and 24 compressor stations connecting to eight distribution networks and third-party independent systems.

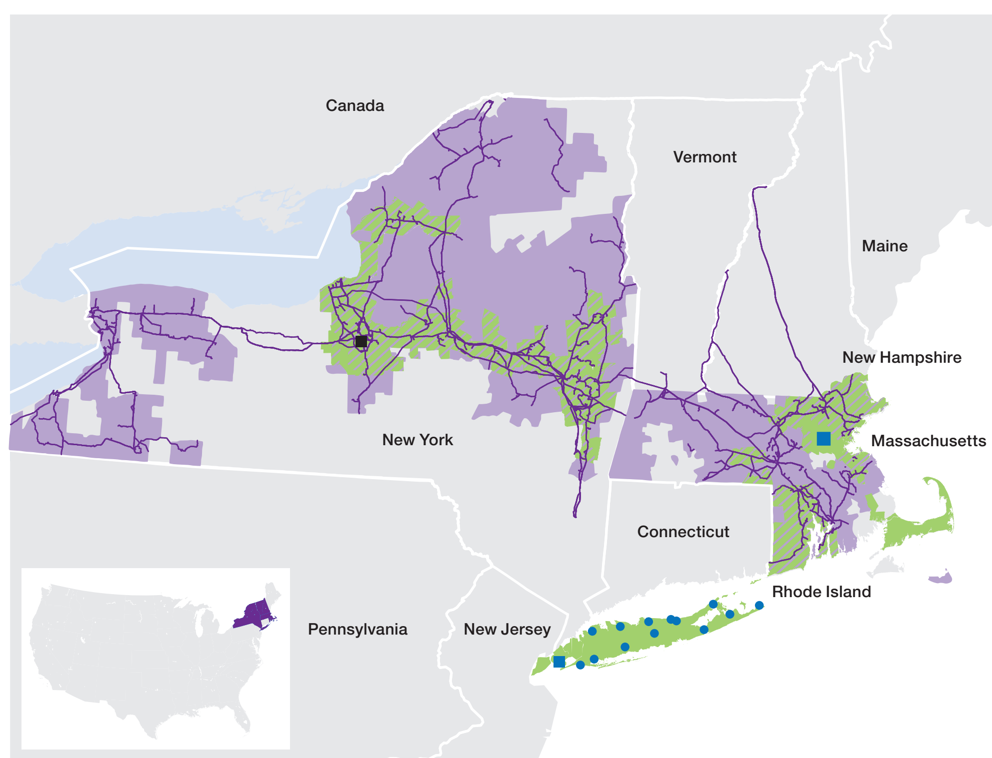
- Terminal
- LNG terminal owned by National Grid
- LNG terminal
- Electricity interconnector
- Gas interconnector

Principal offices

- Owned office space: Warwick and Wokingham
- Leased office space[2]: Solihull and London

Leased office space totalling 134,704 square feet (12,515 square metres) with remaining terms three to six years.

Our US network



US regulated[1]

- Electricity transmission network
- Gas distribution operating area
- Electricity distribution area
- Gas and electricity distribution area overlap

An electricity transmission network of approximately 9,109 miles (14,659 kilometres) of overhead line, 105 miles (169 kilometres) of underground cable and 396 transmission substations.

An electricity distribution network of approximately 73,004 circuit miles (117,488 kilometres) and 730 distribution substations in New England and upstate New York.

A network of approximately 35,682 miles (57,425 kilometres) of gas pipeline. Our network also consists of approximately 498 miles (801 kilometres) of gas transmission pipe, as defined by the US Department of Transportation.

- Generation

Principal offices

- Owned office space: Syracuse, New York
- Leased office space: Brooklyn, New York and Waltham, Massachusetts

Leased office space totalling approximately 635,000 square feet (58,993 square metres) with remaining terms of five to nine years.

In January 2020, we announced we had executed a lease for 86,000 square feet (7,990 square metres) of office space at 2 Hanson Place, Downtown Brooklyn, New York. The lease is anticipated to commence in January 2021. We will begin to exit our current One MetroTech Brooklyn location in phases at the end of the calendar year 2020. Space anticipated to be vacated is being marketed for sub-lease. The MetroTech lease terminates in February 2025 and will not be renewed.

At present, environmental issues are not preventing our UK and US businesses from utilising any material operating assets in the course of their operations.

1. Access to electricity and gas transmission assets on property owned by others is controlled through various agreements.
2. The Warwick (Telent) building lease was terminated on a break clause and was vacated on 24 December 2019.

UK regulation

Our licences to participate in transmission and interconnection activities are established under the Gas Act 1986 and the Electricity Act 1989, as amended (the Acts). These require us to develop, maintain and operate economic and efficient networks and to facilitate competition in the supply of gas and electricity in Great Britain (GB). They also give us statutory powers, including the right to bury our pipes or cables under public highways and the ability to use compulsory powers to purchase land so we can conduct our business.

Our licensed activities are regulated by Ofgem, which has a statutory duty under the Acts to protect the interests of consumers. To protect consumers from the ability of companies to set unduly high prices, Ofgem has established price controls that limit the amount of revenue such regulated businesses can earn. In setting price controls, Ofgem must have regard to the need to secure that licence holders are able to finance their obligations under the Acts. Licensees and other affected parties can appeal licence modifications which have errors, including in respect of financeability. This should give us a level of revenue for the duration of the price control that is sufficient to meet our statutory duties and licence obligations with a reasonable return on our investments.

The price controls include a number of mechanisms designed to help achieve their objectives. These include financial incentives that encourage us to:

- efficiently deliver, through investment and maintenance, the network outputs that customers and stakeholders require, including reliable supplies, new connections and infrastructure capacity;
- innovate so we can continuously improve the services we give our customers, stakeholders and communities; and
- efficiently balance the transmission networks to support the wholesale markets.

The main price controls for electricity and gas transmission networks came into effect on 1 April 2013 for the eight-year period until 31 March 2021. They follow the RIIO (revenue = incentives + innovation + outputs) framework established by Ofgem.

Following the sale of a majority interest in the National Grid UK Gas Distribution business (now known as Cadent) on 31 March 2017, Cadent now has responsibility for operating within the price controls relating to its four gas distribution networks. In November 2018, we announced our decision to exercise our Options for the sale of our remaining 39% share in Cadent and this completed in June 2019.

Our UK gas and electricity transmission and system operator businesses operate under four separate price controls. These comprise two for our electricity operations, one covering our role as Transmission Owner (TO) and the other for our role as System Operator (SO), and two for our gas operations, again one as TO and one as SO. In addition to the four regulated network price controls, there is also a tariff cap price control applied to certain elements of domestic sized metering activities carried out by National Grid Metering and also regulation of our electricity interconnector interests.

In 2017 Ofgem, the Department for Business, Energy and Industrial Strategy (BEIS) and National Grid plc agreed to create a legally separate business, the Electricity System Operator (ESO), within the National Grid Group. The ESO became a separate entity within the Group on 1 April 2019.

A primary goal of ESO legal separation in April 2019 was to increase transparency of our activities and help minimise any perceived conflicts of interest as we take on the challenge of driving forward the energy transformation. There are clear signals from Ofgem and the broader regulatory context that the ESO will play a crucial role in the changing energy environment. As an asset-light and service-based entity the ESO is also fundamentally different from other regulated network companies. The new price control arrangements for RIIO-2 are therefore an opportunity to implement a new regulatory framework that enables us to meet our stakeholders' expectations.

In April 2018, Ofgem introduced a new regulatory and incentives framework for the ESO. This moved away from the use of targeted, mechanistic incentives towards a 'principles-based' evaluative incentives approach. The new approach includes a set of 'Roles and Principles' designed to set clear expectations about the baseline behaviours we expect from the ESO and a requirement for the ESO to produce a Forward Plan, following stakeholder engagement, demonstrating the activities it will undertake over the year to add value for consumers. Ofgem's ESO Performance Panel will challenge the ESO on its plans, evaluate its performance and make recommendations to Ofgem. At the end of the year, Ofgem will decide whether to financially reward or penalise the ESO up to a maximum cap and floor (where sales revenues above the cap are returned to transmission system users, and revenues below the floor are topped up by transmission system users, thus reducing the overall project risk) of ±£30 million, informed by the Performance Panel's recommendations, as well as other evidence collected throughout the year.

In 2019, the ESO published a mission and set of ambitious goals accompanied by its Forward Plan and its RIIO-2 business plan to set out what, when and how it delivers. This RIIO-2 business plan reflects the ambition shared by us and Ofgem for the ESO to be innovative, ambitious and agile, responding to stakeholder needs and the changing energy landscape.

Ofgem published terms of reference for a review of system operators on 13 February 2020. The aim of the review is to consider the current and future challenges facing GB System Operation and assess whether the right governance framework is in place to deliver the UK's net zero emissions target at lowest cost to consumers. A report on the outcome of the review will be produced which is expected to be received in June 2020 or later.

Interconnectors derive their revenues from sales of capacity to users who wish to move power between market areas with different prices. Under European legislation, these capacity sales are classified as 'congestion revenues'. This is because the market price differences result from congestion on the established interconnector capacity which limits full price convergence. European legislation governs how congestion revenues may be used and how interconnection capacity is allocated. It requires all interconnection capacity to be allocated to the market through auctions. Under UK legislation, interconnection businesses must be separate from transmission businesses.

There is a range of different regulatory models available for interconnector projects. These involve various levels of regulatory intervention, ranging from fully merchant (where the project is fully reliant on sales of interconnector capacity) to cap and floor.

The cap and floor regime is now the regulated route for interconnector investment in GB and may be sought by project developers who do not qualify for, or do not wish to apply for, exemptions from European legislation which would facilitate a merchant development.

RIIO price controls

The building blocks of the RIIO price control are broadly similar to the price controls historically used in the UK. There are, however, some significant differences in the mechanics of the calculations.

How is revenue calculated?

Under RIIO, the outputs we deliver are explicitly articulated and our allowed revenues are linked to their delivery. These outputs were determined through an extensive consultation process, which gave stakeholders a greater opportunity to influence the decisions.

There are five output categories for transmission under the current RIIO price controls:

Safety: ensuring the provision of a safe energy network.

Reliability (and availability): promoting networks capable of delivering long-term reliability, minimising the number and duration of interruptions experienced during the price control period and ensuring adaptation to climate change.

Environmental impact: encouraging companies to play their role in achieving broader environmental objectives, specifically, facilitating the reduction of carbon emissions, as well as minimising their own carbon footprint.

Customer and stakeholder satisfaction: maintaining high levels of customer satisfaction and stakeholder engagement, and improving service levels.

Customer connections: encouraging networks to connect customers quickly and efficiently.

The business in detail continued

Within each of these output categories are a number of primary and secondary deliverables that reflect what our stakeholders want us to deliver over the remaining price control period and in preparation for future periods. The nature and number of these deliverables vary according to the output category. Some are linked directly to our allowed revenue and some to legislation, while others have only a reputational impact.

Using information we have submitted, along with independent assessments, Ofgem determines the efficient level of expected costs necessary for these deliverables to be achieved. Under RIIO this is known as 'totex', which is a component of total allowable expenditure and is broadly the sum of what was defined in previous price controls as operating expenditure (opex) and capital expenditure (capex).

A number of assumptions are necessary in setting allowances for these outputs, including the volumes of work that will be needed and the price of the various external inputs required to achieve them. Consequently, there are a number of uncertainty mechanisms within the RIIO framework that can result in adjustments to totex allowances if actual input prices or work volumes differ from the assumptions.

Where we under- or over-spend the allowed totex for reasons that are not covered by uncertainty mechanisms, there is a 'sharing' factor. This means we share the under- or over-spend with customers through an adjustment to allowed revenues in future years. This sharing factor provides an incentive for us to provide the outputs efficiently, as we are able to keep a portion of savings we make, with the remainder benefiting our customers.

The extended eight-year length of the first round of RIIO price controls is one of the ways that RIIO has given innovation more prominence. Innovation refers to all the new ways of working that deliver outputs more efficiently. This broad challenge has an impact on everyone in our business.

Allowed revenue to fund totex costs is split between RIIO 'fast' and 'slow' money categories using specified ratios that are fixed for the duration of the price control. Fast money represents the amount of totex we are able to recover in the year of expenditure. Slow money is added to our Regulatory Asset Value (RAV) – effectively the regulatory IOU. (For more details on the sharing factors under RIIO, please see the table overleaf).

In addition to fast money, each year we are allowed to recover regulatory depreciation, i.e. a portion of the RAV and a return on the outstanding RAV balance. Regulatory depreciation in electricity and gas transmission permits recovery of RAV consistent with each addition bringing benefit to consumers for a period of up to 45 years. We are also allowed to collect additional revenues related to non-controllable costs and incentives. In addition to totex sharing, RIIO incentive mechanisms can increase or decrease our allowed revenue to reflect our performance against various other measures related to our outputs. For example, performance against our customer and stakeholder satisfaction targets can have a positive or negative effect of up to 1% of allowed annual revenues. Many of our incentives affect our revenues two years after the year of performance.

During the eight-year period of the RIIO-T1 price control, our regulator included a provision for a mid-period review, which was completed during 2017 and led to some changes in allowances relating to certain specific costs. Further to the mid-period review, National Grid volunteered that £480 million (in 2009/10 prices) of allowances for electricity transmission investments should be deferred. In August 2017, Ofgem determined how the RIIO allowances would be correspondingly adjusted.

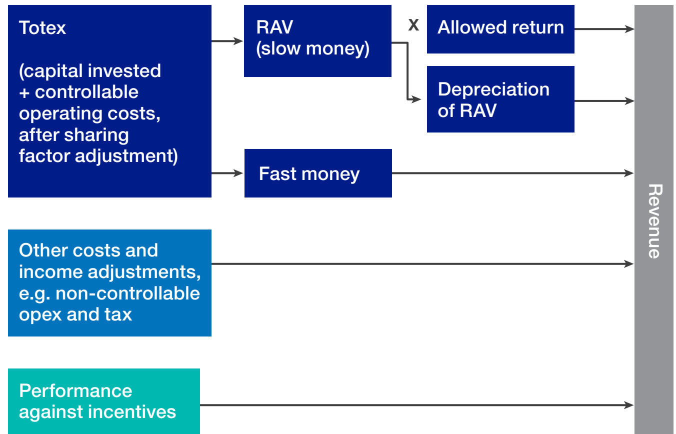
In addition, the RIIO-T1 price controls for transmission included a 're-opener mechanism', in relation to certain specific cost categories where there was uncertainty about expenditure requirements at the time of setting allowances. Both our gas and electricity transmission businesses requested additional funding under this mechanism in May 2018, leading to some changes to the allowed revenues.

Competition in onshore transmission

Ofgem stated in its final decision on the RIIO-T1 price control for electricity transmission that it would consider holding a competition to appoint the constructor and owner of suitably large new transmission projects, rather than including these new outputs and allowances in existing transmission licensee price controls. In the absence of the legislation needed to support a competition, at the end of July 2018, and after consultation, Ofgem decided to fund the delivery of the Hinkley-Seabank (HSB) electricity transmission project by National Grid through a regulatory model called the 'Competition Proxy Model' (CPM). This regulatory model seeks to replicate the outcome of an efficient competitive process for the financing, construction and operation of the project and to provide National Grid Electricity Transmission with a project-specific revenue allowance over the period of its construction and 25 years of operation, but with reduced allowances reflecting prices that Ofgem has observed in other competitions. Ofgem subsequently updated the analysis which supported this decision, and in October 2019 consulted on a new minded-to position to fund delivery of the HSB project through the Strategic Wider Works (SWW) mechanism under the RIIO price control framework, rather than through the CPM as previously intended. The CPM is intended to be a 'late competition' model.

The ESO, at Ofgem's request, is developing an Early Competition Plan. This plan will set out how a model for Early Competition could be implemented, identifying the process, roles and responsibilities, code and licence changes required along with cost and timescales to implement. Plans are being co-created with stakeholders to ensure developed model(s) are attractive to potential bidders in addition to being achievable and aligned with network planning processes. As part of this work, the ESO is also considering what, if any, role the ESO could have in distribution level competition. The Early Competition Plan is due to be completed by the end of February 2021.

Simplified illustration of RIIO regulatory building blocks



Allowed returns

The cost of capital allowed under our current RIIO price controls is as follows:

	Transmission	
	Gas	Electricity
Cost of equity (post-tax real)	6.8%	7.0%
Cost of debt (pre-tax real)	iBoxx 10-year simple trailing average index (1.58% for 2019/20)	
Notional gearing	62.5%	60.0%
Vanilla WACC[1]	3.54%	3.75%

1. Vanilla WACC = cost of debt × gearing + cost of equity × (1-gearing).

Sharing factors are used to share over- and under-spends of allowed totex between the businesses and customers. The sharing figures displayed in the table below are the sharing factors that apply to our electricity and gas transmission businesses, for both TO and SO.

Sharing factors and fast:slow money ratios under our current RIIO price controls are as follows:

	Gas Transmission		Electricity Transmission	
	Transmission owner	**System operator**	**Transmission owner**	**System operator**
Fast[1]	Baseline[3] 35.6% Uncertainty 10%	62.60%	15.00%	72.10%
Slow[2]	Baseline[3] 64.4% Uncertainty 90%	37.40%	85.00%	27.90%
Sharing	44.36%		46.89%	

1. Fast money allows network companies to recover a percentage of totex within a one-year period.
2. Slow money is where costs are added to RAV and, therefore, revenues are recovered slowly (e.g. over 45 years) from both current and future customers.
3. The baseline is the expenditure that is funded through ex-ante allowances, whereas the uncertainty adjusts the allowed expenditure where the level of outputs delivered differ from the baseline level, or if triggered by an event.

RIIO-2

Ofgem has started work on the next round of RIIO price controls (RIIO-2) for the energy network sectors it regulates, including both gas and electricity transmission. It has consulted on a wide range of topics, including incentives, outputs, the cost of capital and other financial parameters. Decisions that have already been taken include reducing the default price control duration back to five years from eight years, extending the role of competition where appropriate from electricity transmission to other sectors and moving away from RPI to CPIH for inflation measurement when calculating RAV and allowed returns. In addition, Ofgem has proposed a methodology for the baseline-allowed cost of equity which, based on the evidence available, it used in May 2019 to calculate its working assumption for RIIO-2 that is lower than the value under the current RIIO price controls. The RIIO-2 proposals will also apply, in part, to the ESO, but due to the nature of its activities some elements are less applicable to the ESO, and Ofgem has proposed that the duration will remain as a five-year price control, but with business plans (and totex allowances) it will be on a two-year cycle and overall the financial framework for the ESO is likely to be very different.

We and other stakeholders will continue to work with Ofgem to develop the framework and parameters for RIIO-2. We submitted business plans in December 2019 and Ofgem is expected to publish and consult on its draft determination in summer 2020, followed by the final price control determination for transmission companies before the end of 2020.

US regulation

Regulators

In the US, public utilities' retail transactions are regulated by state utility commissions. The commissions serve as economic regulators, approving cost recovery and authorised rates of return. The state commissions establish the retail rates to recover the cost of transmission and distribution services, and focus on services and costs within their jurisdictions. They also serve the public interest by making sure utilities provide safe and reliable services at just and reasonable prices. The commissions establish service standards and approve public utility mergers and acquisitions.

The Federal Energy Regulatory Commission (FERC) regulates wholesale transactions for utilities, such as interstate transmission and wholesale electricity sales, including rates for these services, at the federal level. FERC also regulates public utility holding companies and centralised service companies, including those of our US businesses.

Regulatory process

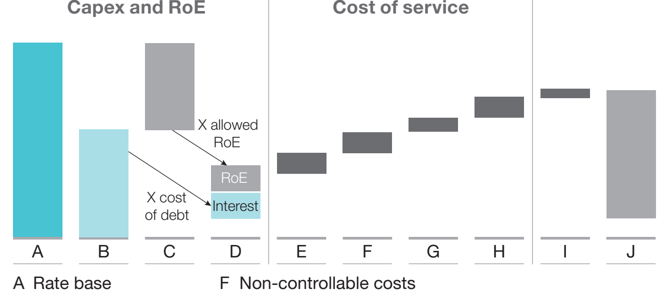
The US regulatory regime is premised on allowing the utility the opportunity to recover its cost of service and earn a reasonable return on its investments as determined by the commission. Utilities submit formal rate filings (rate cases) to the relevant state regulator when additional revenues are necessary to provide safe, reliable service to customers. Utilities can be compelled to file a rate case, either due to complaints filed with the commission or at the commission's own discretion.

The rate case is typically litigated with parties representing customers and other interests. In the states where we operate, it can take 9 to 13 months for the commission to render a final decision. The utility is required to prove that the requested rate change is prudent and reasonable, and the requested rate plan can span multiple years. Unlike the state processes, the federal regulator has no specified timeline for adjudicating a rate case; typically it makes a final decision retroactive when the case is completed.

Gas and electricity rates are established from a revenue requirement, or cost of service, equal to the utility's total cost of providing distribution or delivery service to its customers, as approved by the commission in the rate case. This revenue requirement includes operating expenses, depreciation, taxes and a fair and reasonable return on shareholder capital invested in certain components of the utility's regulated asset base. This is typically referred to as its rate base.

The final revenue requirement and rates for service are approved in the rate case decision. The revenue requirement is derived from a comprehensive study of the utility's total costs during a recent 12-month period of operations, referred to as a test year. Each commission has its own rules and standards for adjustments to the test year. These may include forecast capital investments and operating costs.

US regulatory revenue requirement



A Rate base
B Debt
C Equity
D Return
E Controllable costs
F Non-controllable costs
G Depreciation
H Taxes
I Lagged recoveries
J Allowed revenue

Our rate plans

Each operating company has a set of rates for service. We have three electric distribution operations (upstate New York, Massachusetts and Rhode Island) and six gas distribution networks (upstate New York, New York City, Long Island, Massachusetts (two) and Rhode Island).

Our distribution operating companies have revenue decoupling mechanisms that delink their revenues from the quantity of energy delivered and billed to customers. These mechanisms remove the natural disincentive utility companies have for promoting and encouraging customer participation in energy-efficiency programmes that lower energy end use and distribution volumes.

The business in detail continued

We bill our customers for their use of electricity and gas services. Customer bills typically cover the cost of electricity or gas delivered, and charges covering our delivery service. With the exception of residential gas customers in Rhode Island, our customers are allowed to select an unregulated competitive supplier for the commodity component of electricity and gas utility services.

A substantial proportion of our costs, in particular electricity and gas commodity purchases, are 'pass-through' costs. This means they are fully recoverable from our customers. We recover 'pass-through' costs through making separate charges to customers, designed to recover those costs with no profit. We adjust rates from time to time to make sure that any over- or under-recovery of these costs is returned to, or recovered from, our customers.

Our rate plans are designed to a specific allowed Return on Equity (RoE), by reference to an allowed operating expense level and rate base. Some rate plans include earnings-sharing mechanisms that allow us to retain a proportion of the earnings above our allowed RoE, achieved through improving efficiency, with the balance benefiting customers.

In addition, our performance under certain rate plans is subject to service performance targets. We may be subject to monetary penalties in cases where we do not meet those targets.

Our FERC-regulated transmission companies use formula rates (instead of periodic stated rate cases) to set rates annually that recover their cost of service. Through the use of annual true-ups, formula rates recover our actual costs incurred and the allowed RoE based on the actual transmission rate base each year. We must make annual formula rate filings documenting the revenue requirement that customers can review and challenge.

Revenue for our wholesale transmission businesses in New England and New York is collected from wholesale transmission customers. These are typically other utilities and include our own New England electricity distribution businesses. With the exception of upstate New York, which continues to combine retail transmission and distribution rates to end-use customers, these wholesale transmission costs are incurred by distribution utilities on behalf of their customers. They are fully recovered as a pass-through from end-use customers, as approved by each state commission.

Our Long Island generation plants sell capacity to the Long Island Power Authority (LIPA) under 15-year and 25-year power supply agreements and within wholesale tariffs approved by FERC. Through the use of cost-based formula rates, these long-term contracts provide a similar economic effect to cost-of-service rate regulation.

One measure used to monitor the performance of our regulated businesses is a comparison of achieved RoE to allowed RoE. However, this measure cannot be used in isolation, as several factors may prevent us from achieving the allowed RoE. These include financial market conditions, regulatory lag and decisions by the regulator preventing cost recovery in rates from customers.

We work to increase achieved RoE through:

- productivity improvements;
- positive performance against incentives or earned savings mechanisms, such as available energy-efficiency programmes; and
- filing a new rate case when achieved returns are lower than those the Company could reasonably expect to attain through a new rate case.

US regulatory filings

The objectives of our rate case filings are to make sure we have the right cost of service and are able to earn a fair and reasonable rate of return, while providing safe, reliable and economical service. To achieve these objectives and reduce regulatory lag, we have been requesting structural changes, such as:

- revenue decoupling mechanisms;
- capital trackers;
- commodity-related bad debt true-ups;
- pension and other post-employment benefit true-ups, separately from base rates; and
- performance-based frameworks such as incentives and multi-year plans.

We explain these terms below in the table on page 226.

Below, we summarise significant, recent developments in rate filings and the regulatory environment. In 2017/18, we made full rate case filings with Niagara Mohawk (electric and gas), in April 2017; Boston Gas and Colonial Gas, in November 2017; and the Narragansett Electric Company, also in November 2017. A joint proposal, setting forth a three-year rate plan for Niagara Mohawk, was approved by the New York State Public Service Commission (NYPSC) in March 2018. An amended settlement agreement setting forth a three-year rate plan for the Narragansett Electric Company was approved by the Rhode Island Public Utilities Commission (RIPUC) in August 2018. An order, establishing new base rates for Boston Gas and Colonial Gas, was approved by the Massachusetts Department of Public Utilities (MADPU) in September 2018. In 2018/19, we made a full rate case filing for Massachusetts Electric in November 2018. In 2019/20, we made a full rate case filing for KEDNY and KEDLI in April 2019. More recently, an order, setting forth a five-year performance-based ratemaking plan, was approved by MADPU in September 2019. These filings are expected to capture the benefit of recent increased investments in asset replacement and network reliability, and reflect long-term growth in costs, including property tax and healthcare costs.

Massachusetts

Massachusetts Electric and Nantucket Electric rate cases

We filed a rate case for Massachusetts Electric and Nantucket Electric with MADPU on 15 November 2018 with new rates effective on 1 October 2019. The Massachusetts Electric rate case is the first for Massachusetts Electric and Nantucket Electric since the case filed in 2015. It updates the electric companies' rates to more closely align revenues with the cost of service and bring their earned RoEs closer to the allowed RoE. New rates were approved with an allowed RoE of 9.6% on an equity ratio of 53.5%. MADPU approved a five-year performance-based ratemaking plan, which adjusts distribution rates annually based on a predetermined formula. As part of its decision, MADPU is requiring a management audit addressing the Company's strategic planning processes, staffing decisions and its relationship to National Grid USA Service Company. The audit will take place in two phases beginning in mid-2020 and ending with a final report in 2021. The Company cannot predict the outcome of this proceeding.

Merger of Boston Gas Company and Colonial Gas Company

On 16 December 2019, MADPU approved the Company's proposal to legally merge Colonial Gas Company into Boston Gas Company. The two companies had already effectively consolidated their operations, but the legal merger of these two entities allows for certain small efficiencies and cost savings. The legal merger was effective as of 15 March 2020. However, for ratemaking purposes, the Company must still maintain separate rates for customers of legacy Boston Gas Company and legacy Colonial Gas Company, until otherwise approved by MADPU.

Statewide assessment of gas pipeline safety
In November 2018, MADPU initiated an independent statewide pipeline safety audit of the natural gas distribution systems in Massachusetts and hired an independent auditor. The auditor assessed the safety of the gas systems in the entire state and made recommendations for improvements that may impact operations of Boston and Colonial Gas and pipeline safety compliance requirements in the future. The auditor's final report was issued 29 January 2020, and included 37 recommendations for all the gas companies in Massachusetts as well as state agencies and other stakeholders. The final report also included a number of opportunities specific to Boston Gas and Colonial Gas. MADPU directed the gas companies to file plans in response to the final report. Boston Gas and Colonial Gas filed their plan on 28 February 2020, in which they accepted the final report's recommendations and opportunities, and detailed their actions to assess and address the recommendations and observations. MADPU may take further action on the auditor's final report, but the Company cannot predict what that action may be.

Gas System Enhancement Plan (GSEP)
On 30 April 2019, MADPU approved our recovery of approximately $49.5 million in revenue requirements, related to $269.2 million of anticipated investments in 2019 under an accelerated pipe replacement programme, through rates effective from May 2019 to April 2020. MADPU also raised the cap on GSEP recoveries from 1.5% of revenue to 3% of revenue.

Grid modernisation
In response to a 2014 regulatory requirement, we filed a Massachusetts electricity grid modernisation plan on 19 August 2015 that proposed multiple investment options. An order from MADPU approving some of the proposed investment was received on 10 May 2018. In its order, MADPU refined their objectives for grid modernisation to be: optimise system performance; optimise system demand and interconnect; and integrate distributed energy resources. We continue to implement our grid modernisation plan, and will be making annual cost recovery and annual update filings in conjunction with the plan in March and April of each year, respectively. We will also file our next proposed three-year grid modernisation plan (for 2021–23) on 1 July 2020.

Massachusetts large-scale renewable contracts/clean energy contracts
During 2018, pursuant to state legislation enacted in 2016, our Massachusetts electric distribution companies, Massachusetts Electric Company and Nantucket Electric Company, filed with MADPU requests for approval of long-term contracts for their pro rata share of output and associated transmission from hydroelectric generation from Canada (approximately 1,200 MW), and from an offshore wind energy generation project (approximately 800 MW) to be located on the outer continental shelf.

Between April and June 2019, MADPU approved all of these contracts, along with the companies' request to recover the costs and remuneration equal to 2.75% of the annual payments under the contracts. The MADPU approval of the contracts for hydroelectric generation from Canada was appealed to the Massachusetts Supreme Judicial Court in July 2019. Despite COVID-19, the parties have been heard, but the court has no specific deadline to issue a decision, and the contracts will not become effective without a decision from the court affirming final regulatory approval.

Also, the 2016 legislation requires the companies to solicit a total of 1,600 MW of offshore wind energy generation, and a second competitive solicitation was issued in March 2019. In February 2020, Massachusetts Electric Company and Nantucket Electric Company submitted long-term contracts for their pro rata share of offshore wind energy generation (approximately 804 MW) to MADPU, seeking regulatory approval of the contracts, along with a request to recover the costs and remuneration equal to 2.75% of the annual payments under the contracts. While MADPU has no specific deadline to approve the contracts, despite COVID-19, hearings have been scheduled for July 2020.

The contracts will not become effective without regulatory approval.

Electric vehicle programmes
In September 2018, MADPU approved with modifications a petition filed by Massachusetts Electric Company and Nantucket Electric Company for approval of a three-year pilot Electric Vehicle Market Development Programme (EV Programme). The total allowed cost, including a performance incentive, is approximately $20 million. The companies submitted their first cost recovery filing in May 2020 with effect from 1 July 2020.

In September 2019 MADPU issued its final order in the Petition of Massachusetts Electric Company and Nantucket Electric Company for Approval of General Increases in Base Distribution Rates for Electric Service, which included approval of limited components of the companies' proposed five-year Phase II Electric Vehicle Programme (Phase II). The total allowed cost for Phase II is approximately $9 million.

MADPU allowed the companies to file future EV proposals under the umbrella of the grid modification proceedings, which the companies plan to do. Cost recovery for both the EV Programme and Phase II is governed by the Electric Vehicle Programme Provision.

Solar Massachusetts Renewable Target Program
In September 2018, MADPU approved a petition jointly filed by the Massachusetts electric distribution companies, including Massachusetts Electric Company and Nantucket Electric Company, to offer their customers a new solar programme. Following state legislation enacted in 2016, the Solar Massachusetts Renewable Target (SMART) Programme is required by state regulations issued by the Department of Energy Resources (DOER). The programme's objective is to develop a further 1,600 MW of customer-based solar power, at a lower cost than the prior two solar programmes. It aims to do this by providing on-bill credits and incentive payments, directly from the Company to the customer, at a lower cost than previous programmes. Massachusetts Electric Company's SMART allocation for large solar projects was filled up shortly after SMART opened. In November 2019, the Company has completed its first full year of enrolling projects in SMART and has submitted its proposed 2020 SMART Factor to recover its costs, which MADPU has approved subject to further review and investigation. In April 2020, DOER issued emergency regulations for additional SMART capacity, for review and comment. The SMART regulations require an additional 1,600 MW of customer-based solar power, and DOER has proposed certain changes to the programme incentive structure. About half of the total capacity will be located within the service territories of Massachusetts Electric Company and Nantucket Electric Company, as with the initial SMART programme. The regulations are effective immediately. In May 2020, DOER conducted a virtual public hearing and accepted written comments. Once DOER adopts final regulations, the electric distribution companies must file amended tariffs to allow for the expansion of SMART in summer/autumn 2020.

The business in detail continued

New York

Downstate New York 2019 rate cases

KEDNY and KEDLI filed a rate case with the NYPSC on 30 April 2019 seeking to increase delivery revenues by $195 million and $61 million, respectively, for the year ending 31 March 2021. The filings propose more than $1.5 billion in capital investments to modernise KEDNY and KEDLI's gas infrastructure by replacing ageing pipelines, implementing safety improvements, enhancing storm hardening and resiliency, and reducing methane emissions. The filings also include proposals to enhance gas safety and promote a sustainable and affordable path towards a low-carbon energy future. We are resuming settlement negotiations in the interest of agreeing on a multi-year rate plan that mitigates bill impacts for our customers while allowing us to maintain safe and reliable service, advance our clean energy goals, and earn a reasonable return. If we are unable to reach a negotiated settlement, the rate cases will continue to a litigated outcome at which time we would then plan to file a new multi-year rate case proposal.

In light of the financial hardships our customers have experienced from COVID-19, we delayed implementation of certain previously approved rate increases. We also delayed filing a rate case this Spring and are exploring options including an extension of the current rate plan or a rate case filing later this Summer.

New York regulatory audits

Under the New York Public Service Law, the NYPSC is required to conduct periodic audits of various aspects of public utility activities. In 2018 the NYPSC initiated a comprehensive management and operations audit of our three New York regulated businesses. New York law requires periodic management audits of all utilities at least once every five years.

National Grid's New York regulated business last underwent a New York management audit in 2014, when the NYPSC audited our New York gas business.

In September 2018, the NYPSC selected Saleeby Consulting Group as the independent auditor to perform the audit. The Company was fully committed to the audit with the goal of demonstrating its full capabilities and receiving meaningful feedback that would drive useful recommendations to improve the Company's electric and gas operations for the benefit of its customers. The audit began in November 2018 and ran until August 2019, with a final report due in September 2019. Unexpectedly, in October 2019, the NYPSC employees advised us that they were terminating the contract with the auditors, effective immediately, because of the poor quality of the draft audit report by the auditor, with no fault whatsoever on the part of the Company. NYPSC employees advised their intention to complete the management audit themselves. The audit is expected to be completed sometime in the second half of 2020.

Downstate gas settlement

In May 2019, KEDNY and KEDLI stopped fulfilling applications for new and expanded firm service in most of their downstate New York service territories because the available firm gas supplies were insufficient to keep pace with demand. On 11 October 2019, the NYPSC issued an 'Order Instituting Proceeding and to Show Cause' that directed the Companies to provide gas service to a subset of previously denied applicants and show cause why the Companies should not be subject to financial penalties. On 24 November 2019, the Companies reached a settlement that was approved on 26 November 2019 by the NYPSC. The agreement resolves the proceeding opened by the NYPSC relating to the moratorium and provides the necessary framework for resolving the longer-term energy supply issues. Specifically, the settlement provides that KEDNY and KEDLI will lift the moratorium for approximately two years. National Grid will offer $7 million in customer assistance to address hardships resulting from the moratorium. National Grid also agreed to fund $8 million for new energy-efficiency and gas-conservation measures designed to relieve stress on the system and reduce peak-day gas usage, as well as $20 million of clean technology investments and programmes in New York. The settlement provides for the appointment of a monitor to oversee our downstate New York gas supply operations and compliance with the settlement.

We also agreed to develop a range of options to address the natural gas constraints facing the region, which were initially presented in a report on 24 February 2020 outlining the gas capacity constraints affecting the downstate New York service territory and the reasonably available options for meeting long-term customer demand. These options were further presented at a series of six public meetings during March 2020 in the downstate New York service territory. These meetings were designed to facilitate a dialogue with customers, residents, advocates, business leaders and local elected officials on potential solutions. On 8 May 2020, we published a supplemental report with refined forecasts and additional analyses to evaluate the options for addressing the downstate New York supply constraints, including a preliminary assessment of the impacts of COVID-19 on customer demand, as well as a summary of the public's comments and feedback on the potential solutions. In mid-May certain permits were denied in New York and New Jersey for a pipeline solution and therefore we are advancing a portfolio of solutions that were identified in the supplementary report.

Advanced Metering Infrastructure

On 15 November 2018, Niagara Mohawk Power Corporation (NMPC) filed a report with the NYPSC detailing the initial outcome of NMPC's Advanced Metering Infrastructure (AMI) research and collaborative sessions. The report, which included an AMI Business Plan, a detailed benefit-cost analysis, and a Customer Engagement Plan, proposed a six-year deployment of electric AMI meters and AMI-compatible gas modules in NMPC's service territory beginning in 2019/20. This investment would modernise both customer and grid-facing components of the Company's distribution system and is considered a key enabler of NMPC's strategy to address the comprehensive state energy goals expressed in New York's Reforming the Energy Vision proceedings. The near-term benefits include greater customer choice and control over energy use; improved system modelling, load forecasting, and capital investment planning; increased system efficiency; and operational efficiencies for outage response. On 4 September 2019, we filed a supplemental report detailing the AMI collaborative's continued work. The filing provided an updated benefit-cost analysis and proposed a six-year, $640 million (20-year NPV) deployment of electric AMI meters and AMI-compatible gas modules in NMPC's service territory beginning in 2019/20. Our proposal to deploy AMI is currently pending before the NYPSC. If approved by the NYPSC, the Company would replace approximately 1.7 million electric and 640,000 gas metering points.

Rhode Island

Rhode Island combined gas and electric rate case

On 24 August 2018, the Rhode Island Public Utilities Commission (RIPUC) approved the terms of an Amended Settlement Agreement (ASA). We are currently in year two of the Company's multi-year rate plan. The rate plan includes a 9.275% RoE on an equity ratio of 51%. The ASA also requires the Company to file the next rate case so that new rates take effect no later than 1 September 2022, unless the RIPUC consents to an extension of the term and specifies another date upon which rates are to take effect. The Company will file its Rate Year 3 compliance filing on 1 June 2020 for distribution rates for year three of the multi-year rate plan, effective 1 September 2020.

Rhode Island Aquidneck Island gas service interruption

On 21 January 2019, we suffered a significant loss of gas supply to the distribution system that serves our customers on Aquidneck Island in Rhode Island. As a result, we made the decision to interrupt the gas service to the Aquidneck Island system to protect the safety of our customers and the public. Overall, approximately 7,500 customers lost their gas service. On 30 October 2019, RIPUC issued an Investigation Report regarding the gas service interruption which identified the causes of the outages, which included multiple factors, some of which were outside the control of the Narragansett Electric Company. RIPUC's Report also recommended several gas system improvements, many of which we have addressed already. On 13 December 2019, we filed our response to the RIPUC's Report and continue to meet with RIPUC on a quarterly basis regarding winter reliability issues for Aquidneck Island and Rhode Island.

Power Sector Transformation/Advanced Metering Functionality
On 27 November 2017, we filed a Power Sector Transformation (PST) Vision and Implementation Plan in conjunction with our combined gas and electric rate case (the PST Plan). The PST Plan proposed a suite of investments, including the full deployment of Advanced Metering Functionality (AMF), which were designed to modernise the state's energy infrastructure. We intend to file our Updated AMF Business Case and Grid Modernisation Plan (GMP) with the RIPUC in the second half of 2020/21. The Updated AMF Business Case will present a detailed plan for full-scale AMF deployment in Rhode Island, using a Rhode Island-only scenario and a combination Rhode Island and New York deployment scenario to demonstrate the cost synergies that can be achieved through a multi-jurisdictional deployment. The estimated cost of the Rhode Island programme is approximately $414 million over 20 years in nominal terms (assuming a Rhode Island-only deployment), which reflects the estimated useful life of the meters. The GMP will present a ten-year road map to guide the future development of projects and programmes to enhance distribution system planning and operations, which will be separately recovered as part of the Infrastructure, Safety and Reliability Plan or a future rate case.

Heating Sector Transformation
On 8 July 2019, the Governor signed Executive Order 19-06 launching the Heating Sector Transformation (HST) Initiative to advance the state's development of clean, affordable, and reliable heating technologies. Two state agencies, the Office of Energy Resources (OER) and the Division of Public Utilities and Carriers (Division), were tasked to lead the initiative and instructed to work with government and non-government partners in the development of a report. We engaged with OER, the Division, and external stakeholders through a series of facilitated workshops. On 22 April 2020, the recommendations were provided to the Governor concluding that no one solution was more economically attractive than any other, and the state's decarbonisation solutions should include increased energy efficiency, decarbonised electrification through air and ground source heat pumps, and fuel decarbonisation through renewable natural gas and renewable oil. The document presented guiding principles, rather than technology mandates, for additional policy development proffering that the heating sector policy should remain technology-agnostic while promoting early demonstration and development of promising, carbon-reducing technologies. The report does not specify next steps; however, OER acknowledged it will be conducting an energy and economic analysis to inform actional pathways to meet the Governor's January 2020 Executive Order goal of meeting the state's electricity demand with 100% renewable resources by 2030, which will be linked to decarbonising the heating sector.

Infrastructure, Safety and Reliability Plans
We filed our 2021 Gas and Electric Infrastructure, Safety and Reliability (ISR) Plans on 20 December 2019 for effect 1 April 2020. The Electric ISR Plan proposes capital spending of $103.8 million, plus $10.4 million for vegetation management and total operation and maintenance expense of $1.8 million. The Gas ISR Plan proposes total capital spending of $198.6 million. On 17 March 2020, RIPUC approved the Company's Gas and Electric ISR Plans, which include $200 million and $104 million of investments, respectively, for 2020/21. The Electric ISR Plan investment also includes $3.7 million to readily respond to distributed energy resource (DER) interconnections and $12 million of operation and maintenance expense for vegetation management and inspection and maintenance programmes. RIPUC slightly modified the Electric ISR Plan to move $2 million for certain strategic DER investments such as advance capacitors and feeder monitor systems from the discretionary category (system capacity and performance) to the non-discretionary category. This means that the Company is allowed to invest in those assets if required by the system needs or customer connections, but we may defer the proactive investment in those technologies until after the Grid Modernisation plan is approved. The RIPUC approved both plans with only a $1 million reduction to the gas capital spending proposal.

Rhode Island large-scale renewable contracts
In February 2019, the Company's Rhode Island electric distribution company, the Narragansett Electric Company, filed with the RIPUC for approval of a long-term contract for output from offshore wind energy generation from an approximately 400 MW project to be located on the outer continental shelf. This contract is a voluntary obligation consistent with Governor Raimondo's 1,000 MW clean energy goal for Rhode Island. The bid was submitted in response to the Massachusetts solicitation for offshore wind energy generation, and such bids were shared with Rhode Island. RIPUC approved the contract in May 2019.

In February 2020, the Narragansett Electric Company filed with the RIPUC for approval of a long-term contract for output from an approximately 50 MW solar facility to be located in Connecticut. The contract resulted from a competitive solicitation issued in 2018 to satisfy the Company's obligations under the Rhode Island Long-term Contracting Standard. RIPUC approved the contract at a virtual open meeting on 27 March 2020 and the Company received its written decision on 11 May 2020.

Federal Energy Regulatory Commission

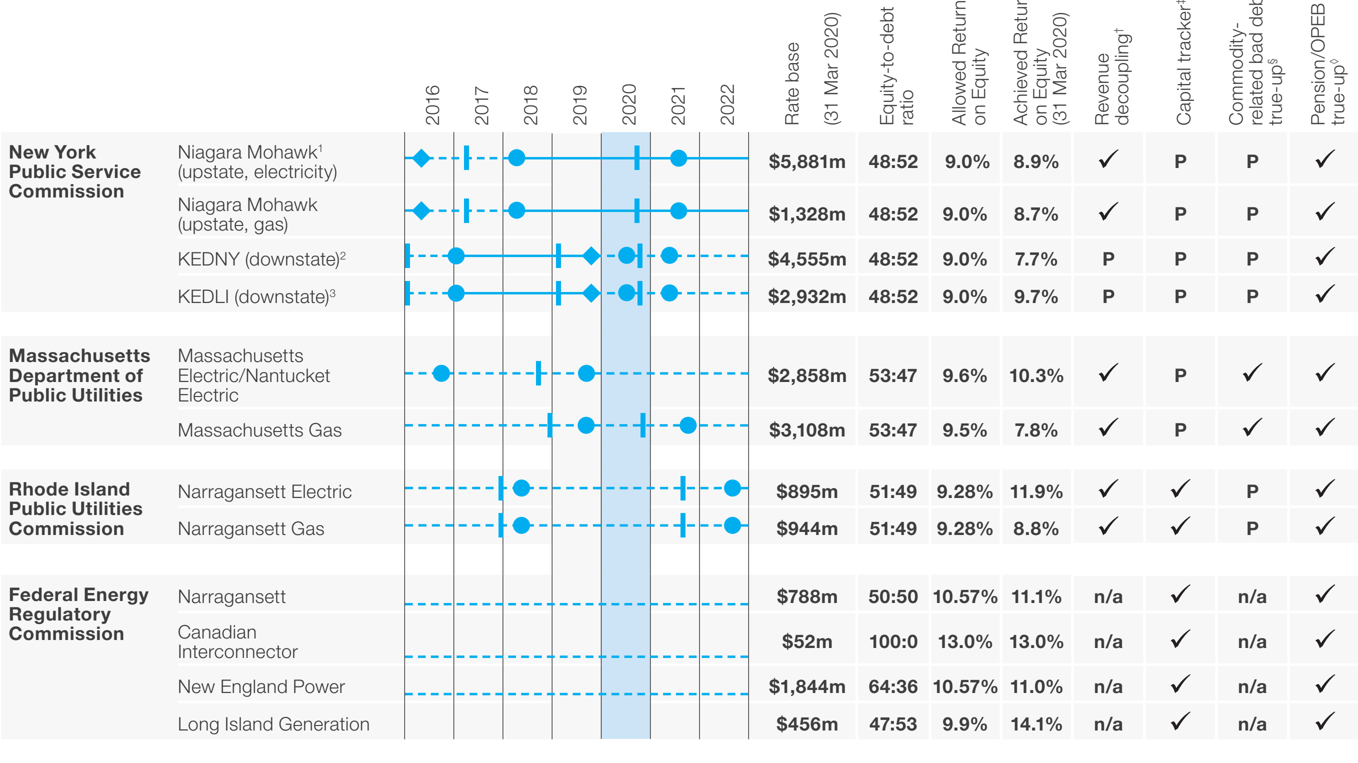
Complaints on New England transmission allowed RoE
In September 2011, December 2012, July 2014 and April 2016, a series of four complaints were filed with FERC against certain transmission owners, including our New England electricity transmission business. These complaints aimed to lower the base RoE, which FERC had authorised at 11.14% prior to the first complaint. FERC issued orders resolving only the first complaint, with the last order in March 2015, lowering the base RoE to 10.57%. A number of parties, including the Company, appealed FERC's order on the first complaint to the US federal court. On 14 April 2017, the court vacated FERC's order and remanded the first complaint back to FERC. This required FERC to reconsider the methodology it adopted in its order. On 5 June 2017, the New England Transmission Owners (NETOs), including the Company, submitted a filing to FERC to document the reinstatement of their transmission rates that had been in effect on 15 October 2014. FERC denied this filing and stated that, until further notice, the base RoE in New England must remain at the filed rate of 10.57%. On 16 October 2018, FERC issued a Preliminary Order Directing Brief on our four New England RoE complaints. In this, FERC proposed a new methodology for determining whether an existing RoE remains just and reasonable and also for determining a new RoE where an existing RoE is found to be unjust and unreasonable. FERC also proposed to set the base RoE in New England at 10.41% with a 13.08% cap on incentives. Briefs were due in January 2019 and responses to the briefs were filed on 8 March 2019. FERC is under no deadline to act on the briefs and it is too early to determine when or how FERC will come to a decision.

On 21 November 2019, FERC issued an order addressing customer complaints involving the transmission RoE for the transmission owners in the Midcontinent Independent System Operator (MISO TOs). FERC issued an order on rehearing addressing the initial order on 21 May 2020. In those orders, FERC adopted a revised methodology for determining base RoEs for the MISO TOs. This differed significantly from the methodology and framework set forth in its 16 October 2018 preliminary order, which proposed a new RoE methodology in the dockets covering the four RoE complaints against the NETOs. On 23 December 2019, the NETOs filed a Supplemental Paper Hearing Brief and a Motion to Supplement the Record in the NETOs' RoE dockets to respond to the new methodology adopted in the November 2019 MISO TOs' order, as there is uncertainty as to whether the outcome in that proceeding may be applied to the NETOs' cases. Further changes to the FERC RoE methodology applicable to the Company are possible as a result of the orders in the MISO TOs' proceeding and the issues raised in pending pleadings in the NETOs' proceedings. Given the significant uncertainty relating to FERC's methodology, the Company is unable to predict the potential effect of the November 2019 and 21 May 2020 MISO TO orders on the NETOs' RoE dockets or the outcome of the four complaints. Further, the Company cannot reasonably estimate a range of gain or loss for any of the four complaint proceedings.

Formula Rate 206 proceeding
On 28 December 2015, FERC initiated a proceeding under Section 206 of the Federal Power Act. It found that ISO-New England Transmission, Markets, and Services Tariff is unjust, unreasonable and unduly discriminatory or preferential. FERC found that ISO-New England's tariff lacks adequate transparency and challenge procedures regarding the formula rates for ISO-NE Participating Transmission Owners (ISO-NE PTOs). In addition, the Commission found that the ISO-NE PTOs' current Regional Network Service and Local Network Service formula rates appear to be unjust, unreasonable, unduly discriminatory or preferential, or otherwise unlawful. FERC explained that the formula rates appear to lack sufficient detail to determine how certain costs are derived and recovered in the formula rates. Accordingly, FERC established hearing and settlement judge procedures. Several parties are active in the proceeding, including FERC employees, various interested consumer parties, the New England States Committee on Electricity (NESCOE), and several municipal light departments. In August 2018, the parties to the proceeding agreed to the terms of a settlement and subsequently filed the proposed settlement with the settlement judge in the proceeding. It was opposed by certain municipal parties, making it a contested settlement. On 22 May 2019, FERC rejected the Formula Rate 206 settlement in its entirety and remanded the matter to the Chief Administrative Law Judge for hearing procedures. The parties have continued settlement negotiations and have been granted a suspension of the procedural schedule to attempt to finalise a settlement.

The business in detail continued

Summary of US price controls and rate plans



Regulator	Company	Rate base (31 Mar 2020)	Equity-to-debt ratio	Allowed Return on Equity	Achieved Return on Equity (31 Mar 2020)	Revenue decoupling†	Capital tracker‡	Commodity-related bad debt true-up§	Pension/OPEB true-up◊
New York Public Service Commission	Niagara Mohawk[1] (upstate, electricity)	$5,881m	48:52	9.0%	8.9%	✓	P	P	✓
	Niagara Mohawk (upstate, gas)	$1,328m	48:52	9.0%	8.7%	✓	P	P	✓
	KEDNY (downstate)[2]	$4,555m	48:52	9.0%	7.7%	P	P	P	✓
	KEDLI (downstate)[3]	$2,932m	48:52	9.0%	9.7%	P	P	P	✓
Massachusetts Department of Public Utilities	Massachusetts Electric/Nantucket Electric	$2,858m	53:47	9.6%	10.3%	✓	P	✓	✓
	Massachusetts Gas	$3,108m	53:47	9.5%	7.8%	✓	P	✓	✓
Rhode Island Public Utilities Commission	Narragansett Electric	$895m	51:49	9.28%	11.9%	✓	✓	P	✓
	Narragansett Gas	$944m	51:49	9.28%	8.8%	✓	✓	P	✓
Federal Energy Regulatory Commission	Narragansett	$788m	50:50	10.57%	11.1%	n/a	✓	n/a	✓
	Canadian Interconnector	$52m	100:0	13.0%	13.0%	n/a	✓	n/a	✓
	New England Power	$1,844m	64:36	10.57%	11.0%	n/a	✓	n/a	✓
	Long Island Generation	$456m	47:53	9.9%	14.1%	n/a	✓	n/a	✓

1. Both transmission and distribution, excluding stranded costs.
2. KeySpan Energy Delivery New York (the Brooklyn Union Gas Company).
3. KeySpan Energy Delivery Long Island (KeySpan Gas East Corporation).

†Revenue decoupling
A mechanism that removes the link between a utility's revenue and sales volume so that the utility is indifferent to changes in usage. Revenues are reconciled to a revenue target, with differences billed or credited to customers. Allows the utility to support energy efficiency.

‡Capital tracker
A mechanism that allows the recovery of the revenue requirement of incremental capital investment above that embedded in base rates, including depreciation, property taxes and a return on the incremental investment.

§Commodity-related bad debt true-up
A mechanism that allows a utility to reconcile commodity-related bad debt to either actual commodity-related bad debt or to a specified commodity-related bad debt write-off percentage. For electricity utilities, this mechanism also includes working capital.

◊Pension/OPEB true-up
A mechanism that reconciles the actual non-capitalised costs of pension and OPEB and the actual amount recovered in base rates. The difference may be amortised and recovered over a period or deferred for a future rate case.

Internal control and risk factors

Disclosure controls

Working with management, including the Chief Executive and Chief Financial Officer, we have evaluated the effectiveness of the design and operation of our disclosure controls and procedures as at 31 March 2020. Our disclosure controls and procedures are designed to provide reasonable assurance of achieving their objectives; however, their effectiveness has limitations, including the possibility of human error and the circumvention or overriding of the controls and procedures.

Even effective disclosure controls and procedures provide only reasonable assurance of achieving their objectives. Based on the evaluation, the Chief Executive and Chief Financial Officer concluded that the disclosure controls and procedures are effective to provide reasonable assurance that information required for disclosure in the reports that we file and submit under the Exchange Act is recorded, processed, summarised and reported as and when required and that such information is accumulated and communicated to our management, including the Chief Executive and Chief Financial Officer, as appropriate, to allow timely decisions regarding disclosure.

Internal control over financial reporting

Our management, including the Chief Executive and Chief Financial Officer, has carried out an evaluation of our internal control over financial reporting pursuant to the Disclosure Guidance and Transparency Rules sourcebook and Section 404 of the Sarbanes-Oxley Act 2002. As required by Section 404, management is responsible for establishing and maintaining an adequate system of internal control over financial reporting (as defined in Rules 13a-5(f) and 15d-15(f) under the Exchange Act).

Our internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes, in accordance with generally accepted accounting principles.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management's evaluation of the effectiveness of the Company's internal control over financial reporting was based on the revised Internal Control-Integrated Framework 2013 issued by the Committee of Sponsoring Organizations of the Treadway Commission. Using this evaluation, management concluded that our internal control over financial reporting was effective as at 31 March 2020.

Deloitte LLP, which has audited our consolidated financial statements for the year ended 31 March 2020, has also audited the effectiveness of our internal control over financial reporting.

During the year, there were no changes in our internal control over financial reporting that have materially affected it, or are reasonably likely to materially affect it.

Risk factors

Management of our risks is an important part of our internal control environment, as we describe on pages 22 – 25. In addition to the principal risks listed, we face a number of inherent risks that could have a material adverse effect on our business, financial condition, results of operations and reputation, as well as the value and liquidity of our securities.

Any investment decision regarding our securities and any forward-looking statements made by us should be considered in the light of these risk factors and the cautionary statement set out on page 258. An overview of the key inherent risks we face is provided below.

Risk factors

Potentially harmful activities

Aspects of the work we do could potentially harm employees, contractors, members of the public or the environment.

Potentially hazardous activities that arise in connection with our business include: the generation, transmission and distribution of electricity; and the storage, transmission and distribution of gas. Electricity and gas utilities also typically use and generate hazardous and potentially hazardous products and by-products. In addition, there may be other aspects of our operations that are not currently regarded or proved to have adverse effects but could become so, such as the effects of electric and magnetic fields.

A significant safety or environmental incident, or the failure of our safety processes or of our occupational health plans, as well as the breach of our regulatory or contractual obligations or our climate change targets, could materially adversely affect our results of operations and our reputation.

Safety is a fundamental priority for us and we commit significant resources and expenditure to ensuring process safety; to monitoring personal safety, occupational health and environmental performance; and to meeting our obligations under negotiated settlements.

We are subject to laws and regulations in the UK and US governing health and safety matters to protect the public and our employees and contractors, who could potentially be harmed by these activities, as well as laws and regulations relating to pollution, the protection of the environment, and the use and disposal of hazardous substances and waste materials.

These expose us to costs and liabilities relating to our operations and properties, including those inherited from predecessor bodies, whether currently or formerly owned by us, and sites used for the disposal of our waste.

The cost of future environmental remediation obligations is often inherently difficult to estimate and uncertainties can include the extent of contamination, the appropriate corrective actions and our share of the liability. We are increasingly subject to regulation in relation to climate change and are affected by requirements to reduce our own carbon emissions as well as to enable reduction in energy use by our customers. If more onerous requirements are imposed or our ability to recover these costs under regulatory frameworks changes, this could have a material adverse impact on our business, reputation, results of operations and financial position.

Pandemics

We face risks related to health epidemics and other outbreaks.

As seen in the context of COVID-19, pandemics and their associated counter-measures may affect countries, communities, supply chains and markets, including the UK and our service territory in the US. The spread of such pandemics could have adverse effects on our workforce, which could affect our ability to maintain our networks and provide service. In addition, disruption of supply chains could adversely affect our systems or networks.

Pandemics such as COVID-19 can also result in extraordinary economic circumstances in our markets which could negatively affect our customers' ability to pay our invoices in the US or the charges payable to the system operators for transmission services in the UK. The suspension of debt collection and customer termination activities across our service area in response to such pandemics is likely to result in near-term lower customer collections, and could result in increasing levels of bad debt and associated provisions.

The extent to which pandemics such as COVID-19 may affect our liquidity, business, financial condition, results of operations and reputation will depend on future developments, which are highly uncertain and cannot be predicted, and will depend on the severity of the relevant pandemic, the scope, duration, cost to National Grid and overall economic impact of actions taken to contain it or treat its effects.

Internal control and risk factors continued

Infrastructure and IT systems

We may suffer a major network failure or interruption, or may not be able to carry out critical operations due to the failure of infrastructure, data or technology or a lack of supply.

Operational performance could be materially adversely affected by: a failure to maintain the health of our assets or networks; inadequate forecasting of demand; inadequate record keeping or control of data or failure of information systems and supporting technology. This, in turn, could cause us to fail to meet agreed standards of service, incentive and reliability targets, or be in breach of a licence, approval, regulatory requirement or contractual obligation. Even incidents that do not amount to a breach could result in adverse regulatory and financial consequences, as well as harming our reputation.

Where demand for electricity or gas exceeds supply, including where we do not adequately forecast and respond to disruptions in energy supplies, and our balancing mechanisms are not able to mitigate this fully, a lack of supply to consumers may damage our reputation.

In addition to these risks, we may be affected by other potential events that are largely outside our control, such as the impact of the COVID-19 pandemic (including on our operations and as a result of large-scale working from home by our employees), weather (including as a result of climate change and major storms), unlawful or unintentional acts of third parties, insufficient or unreliable supply, or force majeure.

Weather conditions can affect financial performance, and severe weather that causes outages or damages infrastructure, together with our actual or perceived response, could materially adversely affect operational and potentially business performance and our reputation.

Malicious attack, sabotage or other intentional acts, including breaches of our cyber security, may also damage our assets (which include critical national infrastructure) or otherwise significantly affect corporate activities and, as a consequence, have a material adverse impact on our reputation, business, results of operations and financial condition.

Unauthorised access to, or deliberate breaches of, our IT systems may also lead to manipulation of our proprietary business data or customer information. Unauthorised access to private customer information may make us liable for a violation of data privacy regulations. Even where we establish business continuity controls and security against threats to our systems, these may not be sufficient.

Law, regulation and political and economic uncertainty

Changes in law or regulation, or decisions by governmental bodies or regulators and increased political and economic uncertainty, could materially adversely affect us.

Most of our businesses are utilities or networks subject to regulation by governments and other authorities. Changes in law or regulation or regulatory policy and precedent (including any changes arising as a result of emergency legislation to address the COVID-19 pandemic and the UK's exit from the European Union), including decisions of governmental bodies or regulators, in the countries or states in which we operate could materially adversely affect us. We may fail to deliver any one of our customer, investor and wider stakeholder propositions due to increased political and economic uncertainty.

If we fail to engage in the energy policy debate, we may be unable to influence future energy policy and deliver our strategy.

Decisions or rulings concerning the following (as examples) could have a material adverse impact on our results of operations, cash flows, the financial condition of our businesses and the ability to develop those businesses in the future:

- the RIIO-2 price controls; whether licences, approvals or agreements to operate or supply are granted, amended or renewed; whether consents for construction projects are granted in a timely manner; or whether there has been any breach of the terms of a licence, approval or regulatory requirement; and
- timely recovery of incurred expenditure or obligations; the ability to pass through commodity costs; a decoupling of energy usage and revenue, and other decisions relating to the impact of general economic conditions on us, our markets and customers; implications of climate change and of advancing energy technologies; whether aspects of our activities are contestable; and the level of permitted revenues and dividend distributions for our businesses and in relation to proposed business development activities.

For further information, see pages 219 – 226, which explain our regulatory environment in detail.

Business performance

Current and future business performance may not meet our expectations or those of our regulators and shareholders.

Earnings maintenance and growth from our regulated gas and electricity businesses will be affected by our ability to meet or exceed efficiency targets and service quality standards set by, or agreed with, our regulators.

If we do not meet these targets and standards, or if we are not able to deliver the US rate plans strategy successfully, we may not achieve the expected benefits, our business may be materially adversely affected and our performance, results of operations and reputation may be materially harmed and we may be in breach of regulatory or contractual obligations.

Growth and business development activity

Failure to respond to external market developments and execute our growth strategy may negatively affect our performance. Conversely, new businesses or activities that we undertake alone or with partners may not deliver target outcomes and may expose us to additional operational and financial risk.

Failure to grow our core business sufficiently and have viable options for new future business over the longer term, or failure to respond to the threats and opportunities presented by emerging technology or innovation (including for the purposes of adapting our networks to meet the challenges of increasing distributed energy resources), could negatively affect the Group's credibility and reputation and jeopardise the achievement of intended financial returns.

Our business development activities and the delivery of our growth ambition include acquisitions, disposals, joint ventures, partnering and organic investment opportunities, such as development activities relating to changes to the energy mix and the integration of distributed energy resources and other advanced technologies. These are subject to a wide range of both external uncertainties (including the availability of potential investment targets and attractive financing and the impact of competition for onshore transmission in both the UK and US) and internal uncertainties (including actual performance of our existing operating companies and our business planning model assumptions and ability to integrate acquired businesses effectively). As a result, we may suffer unanticipated costs and liabilities and other unanticipated effects.

We may also be liable for the past acts, omissions or liabilities of companies or businesses we have acquired, which may be unforeseen or greater than anticipated. In the case of joint ventures, we may have limited control over operations and our joint venture partners may have interests that diverge from our own.

The occurrence of any of these events could have a material adverse impact on our results of operations or financial condition, and could also impact our ability to enter into other transactions.

Exchange rates, interest rates and commodity price indices

Changes in foreign currency rates, interest rates or commodity prices could materially impact earnings or our financial condition.

We have significant operations in the US and are therefore subject to the exchange rate risks normally associated with non-UK operations including the need to translate US assets, liabilities, income and expenses into sterling (our reporting currency).

In addition, our results of operations and net debt position may be affected because a significant proportion of our borrowings, derivative financial instruments and commodity contracts are affected by changes in interest rates, commodity price indices and exchange rates, in particular the dollar-to-sterling exchange rate.

Furthermore, our cash flow may be materially affected as a result of settling hedging arrangements entered into to manage our exchange rate, interest rate and commodity price exposure, or by cash collateral movements relating to derivative market values, which also depend on the sterling exchange rate into the euro and other currencies.

Post-retirement benefits

We may be required to make significant contributions to fund pension and other post-retirement benefits.

We participate in a number of pension schemes that together cover substantially all our employees. In both the UK and US, the principal schemes are DB schemes where the scheme assets are held independently of our own financial resources.

In the US, we also have other post-retirement benefit schemes. Estimates of the amount and timing of future funding for the UK and US schemes are based on actuarial assumptions and other factors, including: the actual and projected market performance of the scheme assets; future long-term bond yields; average life expectancies; and relevant legal requirements.

Actual performance of scheme assets may be affected by volatility in debt and equity markets (including as a result of the COVID-19 pandemic).

Changes in these assumptions or other factors may require us to make additional contributions to these pension schemes which, to the extent they are not recoverable under our price controls or state rate plans, could materially adversely affect the results of our operations and financial condition.

Financing and liquidity

An inability to access capital markets at commercially acceptable interest rates could affect how we maintain and grow our businesses.

Our businesses are financed through cash generated from our ongoing operations, bank lending facilities and the capital markets, particularly the long-term debt capital markets.

Some of the debt we issue is rated by credit rating agencies, and changes to these ratings may affect both our borrowing capacity and borrowing costs. In addition, restrictions imposed by regulators may also limit how we service the financial requirements of our current businesses or the financing of newly acquired or developing businesses.

Financial markets can be subject to periods of volatility and shortages of liquidity – for example, as a result of unexpected political or economic events or the COVID-19 pandemic. If we were unable to access the capital markets or other sources of finance at commercially acceptable rates for a prolonged period, our cost of financing may increase, the discretionary and uncommitted elements of our proposed capital investment programme may need to be reconsidered, and the manner in which we implement our strategy may need to be reassessed.

Such events could have a material adverse impact on our business, results of operations and prospects.

Some of our regulatory agreements impose lower limits for the long-term unsecured debt credit ratings that certain companies within the Group must hold or the amount of equity within their capital structures, including a limit requiring National Grid plc to hold an investment-grade long-term senior unsecured debt credit rating.

In addition, some of our regulatory arrangements impose restrictions on the way we can operate. These include regulatory requirements for us to maintain adequate financial resources within certain parts of our operating businesses and may restrict the ability of National Grid plc and some of our subsidiaries to engage in certain transactions, including paying dividends, lending cash and levying charges.

The inability to meet such requirements, or the occurrence of any such restrictions, may have a material adverse impact on our business and financial condition.

Our debt agreements and banking facilities contain covenants, including those relating to the periodic and timely provision of financial information by the issuing entity, and financial covenants, such as restrictions on the level of subsidiary indebtedness.

Failure to comply with these covenants, or to obtain waivers of those requirements, could in some cases trigger a right, at the lender's discretion, to require repayment of some of our debt and may restrict our ability to draw upon our facilities or access the capital markets.

Customers and counterparties

Customers and counterparties may not perform their obligations.

Our operations are exposed to the risk that customers, suppliers, banks and other financial institutions, and others with whom we do business, will not satisfy their obligations, which could materially adversely affect our financial position.

This risk is significant where our subsidiaries have concentrations of receivables from gas and electricity utilities and their affiliates, as well as industrial customers and other purchasers, and may also arise where customers are unable to pay us as a result of increasing commodity prices or adverse economic conditions (including as a result of the COVID-19 pandemic).

To the extent that counterparties are contracted with for physical commodities (gas and electricity) and they experience events that impact their own ability to deliver, we may suffer supply interruption as described in Infrastructure and IT systems on page 228.

There is also a risk to us where we invest excess cash or enter into derivatives and other financial contracts with banks or other financial institutions. Banks who provide us with credit facilities may also fail to perform under those contracts.

Employees and others

We may fail to attract, develop and retain employees with the competencies (including leadership and business capabilities), values and behaviours required to deliver our strategy and vision and ensure they are engaged to act in our best interests.

Our ability to implement our strategy depends on the capabilities and performance of our employees and leadership at all levels of the business. Our ability to implement our strategy and vision may be negatively affected by the loss of key personnel (including personnel on sick leave or otherwise unable to work on an extended basis because of the COVID-19 pandemic) or an inability to attract, integrate, engage and retain appropriately qualified personnel, or if significant disputes arise with our employees.

As a result, there may be a material adverse effect on our business, financial condition, results of operations and prospects.

There is a risk that an employee or someone acting on our behalf may breach our internal controls or internal governance framework, or may contravene applicable laws and regulations. This could have an impact on the results of our operations, our reputation and our relationship with our regulators and other stakeholders.

Shareholder information

Articles of Association

The following description is a summary of the material terms of our Articles of Association (Articles) and applicable English law. It is a summary only and is qualified in its entirety by reference to the Articles.

Summary

The Articles set out the Company's internal regulations. Copies are available on our website and upon request. Amendments to the Articles have to be approved by at least 75% of those voting at a general meeting of the Company. Subject to company law and the Articles, the Directors may exercise all the powers of the Company. They may delegate authorities to committees and day-to-day management and decision-making to individual Executive Directors. We set out the committee structure on page 68.

General

The Company is incorporated under the name National Grid plc and is registered in England and Wales with registered number 4031152. Under the Companies Act 2006, the Company's objects are unrestricted.

Directors

Under the Articles, a Director must disclose any personal interest in a matter and may not vote in respect of that matter, subject to certain limited exceptions. As permitted under the Companies Act 2006, the Articles allow non-conflicted Directors to authorise a conflict or potential conflict for a particular matter. In doing so, the non-conflicted Directors must act in a way they consider, in good faith, will be most likely to promote the success of the Company for the benefit of the shareholders as a whole.

The Directors (other than a Director acting in an executive capacity) are paid fees for their services. In total, these fees must not exceed £2,000,000 per year or any higher sum decided by an ordinary resolution at a general meeting of shareholders. In addition, special pay may be awarded to a Director who acts in an executive capacity, serves on a committee, performs services which the Directors consider to extend beyond the ordinary duties of a Director, devotes special attention to the business of National Grid, or goes or lives abroad on the Company's behalf. Directors may also receive reimbursement for expenses properly incurred, and may be awarded pensions and other benefits. The compensation awarded to the Executive Directors is determined by the Remuneration Committee. Further details of Directors' remuneration are set out in the Directors' Remuneration Report (see pages 88 – 107).

The Directors may exercise all the powers of National Grid to borrow money. However, the aggregate principal amount of all the Group's borrowings outstanding at any time must not exceed £35 billion or any other amount approved by shareholders by an ordinary resolution at a general meeting. At the Company's AGM for 2020, shareholders will be asked to approve, by ordinary resolution, an increase in this amount (which has remained unchanged since the 2009 AGM) to £45 billion to enable the funding of growth over the medium-term in an efficient manner.

Directors can be appointed or removed by the Board or shareholders at a general meeting. Directors must stand for election at the first AGM following their appointment to the Board. Each Director must retire at least every three years, although they will be eligible for re-election. In accordance with best practice introduced by the UK Corporate Governance Code, all Directors wishing to continue in office currently offer themselves for re-election annually. No person is disqualified from being a Director or is required to vacate that office by reason of attaining a maximum age.

A Director is not required to hold shares in National Grid in order to qualify as a Director.

Rights, preferences and restrictions

(i) Dividend rights

National Grid may not pay any dividend otherwise than out of profits available for distribution under the Companies Act 2006 and other applicable provisions of English law. In addition, as a public company, National Grid may only make a distribution if, at the time of the distribution, the amount of its net assets is not less than the aggregate of its called-up share capital and undistributable reserves (as defined in the Companies Act 2006), and to the extent that the distribution does not reduce the amount of those assets to less than that aggregate. Ordinary shareholders and American Depositary Share (ADS) holders receive dividends.

Subject to these points, shareholders may, by ordinary resolution, declare dividends in accordance with the respective rights of the shareholders, but not exceeding the amount recommended by the Board. The Board may pay interim dividends if it considers that National Grid's financial position justifies the payment. Any dividend or interest unclaimed for 12 years from the date when it was declared or became due for payment will be forfeited and revert to National Grid.

(ii) Voting rights

Subject to any rights or restrictions attached to any shares and to any other provisions of the Articles, at any general meeting on a show of hands, every shareholder who is present in person will have one vote and, on a poll, every shareholder will have one vote for every share they hold. On a show of hands or poll, shareholders may cast votes either personally or by proxy. A proxy need not be a shareholder. Under the Articles, all substantive resolutions at a general meeting must be decided on a poll. Ordinary shareholders and ADS holders can vote at general meetings.

(iii) Liquidation rights

In a winding up, a liquidator may (in each case with the sanction of a special resolution passed by the shareholders and any other sanction required under English law): (a) divide among the shareholders the whole or any part of National Grid's assets (whether the assets are of the same kind or not); the liquidator may, for this purpose, value any assets and determine how the division should be carried out as between shareholders or different classes of shareholders, or (b) transfer any part of the assets to trustees on trust for the benefit of the shareholders as the liquidator determines. In neither case will a shareholder be compelled to accept assets upon which there is a liability.

(iv) Restrictions

There are no restrictions on the transfer or sale of ordinary shares. Some of the Company's employee share plans, details of which are contained in the Directors' Remuneration Report, include restrictions on the transfer of ordinary shares while the ordinary shares are subject to the plan. Where, under an employee share plan operated by the Company, participants are the beneficial owners of the ordinary shares but not the registered owner, the voting rights may be exercised by the registered owner at the direction of the participant. Treasury shares do not attract a vote or dividends.

(v) Variation of rights

Subject to applicable provisions of English law, the rights attached to any class of shares of National Grid may be varied or cancelled. This must be with the written consent of the holders of three quarters in nominal value of the issued shares of that class, or with the sanction of a special resolution passed at a separate meeting of the holders of the shares of that class.

Shareholder information continued

General meetings

AGMs must be convened each year within six months of the Company's accounting reference date upon 21 clear days' advance written notice. Under the Articles, any other general meeting may be convened provided at least 14 clear days' written notice is given, subject to annual approval of shareholders. In certain limited circumstances, the Company can convene a general meeting by shorter notice. The notice must specify, among other things, the nature of the business to be transacted, the place, the date and the time of the meeting. Consistent with the UK government restrictions in relation to the COVID-19 pandemic, the Company's AGM for 2020 will take place as a closed meeting.

Rights of non-residents

There are no restrictions under the Articles that would limit the rights of persons not resident in the UK to vote in relation to ordinary shares.

Disclosure of interests

Under the Companies Act 2006, National Grid may, by written notice, require a person whom it has reasonable cause to believe to be or to have been, in the last three years, interested in its shares to provide additional information relating to that interest. Under the Articles, failure to provide such information may result in a shareholder losing their rights to attend, vote or exercise any other right in relation to shareholders' meetings.

Under the UK Disclosure Guidance and Transparency Rules (DTR) sourcebook, there is also an obligation on a person who acquires or ceases to have a notifiable interest in shares in National Grid to notify the Company of that fact. The disclosure threshold is 3% and disclosure is required each time the person's direct and indirect holdings reach, exceed or fall below each 1% threshold thereafter.

The UK City Code on Takeovers and Mergers imposes strict disclosure requirements regarding dealings in the securities of an offeror or offeree company, and also on their respective associates, during the course of an offer period. Other regulators in the UK, US and elsewhere may have, or assert, notification or approval rights over acquisitions or transfers of shares.

Depositary payments to the Company

The Depositary (The Bank of New York Mellon) reimburses the Company for certain expenses it incurs in relation to the ADS programme. The Depositary also pays the standard out-of-pocket maintenance costs for the ADSs, which consist of the expenses for the mailing of annual and interim financial reports, printing and distributing dividend cheques, the electronic filing of US federal tax information, mailing required tax forms, stationery, postage, facsimiles and telephone calls. It also reimburses the Company for certain investor relationship programmes or special investor relations promotional activities. There are limits on the amount of expenses for which the Depositary will reimburse the Company, but the amount of reimbursement is not necessarily tied to the amount of fees the Depositary collects from investors.

For the period 16 May 2019 to 17 June 2020, the Company received a total of $1,835,589.41 in reimbursements from the Depositary consisting of $1,225,480.47 and $610,108.94 received in October 2019 and February 2020 respectively. Fees that are charged on cash dividends will be apportioned between the Depositary and the Company.

Any questions from ADS holders should be directed to The Bank of New York Mellon at the contact details on page 257.

Description of securities other than equity securities: Depositary fees and charges

The Depositary collects fees by deducting them from the amounts distributed or by selling a portion of distributable property for:

- delivery and surrender of ADSs directly from investors depositing shares or surrendering ADSs for the purpose of withdrawal or from intermediaries acting for them; and
- making distributions to investors (including, it is expected, cash dividends).

The Depositary may generally refuse to provide fee-attracting services until its fees for those services are paid.

Persons depositing or withdrawing shares must pay:	For:
$5.00 per 100 ADSs (or portion of 100 ADSs)	Issuance of ADSs, including issuances resulting from a distribution of shares or rights or other property; cancellation of ADSs for the purpose of withdrawal, including if the Deposit agreement terminates; and distribution of securities distributed to holders of deposited securities that are distributed by the Depositary to ADS holders.
Registration or transfer fees	Transfer and registration of shares on our share register to or from the name of the Depositary or its agent when they deposit or withdraw shares.
Expenses of the Depositary	Cable, telex and facsimile transmissions (when expressly provided in the Deposit agreement); and converting foreign currency to dollars.
Taxes and other governmental charges the Depositary or the Custodian has to pay on any ADS or share underlying an ADS, for example, stock transfer taxes, stamp duty or withholding taxes	As necessary.

The Company's Deposit agreement under which the ADSs are issued allows a fee of up to $0.05 per ADS to be charged for any cash distribution made to ADS holders, including cash dividends. ADS holders who receive cash in relation to the 2019/20 final dividend will be charged a fee of $0.02 per ADS by the Depositary prior to distribution of the cash dividend.

Documents on display

National Grid is subject to the US Securities and Exchange Commission (SEC) reporting requirements for foreign companies. The Company's Form 20-F and other filings can be viewed on the National Grid website as well as the SEC website at www.sec.gov.

Events after the reporting period

In the period between 31 March 2020 and 17 June 2020, there have continued to be substantial environmental, economic and social changes in both the UK and US. As described further in the Strategic Report, these have had, and will continue to have, significant ramifications for the Group. Other than in respect of those areas where forward-looking forecasts are relevant (notably goodwill impairment reviews (note 11), expected credit losses on financial instruments including trade receivables (notes 19 and 32) and the presumption of the going concern basis generally (note 1)), none of these developments have caused adjustment to the financial statements.

Exchange controls

There are currently no UK laws, decrees or regulations that restrict the export or import of capital, including, but not limited to, foreign exchange control restrictions, or that affect the remittance of dividends, interest or other payments to non-UK resident holders of ordinary shares except as otherwise set out in Taxation on pages 234 and 235 and except in respect of the governments of and/or certain citizens, residents or bodies of certain countries (described in applicable Bank of England Notices or European Union Council Regulations in force as at the date of this document).

Material interests in shares

As at 31 March 2020, National Grid had been notified of the following holdings in voting rights of 3% or more in the issued share capital of the Company:

	Number of ordinary shares	% of voting rights[1]	Date of last notification of interest
BlackRock, Inc.	238,695,907	6.85	3 December 2019
The Capital Group Companies, Inc.	145,094,617	3.88	16 April 2015

1. This number is calculated in relation to the issued share capital at the time the holding was disclosed.

As at 17 June 2020, no further notifications have been received.

The rights attached to ordinary shares are detailed on page 231. All ordinary shares and all major shareholders have the same voting rights. The Company is not, to the best of its knowledge, directly or indirectly controlled.

Share capital

As at 17 June 2020, the share capital of the Company consists of ordinary shares of $12^{204/473}$ pence nominal value each and ADSs, which represent five ordinary shares each.

Authority to purchase shares

Shareholder approval was given at the 2019 AGM to purchase up to 10% of the Company's share capital (being 341,188,512 ordinary shares). The Directors intend to seek shareholder approval to renew this authority at the 2020 AGM.

In some circumstances, the Company may find it advantageous to have the authority to purchase its own shares in the market, where the Directors believe this would be in the interests of shareholders generally. The Directors believe that it is an important part of the financial management of the Company to have the flexibility to repurchase issued shares to manage its capital base, including actively managing share issuances from the operation of the scrip dividend scheme. It is expected that repurchases to manage share issuances under the scrip dividend scheme will not exceed 2.5% of the issued share capital (excluding treasury shares) per annum.

When purchasing shares, the Company has taken, and will continue to take, into account market conditions prevailing at the time, other investment and financing opportunities, and the overall financial position of the Company.

At the 2019 AGM, the Company sought authority to purchase ordinary shares in the capital of the Company as part of the management of the dilutive effect of share issuances under the scrip dividend scheme. During the year, the Company did not purchase any of its own shares.

	Number of shares	Total nominal value	% of called up share capital
Shares held in Treasury purchased in prior years[1]	277,263,224	£34,467,394.44	7.52[1]
Shares purchased and held in Treasury during the year	–	–	–
Shares transferred from Treasury during the year (to employees under employee share plans)	5,331,440	£662,766.75[2]	0.14[3]
Maximum number of shares held in Treasury during the year	277,263,224	£34,467,394.44[2]	7.33[3]

1. Called-up share capital: 3,687,483,073 as at 31 March 2019.
2. Nominal value: $12^{204/473}$p.
3. Called-up share capital of 3,780,237,016 ordinary shares as at the date of this report.

As at the date of this report, the Company held 270,105,462 ordinary shares as treasury shares. This represented 7.15% of the Company's called-up share capital.

Authority to allot shares

Shareholder approval was given at the 2019 AGM to allot shares of up to one third of the Company's share capital. The Directors are seeking this same level of authority this year. The Directors consider that the Company will have sufficient flexibility with this level of authority to respond to market developments and that this authority is in line with investor guidelines.

The Directors currently have no intention of issuing new shares or of granting rights to subscribe for or convert any security into shares. This is except in relation to, or in connection with, the operation and management of the Company's scrip dividend scheme and the exercise of options under the Company's share plans. No issue of shares will be made that would effectively alter control of the Company without the sanction of shareholders in a general meeting.

The Company expects to actively manage the dilutive effect of share issuance arising from the operation of the scrip dividend scheme. In some circumstances, additional shares may be allotted to the market for this purpose under the authority provided by this resolution. Under these circumstances, it is expected that the associated allotment of new shares (or rights to subscribe for or convert any security into shares) will not exceed 1% of the issued share capital (excluding treasury shares) per annum.

Shareholder information continued

Dividend waivers

The trustee of the National Grid Employee Share Trust, which is independent of the Company, waived the right to dividends paid during the year. They have also agreed to waive the right to future dividends, in relation to the ordinary shares and ADSs held by the trust.

Under the Company's ADS programme, the right to dividends in relation to the ordinary shares underlying the ADSs was waived during the year, under an arrangement whereby the Company pays the monies to satisfy any dividends separately to the Depositary for distribution to ADS holders entitled to the dividend. This arrangement is expected to continue for future dividends.

Share information

National Grid ordinary shares are listed on the London Stock Exchange under the symbol NG. The ADSs are listed on the New York Stock Exchange under the symbol NGG.

Shareholder analysis

The following table includes a brief analysis of shareholder numbers and shareholdings as at 31 March 2020.

	Number of shareholders	% of shareholders	Number of shares	% of shares
1–50	170,394	21.39	5,185,345	0.14
51–100	202,748	25.46	14,246,560	0.38
101–500	331,032	41.57	68,966,441	1.82
501–1,000	46,110	5.79	32,119,610	0.85
1,001–10,000	43,274	5.43	106,072,161	2.81
10,001–50,000	1,727	0.22	31,718,701	0.84
50,001–100,000	235	0.03	17,096,831	0.45
100,001–500,000	441	0.05	106,039,599	2.81
500,001–1,000,000	144	0.02	102,719,196	2.72
1,000,001+	300	0.04	3,296,072,572	87.19
Total	796,405	100	3,780,237,016	100

Taxation

The discussion in this section provides information about certain US federal income tax and UK tax consequences for US Holders (defined below) of owning ADSs and ordinary shares. A US Holder is the beneficial owner of ADSs or ordinary shares who:

- is for US federal income tax purposes (i) an individual citizen or resident of the United States; (ii) a corporation created or organised under the laws of the United States, any state thereof or the District of Columbia; (iii) an estate, the income of which is subject to US federal income tax without regard to its source; or (iv) a trust, if a court within the United States is able to exercise primary supervision over the administration of the trust and one or more US persons have the authority to control all substantial decisions of the trust, or the trust has elected to be treated as a domestic trust for US federal income tax purposes;
- is not resident or ordinarily resident in the UK for UK tax purposes; and
- does not hold ADSs or ordinary shares in connection with the conduct of a business or the performance of services in the UK or otherwise in connection with a branch, agency or permanent establishment in the UK.

This discussion is not a comprehensive description of all the US federal income tax and UK tax considerations that may be relevant to any particular investor (including consequences under the US alternative minimum tax or net investment income tax). Neither does it address state, local or other tax laws. National Grid has assumed that shareholders, including US Holders, are familiar with the tax rules applicable to investments in securities generally and with any special rules to which they may be subject. This discussion deals only with US Holders who hold ADSs or ordinary shares as capital assets. It does not address the tax treatment of investors who are subject to special rules. Such investors may include:

- financial institutions;
- insurance companies;
- dealers in securities or currencies;
- investors who elect mark-to-market treatment;
- entities treated as partnerships or other pass-through entities and their partners;
- individual retirement accounts and other tax-deferred accounts;
- tax-exempt organisations;
- investors who own (directly or indirectly) 10% or more of our shares (by vote or value);
- investors who hold ADSs or ordinary shares as a position in a straddle, hedging transaction or conversion transaction;
- individual investors who have ceased to be resident in the UK for a period of five years or less;
- persons that have ceased to be US citizens or lawful permanent residents of the US; and
- US Holders whose functional currency is not the US dollar.

The statements regarding US and UK tax laws and administrative practices set forth below are based on laws, treaties, judicial decisions and regulatory interpretations that were in effect on the date of this document. These laws and practices are subject to change without notice, potentially with retroactive effect. In addition, the statements set forth below are based on the representations of the Depositary and assume that each party to the Deposit agreement will perform its obligations thereunder in accordance with its terms.

US Holders of ADSs generally will be treated as the owners of the ordinary shares represented by those ADSs for US federal income tax purposes. For the purposes of the Tax Convention, the Estate Tax Convention and UK tax considerations, this discussion assumes that a US Holder of ADSs will be treated as the owner of the ordinary shares represented by those ADSs. HMRC has stated that it will continue to apply its long-standing practice of treating a holder of ADSs as holding the beneficial interest in the ordinary shares represented by the ADSs; however, we note that this is an area of some uncertainty and may be subject to change.

US Holders should consult their own advisors regarding the tax consequences of buying, owning and disposing of ADSs or ordinary shares depending on their particular circumstances, including the effect of any state, local or other tax laws.

Taxation of dividends

The UK does not currently impose a withholding tax on dividends paid to US Holders.

US Holders should assume that any cash distribution paid by us with respect to ADSs or ordinary shares will be reported as dividend income for US federal income tax purposes. While dividend income received from non-US corporations is generally taxable to a non-corporate US Holder as ordinary income for US federal income tax purposes, dividend income received by a non-corporate US Holder from us generally will be taxable at the same favourable rates applicable to long-term capital gains provided (i) either: (a) we are eligible for the benefits of the Tax Convention or (b) ADSs or ordinary shares are treated as 'readily tradable' on an established securities market in the United States; and (ii) we are not, for our taxable year during which the dividend is paid or the prior year, a passive foreign investment company for US federal income tax purposes (a PFIC), and certain other requirements are met. We expect that our shares will be treated as 'readily tradable' on an established securities market in the United States as a result of the trading of ADSs on the New York Stock Exchange. We also believe we are eligible for the benefits of the Tax Convention.

Based on our audited financial statements and the nature of our business activities, we believe that we were not treated as a PFIC for US federal income tax purposes with respect to our taxable year ending 31 March 2019. In addition, based on our current expectations regarding the value and nature of our assets, the sources and nature of our income, and the nature of our business activities, we do not anticipate becoming a PFIC in the foreseeable future.

Dividends received by corporate US Holders with respect to ADSs or ordinary shares will not be eligible for the dividends-received deduction that is generally allowed to corporations.

Taxation of capital gains

Subject to specific rules relating to assets that derive at least 75% of their value from UK land, US Holders will not be subject to UK taxation on any capital gain realised on the sale or other disposition of ADSs or ordinary shares.

Provided that we are not a PFIC for any taxable year during which a US Holder holds their ADSs or ordinary shares, upon a sale or other disposition of ADSs or ordinary shares, a US Holder generally will recognise a capital gain or loss for US federal income tax purposes that is equal to the difference between the US dollar value of the amount realised on the sale or other disposition and the US Holder's adjusted tax basis in the ADSs or ordinary shares. Such capital gain or loss generally will be long-term capital gain or loss if the ADSs or ordinary shares were held for more than one year. For non-corporate US Holders, long-term capital gain is generally taxed at a lower rate than ordinary income. A US Holder's ability to deduct capital losses is subject to significant limitations.

US information reporting and backup withholding tax

Dividend payments made to US Holders and proceeds paid from the sale, exchange, redemption or disposal of ADSs or ordinary shares to US Holders may be subject to information reporting to the US Internal Revenue Service (IRS). Such payments may be subject to backup withholding taxes if the US Holder fails to provide an accurate taxpayer identification number or certification of exempt status or fails to comply with applicable certification requirements.

US Holders should consult their tax advisors about these rules and any other reporting obligations that may apply to the ownership or disposition of ADSs or ordinary shares. Such obligations include reporting requirements related to the holding of certain foreign financial assets.

UK stamp duty and stamp duty reserve tax (SDRT)

Transfers of ordinary shares – SDRT at the rate of 0.5% of the amount or value of the consideration will generally be payable on any agreement to transfer ordinary shares that is not completed using a duly stamped instrument of transfer (such as a stock transfer form).

The SDRT liability will be cancelled where an instrument of transfer is executed and duly stamped before the expiry of the six-year period beginning with the date on which the agreement is made. If a claim is made within the specified period, any SDRT which has been paid will be refunded. SDRT is due whether or not the agreement or transfer is made or carried out in the UK and whether or not any party to that agreement or transfer is a UK resident.

Purchases of ordinary shares completed using a stock transfer form will generally result in a UK stamp duty liability at the rate of 0.5% (rounded up to the nearest £5) of the amount or value of the consideration. Paperless transfers under the CREST paperless settlement system will generally be liable to SDRT at the rate of 0.5%, and not stamp duty. SDRT is generally the liability of the purchaser, and UK stamp duty is usually paid by the purchaser or transferee.

Transfers of ADSs – no UK stamp duty will be payable on the acquisition or transfer of existing ADSs or beneficial ownership of ADSs, provided that any instrument of transfer or written agreement to transfer is executed outside the UK and remains at all times outside the UK.

An agreement for the transfer of ADSs in the form of American Depositary Receipts will not result in an SDRT liability. A charge to stamp duty or SDRT may arise on the transfer of ordinary shares to the Depositary or The Bank of New York Mellon as agent of the Depositary (the Custodian).

The rate of stamp duty or SDRT will generally be 1.5% of the value of the consideration or, in some circumstances, the value of the ordinary shares concerned. However, there is no 1.5% SDRT charge on the issue of ordinary shares (or, where it is integral to the raising of new capital, the transfer of ordinary shares) to the Depositary or the Custodian.

The Depositary will generally be liable for the stamp duty or SDRT. Under the terms of the Deposit Agreement, the Depositary will charge any tax payable by the Depositary or the Custodian (or their nominees) on the deposit of ordinary shares to the party to whom the ADSs are delivered against such deposits. If the stamp duty is not a multiple of £5, the duty will be rounded up to the nearest multiple of £5.

UK inheritance tax

An individual who is domiciled in the US for the purposes of the Estate Tax Convention and who is not a UK national for the purposes of the Estate Tax Convention will generally not be subject to UK inheritance tax in respect of (i) the ADSs or ordinary shares on the individual's death or (ii) a gift of the ADSs or ordinary shares during the individual's lifetime. This is not the case where the ADSs or ordinary shares are part of the business property of the individual's permanent establishment in the UK or relate to a fixed base in the UK of an individual who performs independent personal services.

Special rules apply to ADSs or ordinary shares held in trust.

In the exceptional case where the ADSs or shares are subject both to UK inheritance tax and to US federal gift or estate tax, the Estate Tax Convention generally provides for the tax paid in the UK to be credited against tax paid in the US or vice versa.

Capital gains tax (CGT) for UK resident shareholders

You can find CGT information relating to National Grid shares for UK resident shareholders on the investor section of our website. Share prices on specific dates are also available on our website.

Other disclosures

All-employee share plans

The Company has a number of all-employee share plans as described below, which operated during the year. These allow UK or US-based employees to participate in tax-advantaged plans and to become shareholders in National Grid.

Sharesave

UK employees are eligible to participate in the Sharesave plan. Under this plan, participants may contribute between £5 and £500 in total each month, for a fixed period of three years, five years or both. Contributions are taken from net salary. At the end of the three or five years, participants may use their savings to purchase ordinary shares in National Grid at a 20% discounted option price, which is set at the time of each annual Sharesave launch.

Share Incentive Plan (SIP)

UK employees are eligible to participate in the SIP. Contributions up to £150 per month are deducted from participants' gross salary and used to purchase ordinary shares in National Grid each month. The shares are placed in a UK resident trust.

US Incentive Thrift Plans

Thrift Plans are open to all US employees of participating National Grid companies; these are tax-advantaged savings plans (commonly referred to as 401k plans). These are defined contribution (DC) pension plans that give participants the opportunity to invest up to applicable federal salary limits. The federal limits for calendar year 2019 were: for pre-tax contributions, a maximum of 50% of salary limited to $19,000 for those under the age of 50 and $25,000 for those aged 50 and above; for post-tax contributions, up to 15% of salary. The total amount of employee contributions (pre-tax and post-tax) could not exceed 50% of compensation, and was further subject to the combined federal annual contribution limit of $56,000. For the calendar year 2020, participants may invest up to the applicable federal salary limits: for pre-tax contributions, this is a maximum of 50% of salary limited to $19,500 for those under the age of 50 and $26,000 for those aged 50 and above; for post-tax contributions, this is up to 15% of salary. The total amount of employee contributions (pre-tax and post-tax) may not exceed 50% of compensation, and is further subject to the combined federal annual contribution limit of $57,000.

Employee Stock Purchase Plan (ESPP)

Employees of National Grid's participating US companies are eligible to participate in the ESPP (commonly referred to as a 423b plan). Eligible employees have the opportunity to purchase ADSs in National Grid on a monthly basis at a 15% discounted price. Under the plan, employees may contribute up to 20% of base pay each year, up to a maximum annual contribution of $18,888, to purchase ADSs.

Change of control provisions

No compensation would be paid for loss of office of Directors on a change of control of the Company. As at 31 March 2020, the Company had borrowing facilities of £4.2 billion available to it with a number of banks, which, on a change of control of the Company following a takeover bid, may alter or terminate; however, the Company is currently not drawing on any of such borrowing facilities. All of the Company's share plans contain provisions relating to a change of control. Outstanding awards and options would normally vest and become exercisable on a change of control, subject to the satisfaction of any performance conditions at that time. In the event of a change of control of the Company, a number of governmental and regulatory consents or approvals are likely to be required, arising from laws or regulations of the UK, the US or the EU. Such consents or approvals may also be required for acquisitions of equity securities that do not amount to a change of control.

No other agreements that take effect, alter or terminate upon a change of control of the Company following a takeover bid are considered to be significant in terms of their potential impact on the business as a whole.

Code of Ethics

In accordance with US legal requirements, the Board has adopted a Code of Ethics for senior financial professionals. This Code is available on our website: www.nationalgrid.com (where any amendments or waivers will also be posted). There were no amendments to, or waivers of, our Code of Ethics during the year.

Conflicts of interest

In accordance with the Companies Act 2006, the Board has a policy and procedure in place for the disclosure and authorisation (if appropriate) of actual and potential conflicts of interest. The Board continues to monitor and note possible conflicts of interest that each Director may have. The Directors are regularly reminded of their continuing obligations in relation to conflicts, and are required to review and confirm their external interests annually. During the year ended 31 March 2020, no new actual or potential conflicts of interest were identified that required approval by the Board. The Board has considered and noted a number of situations in relation to which no actual conflict of interest was identified. Due to current ongoing contractual negotiations that the Company has with Costain plc, the situational conflict that Paul Golby has by virtue of being a Non-executive Director of the Company and Chairman of Costain plc has been kept under constant review during the year and Paul Golby has been recused of all discussions in relation to contractual issues with Costain plc. He has also confirmed to us in writing that the same arrangements are in place in Costain plc.

Corporate governance practices: differences from New York Stock Exchange (NYSE) listing standards

The Company is listed on the NYSE and is therefore required to disclose differences in its corporate governance practices adopted as a UK listed company, compared with those of a US company.

The corporate governance practices of the Company are primarily based on the requirements of the Corporate Governance Code 2018 but substantially conform to those required of US companies listed on the NYSE. The following is a summary of the significant ways in which the Company's corporate governance practices differ from those followed by US companies under Section 303A Corporate Governance Standards of the NYSE.

The NYSE rules and the Code apply different tests for the independence of Board members.

The NYSE rules require a separate nominating/corporate governance committee composed entirely of independent Directors. There is no requirement for a separate corporate governance committee in the UK. Under the Company's corporate governance policies, all Directors on the Board discuss and decide upon governance issues, and the Nominations Committee makes recommendations to the Board with regard to certain responsibilities of a corporate governance committee.

The NYSE rules require listed companies to adopt and disclose corporate governance guidelines. While the Company reports compliance with the Code in each Annual Report and Accounts, the UK requirements do not require the Company to adopt and disclose separate corporate governance guidelines.

The NYSE rules require a separate audit committee composed of at least three independent members. While the Company's Audit Committee exceeds the NYSE's minimum independent Non-executive Director membership requirements, it should be noted that the quorum for a meeting of the Audit Committee, of two independent Non-executive Directors, is less than the minimum membership requirements under the NYSE rules.

The NYSE rules require a compensation committee composed entirely of independent Directors, and prescribe criteria to evaluate the independence of the committee's members and its ability to engage external compensation advisors. While the Code prescribes different independence criteria, the Non-executive Directors on the Company's Remuneration Committee have each been deemed independent by the Board under the NYSE rules. Although the evaluation criteria for appointment of external advisors differ under the Code, the Remuneration Committee is solely responsible for the appointment, retention and termination of such advisors.

Directors' indemnity

The Company has arranged, in accordance with the Companies Act 2006 and the Articles of Association, qualifying third-party indemnities against financial exposure that Directors may incur in the course of their professional duties. Equivalent qualifying third-party indemnities were, and remain, in force for the benefit of those Directors who stood down from the Board in prior financial years for matters arising when they were Directors of the Company. Alongside these indemnities, the Company places Directors' and Officers' liability insurance cover for each Director.

Employees

We negotiate with recognised unions. It is our policy to maintain well developed communications and consultation programmes. Other than the implementation of the Massachusetts workforce contingency plan in June 2018 there have been no material disruptions to our operations from labour disputes during the past five years. The agreement under dispute between the Company and the Massachusetts Gas unions was satisfactorily renegotiated in January 2019. National Grid believes that it can conduct its relationships with trade unions and employees in a satisfactory manner. Further details on the Company's colleagues can be found on pages 52 – 54.

Human rights

Respect for human rights is incorporated into our employment practices and our core values, which are integral to our Code of Ethical Business Conduct. The way in which we conduct ourselves allows us to build trust with the people with whom we work. As a global utility company, we earn this trust by doing things in the right way, complying with the laws of the countries in which we do business while building our reputation as a responsible company that our stakeholders want to do business with and our employees want to work for. Although we do not have specific policies relating to human rights, slavery or human trafficking, our commitment is guided by our Global Supplier Code of Conduct (GSCoC) that integrates human rights into the way we do business throughout our supply chain alongside other areas of sustainability. This Code outlines our values and expectations to ensure we treat people with respect and protect their human rights, protect the environment and preserve natural resources and positively impact the interests of the communities we serve and from which we procure goods and services. Through our GSCoC, we expect our suppliers to act in accordance with the highest ethical standards and comply with all the relevant laws, regulations and licences relating to their business, as well as adhere to the Principles of the United Nations Global Compact, the International Labour Organization (ILO) minimum standards, the Ethical Trading Initiative (ETI) Base Code, the UK Modern Slavery Act 2015, Trafficking and Violence Protection Act 2000 and, for our UK suppliers, the requirements of the Living Wage Foundation.

Listing Rule 9.8.4 R cross-reference table

Information required to be disclosed by LR 9.8.4 R (starting on page indicated):

Interest capitalised	Page 140
Publication of unaudited financial information	Not applicable
Details of long-term incentive schemes	Not applicable
Waiver of emoluments by a director	Not applicable
Waiver of future emoluments by a director	Not applicable
Non-pre-emptive issues of equity for cash	Not applicable
Item (7) in relation to major subsidiary undertakings	Not applicable
Parent participation in a placing by a listed subsidiary	Not applicable
Contracts of significance	Not applicable
Provision of services by a controlling shareholder	Not applicable
Shareholder waivers of dividends	Page 234
Shareholder waivers of future dividends	Page 234
Agreements with controlling shareholders	Not applicable

Material contracts

Each of our Executive Directors has a Service Agreement and each Non-executive Director has a Letter of Appointment. Apart from these, no contract (other than contracts entered into in the ordinary course of business) has been entered into by the Group within the two years immediately preceding the date of this report that is, or may be, material, or that contains any provision under which any member of the Group has any obligation or entitlement that is material to the Group at the date of this report.

Political donations and expenditure

At this year's AGM, the Directors will again seek authority from shareholders, on a precautionary basis, for the Company and its subsidiaries to make donations to registered political parties and other political organisations and/or incur political expenditure as such terms are defined in the Companies Act 2006. In each case, donations will be in amounts not exceeding £125,000 in aggregate. The definitions of these terms in the Companies Act 2006 are very wide. As a result, this can cover bodies such as those concerned with policy review, law reform and the representation of the business community. It could include special interest groups, such as those involved with the environment, which the Company and its subsidiaries might wish to support, even though these activities are not designed to support or influence support for a particular party. The Companies Act 2006 states that all-party parliamentary groups are not political organisations for these purposes, meaning the authority to be sought from shareholders is not relevant to interactions with such groups. The Company has no intention of changing its current practice of not making political donations or incurring political expenditure within the ordinary meaning of those words. This authority is, therefore, being sought to ensure that none of the Company's activities inadvertently infringe these rules.

National Grid made no political donations in the UK or the EU during the year, including donations as defined for the purposes of the Political Parties, Elections and Referendums Act 2000. National Grid USA and its affiliated New York and federal political action committees (PAC) made political donations in the US totalling $46,050 (£36,978) during the year. National Grid USA's affiliated New York PAC was funded partly by contributions from National Grid USA and certain of its subsidiaries and partly by voluntary employee contributions. National Grid USA's affiliated federal PAC was funded wholly by voluntary employee contributions.

Property, plant and equipment

This information can be found in note 13 property, plant and equipment on pages 150 – 152, note 21 borrowing on pages 161 – 163 and where we operate on page 218.

Research, development and innovation activity

Investment in research and development during the year for the Group was £14 million (2018/19: £19 million; 2017/18: £13 million). Due to the way in which we work with a large number of partners on new ideas, our disclosed research and development expenditure is lower than the overall contribution we make to the industry. We only disclose directly incurred expenditure, and not those amounts our partners contribute to joint or collaborative projects. Collaborating across the industry has played a crucial role in our ability to develop new programmes and deliver value to our stakeholders throughout 2019/20.

Continued collaboration and stakeholder engagement have driven the research programmes for ET innovation. Our engagement with stakeholders as part of webinars, podcasts, formal meetings, conferences and dissemination events has been instrumental to developing our strategies including our overall innovation strategy as well as technology and asset-related innovation strategies.

As a result, our project portfolio has been developed around the themes of delivering cleaner and cheaper energy. Our commitment to the 'Net Zero' target for 2050 has provided the focus for our research programme on carbon emission reduction. We have started cross-sector collaboration in order to drive a whole-system approach to decarbonising key sectors such as heat, transport and industry. Our Zero2050 project in South Wales has brought diverse stakeholders from utilities, industry, academia, SMEs, consultants and government together to design a pathway to decarbonisation for South Wales that delivers best value to consumers.

Other disclosures continued

We are also increasing research into decarbonising our own operations and preparing our network for the changes we need to make to accommodate a fully decarbonised energy sector. We have worked with our partners on several projects, investigating ways to eliminate greenhouse gases from our gas-insulated equipment as well as the reduction of our carbon footprint relating to our construction work. Our future network will need to accommodate more renewable energy sources and other converter-based connections and equipment. Providing the infrastructure for a secure, efficient and reliable network requires an increased understanding of network stability with reduced inertia in the system. We have started four projects investigating the impacts of reduced inertia, potential controller interactions and reduced fault levels. As part of these projects we are developing our capabilities to accurately model the electricity transmission network and are developing schemes to mitigate the impacts on system stability and protection performance.

The second key aspect that our stakeholder engagement has highlighted is the delivery of cheaper energy. This has been implemented in our research programme on optimised asset management and monitoring as well as the digitisation of operational technology, considering in particular, cyber security in a context of increasing cyber threats.

As a key enabler for future innovation we have continued the delivery of our Deeside Centre for Innovation. Significant progress has been made with the completion of the control building, good progress on the construction of the overhead line test area and detailed design for the substation area, which notably includes a trial for construction with cement-free concrete.

The ESO has been innovating to make sure the electricity network operates safely and efficiently around the clock. Innovation is key to creating a sustainable, low-carbon electricity system for the future that will help the UK meet its net zero commitments. We refresh our strategy and innovation priorities annually, based on consultation with our stakeholders and this ensures we continue to focus innovation funding only on the most effective projects which can deliver consumer benefits. Next year will see us continue delivering large-scale ESO-led innovation projects, including Distributed ReStart, a £10 million Network Innovation Competition (NIC) project with SP Energy Networks and specialist energy consultancy TNEI. In a world first, this project will develop and demonstrate coordination of DERs to provide a safe and effective Black Start service at lower cost to consumers.

Gas Transmission innovation has continued to focus on developing innovation programmes across core areas such as net zero, safety, reliability and asset health, and embedding these in the business, while also preparing to deliver the energy network of the future and facilitate UK decarbonisation. Highlights from the year include:

- expanding our focus on hydrogen with a number of new projects, including Hydrogen Injection into the NTS, looking at the requirements to carry out a physical trial of hydrogen in the NTS;
- the Monitoring of Real-Time Fugitive Emissions project, looking at developing a robust measurement protocol and a new, low-cost, distributed sensor scheme to monitor fugitive emissions;
- the Spatial GB Clean Heat model, a National Grid-led collaborative project with the gas distribution networks to develop an integrated, cross-vector heat decarbonisation model of the whole heating system within GB to optimise future investment plans;
- launching a number of innovation calls with the Energy Innovation Centre (EIC), reaching out to innovators and small and medium-sized enterprises (SMEs) to find new technologies and solutions to some of our biggest challenges on the NTS;
- the GRAID ART project, which will investigate the addition of Acoustic Resonance Technology (ART) onto the GRAID robotic platform to enhance our underground pipeline inspections, provide robust data about their condition and reduce maintenance and repair costs;
- the installation of the Composite Transition Pieces at Peterborough and Huntingdon; these innovative seal units make it quicker, cheaper and safer to assess pipelines for corrosion.

Research and Development (R&D) work in the US focused on the advancement of products, processes, systems and work methods that may be new to National Grid. This is accomplished by working with internal departments to identify where strategic R&D investment is needed and is likely to prove beneficial. To achieve these goals, we work in collaboration with technical organisations, academia and vendors in the energy sector that align with our goals and objectives to provide a safe, reliable, efficient and clean service. This collaboration has also helped inform our strategic direction in response to jurisdictional requests for electric modernisation (Grid Modernisation in Massachusetts, Rhode Island and Reforming the Energy Vision (REV) in New York). We continue to focus our R&D on increasing public safety, protecting our workforce and reducing the cost of the work we perform.

In 2019/20, we continued to invest and participate in several significant pilot projects with the intention of obtaining operational knowledge and experience of technology-driven system impacts. Below are a few examples of our R&D projects:

US Electricity:

- In Massachusetts under our 'Solar Phase II' programme, we contracted and built 15.27 MW of company-owned photovoltaics facilities. The objective is to better understand the real-world impact advanced technologies can bring to the grid; such as reduced customer interconnection costs and time; increasing hosting capacity; and improving the distribution system's overall power quality and reliability. We partnered with the Electric Power Research Institute (EPRI), Sandia National Laboratories (Sandia) and Fraunhofer Gesellschaft (Fraunhofer);
- With the EPRI, we explored the value of customised smart inverter settings and advanced metering at the Point of Common Coupling (PCC) and published our findings in a white paper titled 'Recommended Smart Inverter Settings for Grid Support and Test Plan: Interim Report'. We also worked with them to calculate the severity of PV Arc Flashes, of which the team shared their findings in a paper titled 'DC Arc Flash on Photovoltaic Equipment';
- With National Grid's support, Sandia initiated an Advanced Distribution Management Systems (ADMS) to optimise commands to allow PV penetration of 50% or greater. Our work was published in a paper titled 'Optimal Distribution System Voltage Regulation using State Estimation and DER Grid-Support Functions';
- Under the support of the US Department of Energy, the Fraunhofer CSE-led project, called 'SunDial', we created a system that optimally manages facility loads and energy storage charging and discharging with PV to mitigate potential problems due to intermittency and large ramps in generation;
- In the 'Solar Phase III' programme, we developed seven additional sites each equipped with a unique combination of smart inverters, energy storage, advanced metering, plant level control, and other equipment with features beyond today's industry standards. We will be testing these new technologies on a variety of distribution circuits; and
- Last year, we completed two New York REV pilot projects:
  - Fruit Belt Neighbourhood Solar and Community Resilience. This year we have completed an additional New York REV demonstration project; and
  - The Distributed System Platform (DSP) REV demonstration project tested a small-scale distribution system energy market involving customer-owned DERs to support the Distribution System Operator (DSO) concept.

- We continued to progress our Smart City REV demonstration project in partnership with the city of Schenectady. Phase 1, which involves procurement, deployment and initial operation of all selected technologies, has progressed beyond 90% completion. Now we are collaborating on the establishment and assessment of functional performance characteristics, including feedback from city stakeholders to evaluate the public acceptance and the overall value proposition. Phase 2 of the project is currently in the technology procurement phase, which will then be deployed in the remaining areas of the city.
- National Grid is heavily engaged on several programmes, including bulk system renewables, DERs integration, planning and asset management, energy storage, asset management for transmission and distribution, system automation and integrating emerging technologies.
- To proactively monitor environmental conditions within underground structures (manholes) we have piloted the installation of manhole monitoring technology produced by CNIguard. Underground infrastructure can be susceptible to the accumulation of water, debris and salt that can result in the degradation of assets. This can result in failure of the assets thereby increasing the operation and loading on parallel equipment. National Grid has installed nine units in Providence, Rhode Island and 11 in Brockton, Massachusetts and will be installing 12 in Albany, NY, 12 in Brockton, Massachusetts and 12 in Providence, Rhode Island in the second quarter of 2020.
- National Grid is preparing to demonstrate online monitoring technology at transmission substations and lines in our New England service area. These technologies will allow the Company to utilise the capacity of lines and transformers more efficiently and focus maintenance efforts on the assets which are at the greatest risk.
- Over the next 10 years we will be deploying up to 170 digital substations in New England and New York as we transition to fully digital substations on our transmission network, which will utilise the IEC 61850 communications standard. The digital substation reduces construction and operation costs, engineering and construction time, increases system flexibility, and helps facilitate the large-scale incorporation of renewable power.

US gas:

- While partnering with a robotics company and another utility, we have been developing and testing new technology to locate inadvertent sewer cross bores created when using some trenchless technology. This technology is deployed in our gas main immediately after installation, prior to the introduction of natural gas. It differs from the current process, which requires us to gain access to the municipal sewer system. Deployment will reduce the risk and cost associated with sewer cross bores. We constructed a functional sewer system covering five hectares at one of our facilities to test the accuracy of the technology. We purposefully created cross bores in the system at several points to determine if the technology could locate them. The technology found all the cross bores with no false negatives. We are currently transitioning the technology to the field for live testing.
- We have been working with a Canadian valve manufacturer to develop a service isolation valve to locally and remotely isolate a gas service. The application has become necessary due to recent industry incidents in the US. The valve has passed all industry and National Grid required testing and can be installed on service lines up to 11 bar of pressure. The valve can take a switched signal from any source and locally isolate the gas service. Signals include flood, fire, seismic, under-pressurisation, over-pressurisation and methane. The valve can also be closed via a wireless signal from National Grid. We are currently building 75 units to be deployed in the New York State service territory. We are in conversations with our regulators to expand the testing to 1,000 units as a solution to hurricane Sandy flooding issues.
- To enhance the functionality of the service isolation valve, we have been working to develop and deploy enhanced residential methane detectors (RMDs). With the deployment of the 75 service isolation valves, we are installing European manufactured RMDs that are powered by 120 V and hard wired to the valve control. We are working with several manufacturers on enhancements: first to power the unit with long-term batteries (current technology limits battery life to three years); and second, to introduce wireless communication to the valve controller (as current technology requires wiring from the RMD to the isolation valve). We are developing an RMD with communications technology that would allow installation of the RMD in remote locations in residential flats, and installation of the RMD in locations where gas is being used to signal if gas escapes.

The Company is utilising all the R&D efforts described above, to create the Grid modernisation plans for all jurisdictions.

Unresolved SEC staff comments

There are no unresolved SEC staff comments required to be reported.

Other unaudited financial information

Alternative performance measures/non-IFRS reconciliations

Within the Annual Report, a number of financial measures are presented. These measures have been categorised as alternative performance measures (APMs), as per the European Securities and Markets Authority (ESMA) guidelines and the Securities and Exchange Commission (SEC) conditions for use of non-GAAP financial measures.

An APM is a financial measure of historical or future financial performance, financial position, or cash flows, other than a financial measure defined under IFRS. The Group uses a range of these measures to provide a better understanding of its underlying performance. APMs are reconciled to the most directly comparable IFRS financial measure where practicable.

The Group has defined the following financial measures as APMs derived from IFRS: net revenue, the various adjusted operating profit, earnings and earnings per share metrics detailed in the 'adjusted profit measures' section below, net debt, capital investment, funds from operations (FFO), FFO interest cover and retained cash flow (RCF)/adjusted net debt. For each of these we present a reconciliation to the most directly comparable IFRS measure.

We also have a number of APMs derived from regulatory measures which have no basis under IFRS; we call these Regulatory Performance Measures (RPMs). They comprise: Group Return on Equity (RoE), UK and US regulatory RoE, regulated asset base, regulated financial performance, regulatory gearing, asset growth, Value Added, including Value Added per share and Value Growth. These measures include the inputs used by utility regulators to set the allowed revenues for many of our businesses.

We use RPMs to monitor progress against our regulatory agreements and certain aspects of our strategic objectives. Further, targets for certain of these performance measures are included in the Company's Annual Performance Plan (APP) and Long Term Performance Plan (LTPP) and contribute to how we reward our employees. As such, we believe that they provide close correlation to the economic value we generate for our shareholders and are therefore important supplemental measures for our shareholders to understand the performance of the business and to ensure a complete understanding of Group performance.

As the starting point for our RPMs is not IFRS, and these measures are not governed by IFRS, we are unable to provide meaningful reconciliations to any directly comparable IFRS measures, as differences between IFRS and the regulatory recognition rules applied have built up over many years. Instead, for each of these we present an explanation of how the measure has been determined and why it is important, and an overview as to why it would not be meaningful to provide a reconciliation to IFRS.

Alternative performance measures

Net revenue

Net revenue is revenue less pass-through costs, such as UK system balancing costs, gas and electricity commodity costs in the US and, prior to the adoption of IFRS 15, payments to other UK network owners. Pass-through costs are fully recoverable from our customers and are recovered through separate charges that are designed to recover those costs with no profit. Any over- or under-recovery of these costs is returned to, or recovered from, our customers.

	2020			2019			2018		
	Gross revenue £m	**Pass-through costs £m**	**Net revenue £m**	Gross revenue £m	Pass-through costs £m	Net revenue £m	Gross revenue £m	Pass-through costs £m	Net revenue £m
UK Electricity Transmission	**3,702**	**(1,528)**	**2,174**	3,351	(1,397)	1,954	4,154	(2,243)	1,911
UK Gas Transmission	**927**	**(242)**	**685**	896	(227)	669	1,091	(257)	834
US Regulated	**9,205**	**(3,460)**	**5,745**	9,846	(3,978)	5,868	9,272	(3,804)	5,468
NGV and Other	**736**	**–**	**736**	876	–	876	776	–	776
Sales between segments	**(30)**	**–**	**(30)**	(36)	–	(36)	(43)	–	(43)
Total	**14,540**	**(5,230)**	**9,310**	14,933	(5,602)	9,331	15,250	(6,304)	8,946

Adjusted profit measures

In considering the financial performance of our business and segments, we use various adjusted profit measures in order to aid comparability of results year-on-year.

The various measures are presented on pages 28 – 37 and reconciled below.

Adjusted results, also referred to as Headline results – these exclude the impact of exceptional items and remeasurements that are treated as discrete transactions under IFRS and can accordingly be classified as such. This is a measure used by management that forms part of the incentive target set annually for remunerating certain Executive Directors, and further details of these items are included in Note 5 to the financial statements.

Underlying results – further adapts our adjusted results to take account of volumetric and other revenue timing differences arising due to the in-year difference between allowed and collected revenues, including revenue incentives, as governed by our rate plans in the US or regulatory price controls in the UK (but excluding totex-related allowances and adjustments). For 2019/20, as highlighted on page 241, our underlying results exclude £147 million (2018/19: £108 million) of timing differences. We have not excluded major storm costs this year as costs were below our $100 million storm cost timing threshold (2018/19: £93 million). We expect to recover major storm costs incurred through regulatory mechanisms in the US.

Constant currency – the adjusted profit measures are also shown on a constant currency basis to show the year-on-year comparisons excluding any impact of foreign currency movements.

Reconciliation of statutory, adjusted and underlying profits and earnings – at actual exchange rates – continuing operations

Year ended 31 March 2020	Statutory £m	Exceptionals and remeasurements £m	Adjusted £m	Timing £m	Major storm costs £m	Underlying £m
UK Electricity Transmission	1,316	4	1,320	(146)	–	1,174
UK Gas Transmission	347	1	348	54	–	402
US Regulated	880	517	1,397	239	–	1,636
NGV and Other	237	5	242	–	–	242
Total operating profit	2,780	527	3,307	147	–	3,454
Net finance costs	(1,113)	64	(1,049)	–	–	(1,049)
Share of post-tax results of joint ventures and associates	87	1	88	–	–	88
Profit before tax	1,754	592	2,346	147	–	2,493
Tax	(480)	47	(433)	(45)	–	(478)
Profit after tax	1,274	639	1,913	102	–	2,015

Year ended 31 March 2019	Statutory £m	Exceptionals and remeasurements £m	Adjusted £m	Timing £m	Major storm costs £m	Underlying £m
UK Electricity Transmission	778	237	1,015	77	–	1,092
UK Gas Transmission	267	36	303	38	–	341
US Regulated	1,425	299	1,724	(223)	93	1,594
NGV and Other	400	–	400	–	–	400
Total operating profit	2,870	572	3,442	(108)	93	3,427
Net finance costs	(1,069)	76	(993)	–	–	(993)
Share of post-tax results of joint ventures and associates	40	–	40	–	–	40
Profit before tax	1,841	648	2,489	(108)	93	2,474
Tax	(339)	(149)	(488)	36	(24)	(476)
Profit after tax	1,502	499	2,001	(72)	69	1,998

Year ended 31 March 2018	Statutory £m	Exceptionals and remeasurements £m	Adjusted £m	Timing £m	Major storm costs £m	Underlying £m
UK Electricity Transmission	1,041	–	1,041	14	–	1,055
UK Gas Transmission	487	–	487	18	–	505
US Regulated	1,734	(36)	1,698	(136)	142	1,704
NGV and Other	231	–	231	–	–	231
Total operating profit	3,493	(36)	3,457	(104)	142	3,495
Net finance costs	(882)	(119)	(1,001)	–	–	(1,001)
Share of post-tax results of joint ventures and associates	49	(5)	44	–	–	44
Profit before tax	2,660	(160)	2,500	(104)	142	2,538
Tax	889	(1,473)	(584)	42	(51)	(593)
Profit after tax	3,549	(1,633)	1,916	(62)	91	1,945

Other unaudited financial information continued

Reconciliation of adjusted and underlying profits – at constant currency

		At constant currency				
Year ended 31 March 2019	Adjusted at actual exchange rate £m	Constant currency adjustment £m	Adjusted £m	Timing £m	Major storm costs £m	Underlying £m
UK Electricity Transmission	1,015	–	1,015	77	–	1,092
UK Gas Transmission	303	–	303	38	–	341
US Regulated	1,724	25	1,749	(226)	94	1,617
NGV and Other	400	1	401	–	–	401
Total operating profit	3,442	26	3,468	(111)	94	3,451
Net finance costs	(993)	(11)	(1,004)	–	–	(1,004)
Share of post-tax results of joint ventures and associates	40	–	40	–	–	40
Profit before tax	2,489	15	2,504	(111)	94	2,487

		At constant currency				
Year ended 31 March 2018	Adjusted at actual exchange rate £m	Constant currency adjustment £m	Adjusted £m	Timing £m	Major storm costs £m	Underlying £m
UK Electricity Transmission	1,041	–	1,041	14	–	1,055
UK Gas Transmission	487	–	487	18	–	505
US Regulated	1,698	94	1,792	(144)	150	1,798
NGV and Other	231	(4)	227	–	–	227
Total operating profit	3,457	90	3,547	(112)	150	3,585
Net finance costs	(1,001)	(38)	(1,039)	–	–	(1,039)
Share of post-tax results of joint ventures and associates	44	1	45	–	–	45
Profit before tax	2,500	53	2,553	(112)	150	2,591

Earnings per share calculations from continuing operations – at actual exchange rates

The table below reconciles the profit before tax from continuing operations as per the previous tables back to the earnings per share from continuing operations for each of the adjusted profit measures. Earnings per share is only presented for those adjusted profit measures that are at actual exchange rates, and not for those at constant currency.

Year ended 31 March 2020	**Profit after tax £m**	**Non-controlling interest £m**	**Profit after tax attributable to shareholders £m**	**Weighted average number of shares millions**	**Earnings per share pence**
Statutory	**1,274**	**(1)**	**1,273**	**3,461**	**36.8**
Adjusted (also referred to as Headline)	**1,913**	**(1)**	**1,912**	**3,461**	**55.2**
Underlying	**2,015**	**(1)**	**2,014**	**3,461**	**58.2**

Year ended 31 March 2019	Profit after tax £m	Non-controlling interest £m	Profit after tax attributable to shareholders £m	Weighted average number of shares millions	Earnings per share pence
Statutory	1,502	(3)	1,499	3,386	44.3
Adjusted (also referred to as Headline)	2,001	(3)	1,998	3,386	59.0
Underlying	1,998	(3)	1,995	3,386	58.9

Year ended 31 March 2018	Profit after tax £m	Non-controlling interest £m	Profit after tax attributable to shareholders £m	Weighted average number of shares millions	Earnings per share pence
Statutory	3,549	(1)	3,548	3,461	102.5
Adjusted (also referred to as Headline)	1,916	(1)	1,915	3,461	55.3
Underlying	1,945	(1)	1,944	3,461	56.2

Timing and regulated revenue adjustments

As described on pages 219 – 226, our allowed revenues are set in accordance with our regulatory price controls or rate plans. We calculate the tariffs we charge our customers based on the estimated volume of energy we expect will be delivered during the coming period. The actual volumes delivered will differ from the estimate. Therefore, our total actual revenue will be different from our total allowed revenue. These differences are commonly referred to as timing differences.

If we collect more than the allowed revenue, the balance must be returned to customers in subsequent periods, and if we collect less than the allowed level of revenue, we may recover the balance from customers in subsequent periods. In the US, a substantial portion of our costs are pass-through costs (including commodity and energy-efficiency costs) and are fully recoverable from our customers. Timing differences between costs of this type being incurred and their recovery through revenue are also included in timing. The amounts calculated as timing differences are estimates and subject to change until the variables that determine allowed revenue are final.

Our continuing operating profit for the year includes a total estimated in-year under-collection of £147 million (2018/19: £108 million over-collection). Our closing balance at 31 March 2020 was £256 million over-recovered. In the UK, there was a cumulative over-recovery of £24 million at 31 March 2020 (2019: under-recovery of £59 million). In the US, cumulative timing over-recoveries at 31 March 2020 were £240 million (2019: £466 million over-recovery).

The total estimated in-year over- or under-collection excludes opening balance adjustments related to estimates or finalisation of balances as part of regulatory submissions.

In addition to the timing adjustments described above, as part of the RIIO price controls in the UK, outperformance against allowances as a result of the totex incentive mechanism, together with changes in output-related allowances included in the original price control, will almost always be adjusted in future revenue recoveries, typically starting in two years' time. We are also recovering revenues in relation to certain costs incurred (for example pension contributions made) in prior years.

Our current IFRS revenues and earnings include these amounts that relate to certain costs incurred in prior years or that will need to be repaid or recovered in future periods. Such adjustments will form an important part of the continuing difference between reported IFRS results and underlying economic performance based on our regulatory obligations.

For our UK Regulated businesses as a whole, timing and regulated revenue adjustments totalled a recovery of £92 million in the year (2018/19: £115 million return). In the US, accumulated regulatory entitlements cover a range of different areas, with the most significant being environmental remediation and pension assets, as well as deferred storm costs.

All regulatory entitlements are recoverable (or repayable) over different periods, which are agreed with the regulators to match the expected payment profile for the liabilities.

	UK Electricity Transmission £m	**UK Gas Transmission £m**	**US Regulated £m**	**Total £m**
1 April 2019 opening balance[1]	**(127)**	**59**	**471**	**403**
Over/(under) recovery	**146**	**(54)**	**(239)**	**(147)**
31 March 2020 closing balance to (recover)/return[3]	**19**	**5**	**232**	**256**

	UK Electricity Transmission £m	UK Gas Transmission £m	US Regulated £m	Total £m
1 April 2018 opening balance[1]	(41)	97	245	301
Over/(under) recovery	(77)	(38)	226	111
31 March 2019 closing balance to (recover)/return[2,3]	(118)	59	471	412

	UK Electricity Transmission £m	UK Gas Transmission £m	US Regulated £m	Total £m
1 April 2017 opening balance[1]	(30)	111	108	189
Over/(under) recovery	(14)	(18)	143	111
31 March 2018 closing balance to (recover)/return[2,3]	(44)	93	251	300

1. Opening balances have been restated to reflect the finalisation of calculated over/(under)-recoveries in the UK and the US.
2. US over/(under) recovery and all US Regulated balances have been translated using the average exchange rate for the year ended 31 March 2020.
3. The over-recovered closing balance at 31 March 2020 was £264 million (translated at the closing rate of $1.24:£1). 31 March 2019 was £407 million (translated at the closing rate of $1.30:£1). 31 March 2018 was £279 million (translated at the closing rate of $1.40:£1).

Other unaudited financial information continued

Capital investment

'Capital investment' or 'investment' refer to additions to property, plant and equipment and intangible assets, and contributions to joint ventures and associates, other than the St William Homes LLP joint venture during the period. We also include the Group's investments by National Grid Partners during the period, which are classified for IFRS purposes as non-current financial assets in the Group's consolidated statement of financial position.

Investments made to our St William Homes LLP arrangement are excluded based on the nature of this joint venture arrangement. We typically contribute property assets to the joint venture in exchange for cash and accordingly do not consider these transactions to be in the nature of capital investment.

Year ended 31 March	At actual exchange rates			At constant currency		
	2020 £m	2019 £m	% change	**2020 £m**	2019 £m	% change
UK Electricity Transmission	**1,043**	925	13	**1,043**	925	13
UK Gas Transmission	**249**	308	(19)	**249**	308	(19)
US Regulated	**3,228**	2,650	22	**3,228**	2,688	20
NGV and Other	**559**	438	28	**559**	439	27
Group capital expenditure	**5,079**	4,321	18	**5,079**	4,360	16
Equity investment, funding contributions and loans to joint ventures and associates[1]	**56**	127	(56)	**56**	128	(56)
Acquisition of Geronimo and Emerald	**209**	–	n/a	**209**	–	n/a
Increase in financial assets (National Grid Partners)	**61**	58	5	**61**	59	3
Group capital investment	**5,405**	4,506	20	**5,405**	4,547	19

1. Excludes £15 million (2019: £47 million) equity contribution to the St William Homes LLP joint venture.

Net debt

See note 29 on page 178 for the definition and reconciliation of net debt.

Funds from operations and interest cover

FFO is the cash flows generated by the operations of the Group. Credit rating metrics, including FFO, are used as indicators of balance sheet strength.

Year ended 31 March	**2020 £m**	2019[1] £m	2018[1] £m
Interest expense (income statement)	**1,119**	1,066	1,128
Hybrid interest reclassified as dividend	**(39)**	(51)	(51)
Capitalised interest	**122**	135	128
Pensions interest adjustment	**16**	(4)	(49)
Interest on lease rentals adjustment	**–**	11	16
Unwinding of discount on provisions	**(77)**	(74)	(75)
Other interest adjustments	**–**	1	12
Adjusted interest expense	**1,141**	1,084	1,109
Net cash inflow from operating activities	**4,715**	4,389	4,710
Interest received on financial instruments	**73**	68	57
Interest paid on financial instruments	**(957)**	(914)	(853)
Dividends received	**75**	201	213
Working capital adjustment	**(269)**	(40)	(118)
Excess employer pension contributions	**176**	260	211
Hybrid interest reclassified as dividend	**39**	51	51
Lease rentals	**–**	34	86
Difference in net interest expense in income statement to cash flow	**(187)**	(186)	(178)
Difference in current tax in income statement to cash flow	**67**	(13)	(206)
Current tax related to prior periods	**(45)**	(52)	(22)
Cash flow from discontinued operations	**(97)**	(71)	(207)
Funds from operations (FFO)	**3,590**	3,727	3,744
FFO interest cover ((FFO + adjusted interest expense)/adjusted interest expense)	**4.1x**	4.4x	4.4x

1. Numbers for 2019 and 2018 reflect the calculations for the total Group as based on the published accounts for the respective years.

Retained cash flow/adjusted net debt

RCF/adjusted net debt is one of two credit metrics that we monitor in order to ensure the Group is generating sufficient cash to service its debts, consistent with maintaining a strong investment-grade credit rating. We calculated RCF/adjusted net debt applying the methodology used by Moody's, as this is one of the most constrained calculations of credit worthiness. The net debt denominator includes adjustments to take account of the equity component of hybrid debt.

Year ended 31 March	2020 £m	2019 £m	2018 £m
Funds from operations (FFO)	**3,590**	3,727	3,744
Hybrid interest reclassified as dividend	**(39)**	(51)	(51)
Ordinary dividends paid to shareholders	**(892)**	(1,160)	(1,316)
RCF (excluding share buybacks)	**2,659**	2,516	2,377
Repurchase of shares	**–**	–	(178)
RCF (net of share buybacks)	**2,659**	2,516	2,199
Borrowings	**30,794**	28,730	26,625
Less:			
50% hybrid debt	**(1,054)**	(1,039)	(1,050)
Cash and cash equivalents	**(73)**	(252)	(329)
Financial and other investments	**(1,278)**	(1,311)	(2,304)
Underfunded pension obligations	**1,442**	845	857
Operating leases adjustment	**–**	248	408
Derivative balances removed from debt	**(116)**	141	(479)
Currency swaps	**203**	38	117
Nuclear decommissioning liabilities reclassified as debt	**6**	18	5
Collateral – cash received under collateral agreements	**(785)**	(558)	(878)
Accrued interest removed from short-term debt	**(246)**	(223)	(195)
Adjusted net debt (includes pension deficit)	**28,893**	26,637	22,777
RCF (excluding share buybacks)/adjusted net debt	**9.2%**	9.4%	10.4%
RCF (net of share buybacks)/adjusted net debt	**9.2%**	9.4%	9.7%

Regulatory Performance Measures

Regulated financial performance – UK

Regulatory financial performance is a pre-interest and tax measure, starting at segmental operating profit and making adjustments (such as the elimination of all pass-through items included in revenue allowances and timing) to approximate regulatory profit for the UK regulated activities. This measure provides a bridge for investors between a well-understood and comparable IFRS starting point and through the key adjustments required to approximate regulatory profit. This measure also provides the foundation to calculate Group RoE.

For the reasons noted above, the table below shows the principal differences between the IFRS operating profit and the regulated financial performance, but is not a formal reconciliation to an equivalent IFRS measure.

UK Electricity Transmission

Year ended 31 March	2020 £m	2019 £m	2018 £m
Adjusted operating profit	**1,320**	1,015	1,041
Movement in regulatory 'IOUs'	**(99)**	174	51
Deferred taxation adjustment	**63**	64	70
RAV indexation (average 3% long-run inflation)	**406**	391	374
Regulatory vs IFRS depreciation difference	**(459)**	(394)	(377)
Fast money/other	**26**	72	69
Pensions	**(52)**	(51)	(49)
Performance RAV created	**119**	90	83
Regulated financial performance	**1,324**	1,361	1,262

Other unaudited financial information continued

UK Gas Transmission

Year ended 31 March	2020 £m	2019 £m	2018 £m
Adjusted operating profit	**348**	303	487
Movement in regulatory 'IOUs'	**67**	68	(91)
Deferred taxation adjustment	**25**	8	18
RAV indexation (average 3% long-run inflation)	**185**	179	173
Regulatory vs IFRS depreciation difference	**(77)**	(42)	(29)
Fast money/other	**(17)**	(10)	(11)
Pensions	**(34)**	(33)	(32)
Performance RAV created	**(24)**	(30)	(16)
Regulated financial performance	**473**	443	499

Regulated financial performance – US

US Regulated

Year ended 31 March	2020 £m	2019 £m	2018 £m
Adjusted operating profit	**1,397**	1,724	1,698
Bad debt provision (COVID-19)[1]	**117**	–	–
Major storm costs	**–**	93	142
Timing	**239**	(223)	(136)
US GAAP pension adjustment	**(4)**	(80)	(73)
Regulated financial performance	**1,749**	1,514	1,631

1. US Regulated financial performance includes an adjustment reflecting our expectation for future recovery of COVID-19 related bad and doubtful debt costs.

Total regulated financial performance

Year ended 31 March	2020 £m	2019 £m	2018 £m
UK Electricity Transmission	**1,324**	1,361	1,262
UK Gas Transmission	**473**	443	499
US Regulated	**1,749**	1,514	1,631
Total regulated financial performance	**3,546**	3,318	3,392

US timing, major storms and movement in UK regulatory 'IOUs' – Revenue related to performance in one year may be recovered in later years. Revenue may be recovered in one year but be required to be returned to customers in future years. In the UK, this is calculated as the movement in other regulated assets and liabilities.

Performance RAV – UK performance efficiencies are in-part remunerated by the creation of additional RAV which is expected to result in future earnings under regulatory arrangements. This is calculated as in-year totex outperformance multiplied by the appropriate regulatory capitalisation ratio and multiplied by the retained company incentive sharing ratio.

Pension adjustment – Cash payments against pension deficits in the UK are recoverable under regulatory contracts. In US Regulated operations, US GAAP pension charges are generally recoverable through rates. Revenue recoveries are recognised under IFRS but payments are not charged against IFRS operating profits in the year. In the UK, this is calculated as cash payments against the regulatory proportion of pension deficits in the UK regulated business, whereas in the US, it is the difference between IFRS and US GAAP pension charges.

3% RAV indexation – Future UK revenues are expected to be set using an asset base adjusted for inflation. This is calculated as UK RAV multiplied by 3% (long-run RPI inflation assumption).

UK deferred taxation adjustment – Future UK revenues are expected to recover cash taxation cost including the unwinding of deferred taxation balances created in the current year. This is the difference between: (a) IFRS underlying EBITDA less other regulatory adjustments; and (b) IFRS underlying EBITDA less other regulatory adjustments less current taxation (adjusted for interest tax shield) then grossed up at full UK statutory tax rate.

Regulatory depreciation – US and UK regulated revenues include allowance for a return of regulatory capital in accordance with regulatory assumed asset lives. This return does not form part of regulatory profit.

Fast/slow money adjustment – The regulatory remuneration of costs incurred is split between in-year revenue allowances and the creation of additional RAV. This does not align with the classification of costs as operating costs and fixed asset additions under IFRS accounting principles. This is calculated as the difference between IFRS classification of costs as operating costs or fixed asset additions and the regulatory classification.

Regulated asset base

The regulated asset base is a regulatory construct, based on predetermined principles not based on IFRS. It effectively represents the invested capital on which we are authorised to earn a cash return. By investing efficiently in our networks, we add to our regulated asset base over the long term, and this in turn contributes to delivering shareholder value. Our regulated asset base is comprised of our regulatory asset value in the UK, plus our rate base in the US.

Maintaining efficient investment in our regulated asset base ensures we are well positioned to provide consistently high levels of service to our customers and increases our revenue allowances in future years. While we have no specific target, our overall aim is to achieve between 5% and 7% growth in regulated asset base each year through continued investment in our networks in both the UK and US.

In the UK, the way in which our transactions impact RAV is driven by principles set out by Ofgem. In a number of key areas these principles differ from the requirements of IFRS, including areas such as additions and the basis for depreciation. Further, our UK RAV is adjusted annually for inflation. RAV in each of our retained UK businesses has evolved over the period since privatisation in 1990, and as a result, historical differences between the initial determination of RAV and balances reported under UK GAAP at that time still persist. Due to the above, substantial differences exist in the measurement bases between RAV and an IFRS balance metric, and therefore, it is not possible to provide a meaningful reconciliation between the two.

In the US, rate base is a regulatory measure determined for each of our main US operating companies. It represents the value of property and other assets or liabilities on which we are permitted to earn a rate of return, as set out by the regulatory authorities for each jurisdiction. The calculations are based on the applicable regulatory agreements for each jurisdiction and include the allowable elements of assets and liabilities from our US companies. For this reason, it is not practical to provide a meaningful reconciliation from the US rate base to an equivalent IFRS measure. However, we include the calculation below.

'Total Regulated and other balances' includes the under or over-recovery of revenues that National Grid's UK regulated businesses target to collect in any year, which are based on the regulator's forecasts for that year. Under the UK price control arrangements, revenues will be adjusted in future years to take account of actual levels of collected revenue, costs and outputs delivered when they differ from those regulatory forecasts. In the US, other regulatory assets and liabilities include regulatory assets and liabilities which are not included in the definition of rate base, including working capital where appropriate.

The investment in 'NGV and other businesses' includes net assets excluding pensions, tax and items related to the UK Gas Distribution sale.

	RAV, rate base or other business assets		Total Regulated and other balances	
Year ended 31 March (£m at constant currency)	**2020 £m**	2019[1] £m	**2020 £m**	2019[1] £m
UK Electricity Transmission	**14,133**	13,537	**13,769**	13,291
UK Gas Transmission	**6,298**	6,155	**6,305**	6,099
US Regulated	**20,644**	18,407	**22,435**	20,394
Total regulated	**41,075**	38,099	**42,509**	39,784
NGV and other businesses	**4,105**	3,351	**3,591**	2,672
Total Group regulated and other balances	**45,180**	41,450	**46,100**	42,456

1. Figures relating to prior periods have, where appropriate, been re-presented at constant currency, for opening balance adjustments following the completion of the UK regulatory reporting pack process in 2019, and finalisation of US balances.

US rate base and Total Regulated and other balances for 31 March 2019 have been restated in the table above at constant currency. At actual currency the values were £17.6 billion and £19.5 billion respectively.

Other business assets and other balances for NGV and Other businesses for 31 March 2019 have been restated in the table above for the impact of IFRS 16 leases, constant currency and to exclude out 39% share of our investment in Quadgas. At actual currency excluding IFRS 16 leases the values were £2.8 billion and £2.7 billion respectively.

Group RoE

Group RoE provides investors with a view of the performance of the Group as a whole compared with the amounts invested by the Group in assets attributable to equity shareholders. It is the ratio of our regulatory financial performance to our measure of equity investment in assets. It therefore reflects the regulated activities as well as the contribution from our non-regulated businesses together with joint ventures and non-controlling interests.

We use Group RoE to measure our performance in generating value for our shareholders, and targets for Group RoE are included in the incentive mechanisms for executive remuneration within both the APP and LTPP schemes.

Group RoE is underpinned by our regulated asset base. For the reasons noted above, no reconciliation to IFRS has been presented, as we do not believe it would be practical. However, we do include the calculations below.

Calculation: Regulatory financial performance including a long-run assumption of 3% RPI inflation, less adjusted interest and adjusted taxation divided by equity investment in assets:

- adjusted interest removes interest on pensions, capitalised interest in regulated operations and unwind of discount rate on provisions;
- adjusted taxation adjusts the Group taxation charge for differences between IFRS profit before tax and regulated financial performance less adjusted interest; and
- equity investment in assets is calculated as the total opening UK regulatory asset value, the total opening US rate base plus goodwill plus opening net book value of National Grid Ventures and Other activities and our share of joint ventures and associates, minus opening net debt as reported under IFRS restated to the weighted average £/$ exchange rate for the year.

Other unaudited financial information continued

Year ended 31 March	2020 £m	2019 £m	2018 £m
Regulated financial performance	**3,546**	3,318	3,392
Operating profit of other activities	**269**	424	255
Group financial performance	**3,815**	3,742	3,647
Share of post-tax results of joint ventures and associates	**88**	40	238
Non-controlling interests	**(1)**	(3)	(1)
Adjusted Group interest charge	**(1,069)**	(1,037)	(980)
Group tax charge	**(433)**	(488)	(639)
Tax on adjustments	**(117)**	(34)	27
Group financial performance after interest and tax	**2,283**	2,220	2,292
Opening rate base/RAV	**37,459**	35,045	32,446
Share of Cadent RAV	**–**	–	512
Opening other balances	**3,304**	2,298	1,787
Opening goodwill	**5,938**	5,852	5,626
Opening capital employed	**46,701**	43,195	40,371
Opening net debt	**(27,194)**	(24,345)	(21,770)
Opening equity	**19,507**	18,850	18,601
Return on Equity	**11.7%**	11.8%	12.3%

UK and US regulated RoE

		Achieved Return on Equity		Base or Allowed Return on Equity	
Year ended 31 March	Regulatory Debt: Equity assumption	2020 %	2019 %	2020 %	2019 %
UK Electricity Transmission	**60/40**	**13.5**	13.7	**10.2**	10.2
UK Gas Transmission	**62.5/37.5**	**9.8**	9.5	**10.0**	10.0
US Regulated	**Avg. 50/50**	**9.3**	8.8	**9.4**	9.4

UK regulated RoE
UK regulated RoEs are a measure of how the businesses are performing against the assumptions used by our UK regulator. These returns are calculated using the assumption that the businesses are financed in line with the regulatory adjudicated capital structure, at the cost of debt assumed by the regulator, and that RPI inflation is equal to a long-run assumption of 3%. They are calculated by dividing elements of out/under-performance versus the regulatory contract (i.e., regulated financial performance disclosed above) by the average equity RAV in line with the regulatory assumed capital structure and adding to the base allowed RoE.

This is an important measure of UK regulated business performance, and our operational strategy continues to focus on this metric. This measure can be used to determine how we are performing under the RIIO framework and also helps investors to compare our performance with similarly regulated UK entities. Reflecting the importance of this metric, it is also a key component of the APP scheme.

The UK RoE is underpinned by the UK RAV. For the reasons noted above, no reconciliation to IFRS has been presented, as we do not believe it would be practical.

US regulated RoE
US regulated RoE is a measure of how a business is performing against the assumptions used by the US regulators. This US operational return measure is calculated using the assumption that the businesses are financed in line with the regulatory adjudicated capital structure and allowed cost of debt. The returns are divided by the average rate base (or where a reported rate base is not available, an estimate based on rate base calculations used in previous rate filings) multiplied by the adjudicated equity portion in the regulatory adjudicated capital structure.

This is an important measure of our US regulated business performance, and our operational strategy continues to focus on this metric. This measure can be used to determine how we are performing and also helps investors compare our performance with similarly regulated US entities. Reflecting the importance of this metric, it is also a key component of the APP scheme.

The US return is based on a calculation which gives proportionately more weighting to those jurisdictions which have a greater rate base. For the reasons noted above, no reconciliation to IFRS for the RoE measure has been presented, as we do not believe it would be practical to reconcile our IFRS balance sheet to the equity base.

The table below shows the principal differences between the IFRS result of the US Regulated segment, and the 'return' used to derive the US RoE. In outlining these differences, we also include the result for the US regulated Operating Companies (OpCo) entities aggregated under US GAAP.

In respect of 2018/19 and 2017/18, this measure is the aggregate operating profit of our US OpCo entities' publicly available financial statements prepared under US GAAP. For 2019/20, this measure represents our current estimate, since local financial statements have yet to be prepared.

	2020 £m	2019 £m	2018 £m
Underlying IFRS operating profit for US regulated segment	**1,636**	1,594	1,704
Weighted average £/$ exchange rate	**$1.2868**	$1.305	$1.358

	2020 $m	2019 $m	2018 $m
Underlying IFRS operating profit for US regulated segment	**2,105**	2,081	2,313
Adjustments to convert to US GAAP as applied in our US OpCo entities			
Adjustment in respect of customer contributions	**(50)**	(50)	(151)
Pension accounting differences[1]	**(13)**	(10)	(101)
Environmental charges recorded under US GAAP	**(94)**	(117)	(106)
Storm costs and recoveries recorded under US GAAP	**(9)**	(112)	(113)
Other regulatory deferrals, amortisation and other items	**3**	121	(146)
Results for US regulated OpCo entities, aggregated under US GAAP[2]	**1,942**	1,913	1,696
Adjustments to determine regulatory operating profit used in US RoE			
Levelisation revenue adjustment	**(122)**	(48)	82
Adjustment for COVID-19 related provision for bad and doubtful debts[3]	**150**	–	–
Net other	**51**	(1)	40
Regulatory operating profit	**2,021**	1,864	1,818
Pensions[1]	**19**	(95)	–
Regulatory interest charge	**(491)**	(457)	(395)
Regulatory tax charge	**(408)**	(345)	(520)
Regulatory earnings used to determine US RoE	**1,141**	967	903

1. Following a change in US GAAP accounting rules, an element of the pensions charge is reported outside operating profit with effect from 2019.
2. Based on US GAAP accounting policies as applied by our US regulated OpCo entities.
3. US RoE includes an adjustment reflecting our expectation for future recovery of COVID-19 related bad and doubtful deb costs.

	2020 $m	2019 $m	2018 $m
US equity base (average for the year)	**12,331**	11,045	10,092
US RoE	**9.3%**	8.8%	8.9%

Value Added and Value Added per share and Value Growth

Value Added is a measure that reflects the value to shareholders of our cash dividend and the growth in National Grid's regulated and non-regulated assets (as measured in our regulated asset base, for regulated entities), and corresponding growth in net debt. It is a key metric used to measure our performance and underpins our approach to sustainable decision-making and long-term management incentive arrangements.

Value Added is derived using our regulated asset base and, as such, it is not practical to provide a meaningful reconciliation from this measure to an equivalent IFRS measure due to the reasons set out for our regulated asset base. However, the calculation is set out in the Financial review on page 32. Value Added per share is calculated by dividing Value Added by the weighted average number of shares (3,461 million) set out in note 8 on page 145.

Value Growth of 10.4% (2018/19: 11.5%) is derived from Value Added by adjusting Value Added to normalise for a 3% long-run RPI inflation rate. In 2019/20, the numerator for Value Growth was £2,068 million (2018/19: £2,166 million). The denominator is Group equity as used in the Group RoE calculation, adjusted for foreign exchange movements.

Asset growth

Asset growth is the annual percentage increase in our RAV and rate base and other business balances (including the assets of NGV and NGP) calculated at constant currency.

Regulatory gearing

Regulatory gearing is a measure of how much of our investment in RAV and rate base and other elements of our invested capital (including our investments in NGV, UK property and other assets and US other assets) is funded through debt. Comparative amounts as at March 2019 are presented at historical exchange rates and have not been restated for opening balance adjustments.

As at 31 March	2020 £m	2019 £m	
UK RAV	**20,431**	19,692	
US rate base	**20,644**	17,565	
Other invested capital included in gearing calculation	**4,105**	2,815	
Total assets included in gearing calculation	**45,180**	40,072	
Net debt (including 100% of hybrid debt)	**(28,590)**	(26,529)	change
Group gearing (based on 100% of net debt)	**63%**	66%	3% pts
Group gearing (excluding 50% of hybrid debt from net debt)	**61%**	64%	3% pts

Commentary on consolidated financial statements
for the year ended 31 March 2019

In compliance with SEC rules, we present a summarised analysis of movements in the income statement and an analysis of movements in adjusted operating profit (for the continuing group) by operating segment. This should be read in conjunction with the 31 March 2020 financial review included on pages 28 – 37.

Analysis of the income statement for the year ended 31 March 2019

Revenue
Revenue for the year ended 31 March 2019 decreased by £317 million to £14,933 million. This decrease was driven by lower revenues in our UK Electricity Transmission business and in our UK Gas Transmission business, partially offset by higher revenues in our US Regulated and NGV and Other businesses. US Regulated revenues were £574 million higher year-on-year, principally due to the impact of new rate plans, the benefit of foreign exchange and recovery of prior year timing under-collections, partially offset by the collection of lower tax allowances and the impact of IFRS 15. UK Electricity Transmission revenues decreased by £803 million, (related to IFRS 15, which reduced both revenues and costs by £1.0 billion), partly offset by higher BSIS pass-through costs and return of prior year timing over-collections. UK Gas Transmission revenues were £195 million lower, driven by the return of allowances related to Avonmouth. Revenue from NGV and Other businesses increased by £100 million, primarily driven by sales in our Commercial Property business.

Operating costs
Operating costs for the year ended 31 March 2019 of £12,063 million were £306 million higher than the prior year. This increase in costs included a £608 million increase in exceptional items and remeasurements, which is discussed below. Excluding exceptional items and remeasurements, operating costs were £302 million lower, driven by the impact of IFRS 15, which reduced costs (and related revenues) for payments to other network owners by £1,043 million, partially offset by higher pass-through costs, increased rates and property taxes, higher depreciation as a result of continued asset investment and the impact of movement in exchange rates.

Net finance costs
For the year ended 31 March 2019, net finance costs before exceptional items and remeasurements were £8 million lower than 2017/18 at £993 million, mainly as a result of the impact of the stronger US dollar and lower pension net interest expense due to lower pension net liabilities and other interest gains, partially offset lower gains on the sale of financial assets and the impact of higher UK RPI inflation. Net finance costs in 2018/19 included remeasurement losses of £76 million on derivative financial instruments used to hedge our borrowings, compared to £119 million of remeasurement gains in 2017/18.

Tax
The tax charge on profits before exceptional items and remeasurements of £488 million was £96 million lower than 2017/18. This reduction was primarily due to a full year's benefit in 2018/19 from the Tax Cut & Jobs Act which reduced the US corporate tax rate from 35% to 21% with effect from 1 January 2018.

Exceptional items and remeasurements
Operating costs for the year ended 31 March 2019 included £283 million of costs arising from the workforce contingency plan related to the Massachusetts Gas labour dispute, £204 million of restructuring charges in our UK and US businesses and £137 million related to the impairment of nuclear connection development costs following the cancellation of the NuGen and Horizon projects. These were partially offset by a net £52 million gain on remeasurement of commodity contracts. In the previous year, operating costs included a £26 million gain on settlement of outstanding balances related to the LIPA Management Services Agreement, together with a net £10 million gain on remeasurement of commodity contracts.

Finance costs for the year ended 31 March 2019 included a net loss of £76 million on financial remeasurements of derivative financial instruments used to hedge our borrowings, compared to a gain of £119 million on financial remeasurements in 2017/18.

Share of post-tax results of joint ventures and associates before exceptional items for the year ended 31 March 2019 of £40 million was £4 million lower, principally due to higher costs in St William.

Adjusted earnings and EPS from continuing operations
Adjusted earnings and EPS, which exclude exceptional items and remeasurements, are provided to reflect the Group's results on a 'business performance' basis, described further in note 5. See page 242 for a reconciliation of adjusted basic EPS to EPS.

The above earnings performance translated into an increase in adjusted EPS in 2018/19 of 3.7p (7%).

Exchange rates
Our financial results are reported in sterling. Transactions for our US operations are denominated in dollars, so the related amounts that are reported in sterling depend on the dollar to sterling exchange rate. The table below shows the average and closing exchange rates of sterling to US dollars.

	2018/19	2017/18	% change
Weighted average (income statement)	**1.31**	1.36	4%
Year-end (statement of financial position)	**1.30**	1.40	7%

The movement in foreign exchange during 2018/19 has resulted in a £355 million increase in revenue, a £62 million increase in adjusted operating profit and a £63 million increase in operating profit.

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Analysis of the adjusted operating profit by segment for the year ended 31 March 2019

UK Electricity Transmission
For the year ended 31 March 2019, revenue in the UK Electricity Transmission segment decreased by £803 million to £3,351 million, and adjusted operating profit decreased by £26 million to £1,015 million. Revenue was significantly impacted by the adoption of IFRS 15, with revenues collected from customers but passed on to the Scottish and Offshore transmission operators are now excluded from both revenue and operating costs, compared to £1,027 million in 2017/18. Excluding pass-through costs, net revenue was £43 million higher, reflecting higher baser allowances including the impact of inflation and increased incentives income, partially offset by the return of outstanding timing balances along with higher adjustments this year to return the benefits of efficiencies and lower required outputs to customers. Regulated controllable costs were £11 million higher, reflecting inflation, increased headcount and workload, and initiative spend. Depreciation and amortisation was £18 million higher, reflecting the continued capital investment programme. Other costs were £41 million higher, principally relating to provision against income recognised on early termination of connections.

Capital expenditure decreased by £74 million compared with 2016/17 to £925 million reflecting reduced activity on Western Link and completion of the London Power Tunnels project.

UK Gas Transmission
Revenue in the UK Gas Transmission segment decreased by £195 million to £896 million, and adjusted operating profit decreased by £184 million to £303 million.

After deducting pass-through costs, net revenue was £165 million lower than 2017/18, reflecting the refund of revenues previously received in respect of the proposed Avonmouth pipeline project that is no longer required. Regulated controllable costs were £2 million lower than 2017/18, with efficiency savings offsetting the higher IT run-the-business costs and the impact of inflation. Pension costs were £9 million higher mainly related to the Guaranteed Minimum Pension equalisation ruling. Depreciation and amortisation costs were £13 million lower following a detailed review of asset lives in the year. Other operating costs were £25 million higher than 2017/18, as a result of the release of unused provisions in the prior year.

Capital expenditure marginally decreased to £308 million, £2 million lower than last year.

US Regulated
Revenue in our US Regulated business increased by £574 million to £9,846 million, and adjusted operating profit increased by £26 million to £1,724 million.

The stronger US dollar decreased revenue and operating profit in 2018/19. Excluding the impact of foreign exchange rate movements, revenue increased by £202 million. Of this increase, £21 million was due to increases in pass-through costs charged on to customers. Excluding pass-through costs, net revenue increased by £181 million at constant currency, principally reflecting increased revenue allowances under rate plans in upstate and downstate New York and in Massachusetts, partially offset by the impact of US tax reform (as the billing tariffs now reflect lower tax requirements) and the impact of IFRS 15, under which customer connection revenues are now recognised over the life of the asset rather than on completion of the works.

We incurred £93 million of major storm costs in 2018/19 through a number of heavy winter storms that caused substantial damage to our electricity networks, compared to £142 million in 2017/18. Excluding these costs and the impact of foreign exchange movements, regulated controllable costs increased by £106 million, reflecting workload increases agreed with regulators and the impact of inflation. Bad debt expense increased by £42 million at constant currency, reflecting higher levels of receivables and cash collection studies. Depreciation and amortisation was £40 million higher in 2018/19 at constant currency as a result of ongoing investment in our networks. Other operating costs were £41 million higher at constant currency, due to more expenditure on 'minor' storms (non-deferrable) and increased cost of removal.

Capital expenditure in the US Regulated business increased to £2,650 million in 2018/19, £226 million more than in 2017/18. At constant currency, this represented a £129 million increase in investment driven by higher investment in new and replacement gas mains and gas business enablement investment, partially offset by the impact of the Massachusetts Gas labour dispute.

NGV and Other
Revenue in NGV and Other increased by £100 million to £876 million, and adjusted operating profit increased by £169 million to £400 million. This reflects higher revenues and profit on disposal of property sites in the UK and lower costs to setting up our new business and the absence of the impairment of land value in 2017/18.

Capital expenditure in NGV and Other was £107 million higher than 2017/18 at £438 million, including the increased investment in a second French Interconnector and in the North Sea Link interconnector to Norway.

Summary consolidated financial information

Financial summary (unaudited)

The financial summary set out below has been derived from the audited consolidated financial statements of National Grid for the five financial years ended 31 March 2020. It should be read in conjunction with the consolidated financial statements and related notes, together with the Strategic Report. The information presented below is adjusted for the matters described in the footnotes below for the years ended 31 March 2020, 2019, 2018, 2017 and 2016 where relevant and has been prepared under IFRS as issued by the IASB and as adopted by the EU.

Summary income statement (£m)	2020	2019	2018[1]	2017	2016[2]
Continuing operations					
Revenue	**14,540**	14,933	15,250	15,035	13,212
Operating profit					
Before exceptional items, remeasurements	**3,307**	3,442	3,457	3,773	3,214
Exceptional items, remeasurements	**(527)**	(572)	36	(565)	11
Profit before tax					
Before exceptional items, remeasurements	**2,346**	2,489	2,500	2,807	2,417
Exceptional items, remeasurements	**(592)**	(648)	160	(623)	(88)
Profit after tax from continuing operations					
Before exceptional items, remeasurements	**1,913**	2,001	1,916	2,141	1,813
Exceptional items, remeasurements	**(639)**	(499)	1,633	(331)	89
(Loss)/profit after tax from discontinued operations					
Before exceptional items, remeasurements	**5**	57	145	606	576
Exceptional items, remeasurements	**(14)**	(45)	(143)	57	116
Gain on disposal of UK Gas Distribution after tax	**–**	–	–	5,321	–
Total profit for the year	**1,265**	1,514	3,551	7,794	2,594
Profit for the year attributable to equity shareholders					
Before exceptional items, remeasurements	**1,917**	2,055	2,060	2,747	2,386
Exceptional items, remeasurements	**(653)**	(544)	1,490	(273)	205
Gain on disposal of UK Gas Distribution after tax	**–**	–	–	5,321	–
Total	**1,264**	1,511	3,550	7,795	2,591
Earnings per share					
Basic – continuing operations (pence)	**36.8**	44.3	102.5	48.1	50.4
Diluted – continuing operations (pence)	**36.6**	44.1	102.1	47.9	50.2
Basic – total (pence)	**36.5**	44.6	102.6	207.1	68.7
Diluted – total (pence)	**36.3**	44.4	102.1	206.2	68.4
Weighted average number of shares – basic (millions)	**3,461**	3,386	3,461	3,763	3,774
Weighted average number of shares – diluted (millions)	**3,478**	3,401	3,476	3,780	3,790
Dividends per ordinary share					
Paid during the year (pence)	**47.83**	46.52	128.97	43.51	43.16
Approved or proposed during the year (pence)[3]	**48.57**	47.34	45.93	128.65	43.34
Paid during the year ($)	**0.615**	0.607	1.751	0.555	0.664
Approved or proposed during the year ($)	**0.625**	0.618	0.624	1.642	0.635

1. Items previously reported for 2018 have been re-presented to reflect our investment in Quadgas HoldCo Limited being presented as a discontinued operation in the current year.
2. Items previously reported for 2016 have been re-presented to reflect UK Gas Distribution being presented as a discontinued operation.
3. Following the disposal of UK Gas Distribution, 2017 includes a special interim dividend of 84.375 pence per share that was paid on 2 June 2017

Summary statement of net assets (£m)	2020	2019	2018	2017	2016
Non-current assets	**61,288**	55,017	52,106	52,266	52,622
Current assets	**5,801**	7,946	6,681	13,574	6,312
Total assets	**67,089**	62,963	58,787	65,840	58,934
Current liabilities	**(8,564)**	(9,129)	(8,697)	(10,511)	(7,721)
Non-current liabilities	**(38,941)**	(34,465)	(31,242)	(34,945)	(37,648)
Total liabilities	**(47,505)**	(43,594)	(39,939)	(45,456)	(45,369)
Net assets	**19,584**	19,369	18,848	20,384	13,565
Total shareholders' equity	**19,562**	19,349	18,832	20,368	13,555

Definitions and glossary of terms

Our aim is to use plain English in this Annual Report and Accounts. However, where necessary, we do use a number of technical terms and abbreviations. We summarise the principal ones below, together with an explanation of their meanings. The descriptions below are not formal legal definitions. Alternative and Regulatory Performance Measures are defined on pages 240 – 249.

A

Adjusted interest
A measure of the interest charge of the Group, calculated by making adjustments to the Group reported interest charge.

Adjusted net debt
A measure of the indebtedness of the Group, calculated by making adjustments to the Group reported borrowings, including adjustments made to include elements of pension deficits and exclude elements of hybrid debt financing.

Adjusted results (also referred to as headline results)
Financial results excluding the impact of exceptional items and remeasurements that are treated as discrete transactions under IFRS and can accordingly be classified as such. This is a measure used by National Grid management that forms part of the incentive target set annually for remunerating certain Executive Directors, and further details of these items are included in note 5 to the Financial Statements.

American Depositary Shares (ADSs)
Securities of National Grid listed on the New York Stock Exchange, each of which represents five ordinary shares. They are evidenced by American Depositary Receipts or ADRs.

Annual General Meeting (AGM)
Meeting of shareholders of the Company held each year to consider ordinary and special business as provided in the Notice of AGM.

B

BAME
Black, Asian and Minority Ethnic (being the UK term used to refer to members of non-white communities).

BEIS
The Department for Business, Energy and Industrial Strategy, the UK government department responsible for business, industrial strategy, and science and innovation with energy and climate change policy.

Board
The Board of Directors of the Company (for more information see pages 66 and 67).

bps
Basis point (bp, bps) is a unit that is equal to 1/100th of 1% and is typically used to denote the movement in a percentage-based metric such as interest rates or RoE. A 0.1% change in a percentage represents 10 basis points.

BritNed
BritNed Development Limited.

C

Cadent
Cadent Gas Limited, the Company's former UK Gas Distribution business. A 61% equity interest in it was sold to the Consortium on 31 March 2017, and the sale of the remaining 39% to the Consortium completed on 28 June 2019.

Called-up share capital
Shares (common stock) that have been issued and have been fully paid for.

Capital tracker
In the context of our US rate plans, this is a mechanism that allows the recovery of the revenue requirement of incremental capital investment above that embedded in base rates, including depreciation, property taxes and a return on the incremental investment.

Carrying value
The amount at which an asset or a liability is recorded in the Group's statement of financial position and the Company's balance sheet.

The Company, the Group, National Grid, we, our or us
We use these terms to refer to either National Grid plc itself or to National Grid plc and/or all or certain of its subsidiaries, depending on context.

Consolidated financial statements
Financial statements that include the results and financial position of the Company and its subsidiaries together as if they were a single entity.

Consortium
The Consortium that purchased Cadent. It comprised Macquarie Infrastructure and Real Assets, Allianz Capital Partners, Hermes Investment Management, CIC Capital Corporation, Qatar Investment Authority, Dalmore Capital, and Amber Infrastructure Limited/International Public Partnerships.

Constant currency
'Constant currency basis' refers to the reporting of the actual results against the results for the same period last year, which, in respect of any US$ currency denominated activity, have been translated using the average US$ exchange rate for the year ended 31 March 2020, which was $1.29 to £1. The average rate for the year ended 31 March 2019 was $1.31 to £1, and for the year ended 31 March 2018 was $1.36 to £1. Assets and liabilities as at 31 March 2019 have been retranslated at the closing rate at 31 March 2020 of $1.24 to £1. The closing rate for the balance sheet date 31 March 2019 was $1.30 to £1.

Contingent liabilities
Possible obligations or potential liabilities arising from past events for which no provision has been recorded, but for which disclosure in the financial statements is made.

COVID-19
COVID-19 or coronavirus disease is an infectious disease caused by a newly discovered coronavirus which spreads through droplets of saliva or discharge from the nose when an infected person coughs or sneezes.

CPIH
The UK Consumer Prices Index including Owner Occupiers' Housing Costs as published by the Office for National Statistics.

D

Dth
Decatherm, being an amount of energy equal to 1 million British thermal units (BTUs), equivalent to approximately 293 kWh.

DB
Defined benefit, relating to our UK or US (as the context requires) final salary pension schemes.

DC
Defined contribution, relating to our UK or US (as the context requires) pension schemes to which National Grid, as an employer, pays contributions based on a percentage of employees' salaries.

Deferred tax
For most assets and liabilities, deferred tax is the amount of tax that will be payable or receivable in respect of that asset or liability in future tax returns as a result of a difference between the carrying value for accounting purposes in the statement of financial position or balance sheet and the value for tax purposes of the same asset or liability.

Deposit agreement
The amended and restated deposit agreement entered into between National Grid plc, the Depositary and all the registered holders from time to time of ADRs, pursuant to which ADSs have been issued, dated 23 May 2013, and any related agreement.

Depositary
Depositary means the Bank of New York Mellon acting as depositary.

Derivative
A financial instrument or other contract where the value is linked to an underlying index, such as exchange rates, interest rates or commodity prices. In most cases, we exclude contracts for the sale or purchase of commodities that are used to supply customers or for our own needs from this definition.

Directors/Executive Directors/Non-executive Directors
The Directors/Executive Directors and Non-executive Directors of the Company, whose names are set out on pages 66 and 67 of this document.

Definitions and glossary of terms continued

Distributed Energy Resources (DER)
Decentralised assets, generally located behind the meter, covering a range of technologies including solar, storage, electric vehicle charging, district heating, smart street lighting and combined heat and power.

Dollars or $
Except as otherwise noted, all references to dollars or $ in this Annual Report and Accounts relate to the US currency.

E

Earnings per share (EPS)
Profit for the year attributable to equity shareholders of the Company allocated to each ordinary share.

Electricity System Operator (ESO)
The party responsible for the long-term strategy, planning and real-time operation (balancing supply and demand) of the electricity system in Great Britain.

Electricity Transmission (ET)
National Grid's UK electricity transmission business.

Employee engagement
A key performance indicator (KPI), based on the percentage of favourable responses to certain indicator questions repeated in each employee survey. It is used to measure how employees think, feel and act in relation to National Grid. Research shows that a highly engaged workforce leads to increased productivity and employee retention. We use employee engagement as a measure of organisational health in relation to business performance.

Employee resource group (ERG)
A group of employees who join together in their workplace based on shared characteristics or life experiences.

Estate Tax Convention
The convention between the US and the UK for the avoidance of double taxation with respect to estate and gift taxes.

EU
The European Union (EU) is the economic and political union of 27 member states located in Europe. The UK left the European Union on 31 January 2020.

Exchange Act
The US Securities Exchange Act 1934, as amended.

F

FERC
The US Federal Energy Regulatory Commission.

Finance lease
A lease where the asset is treated as if it was owned for the period of the lease, and the obligation to pay future rentals is treated as if they were borrowings. Also known as a capital lease.

Financial year
For National Grid this is an accounting year ending on 31 March. Also known as a fiscal year.

FRS
A UK Financial Reporting Standard as issued by the UK Financial Reporting Council (FRC). It applies to the Company's individual financial statements on pages 209 – 215, which are prepared in accordance with FRS 101.

Funds from Operations (FFO)
A measure used by the credit rating agencies of the operating cash flows of the Group after interest and tax but before capital investment.

G

Gas Transmission (GT)
National Grid's UK gas transmission business.

Geronimo
Geronimo, a leading developer of wind and solar generation based in Minneapolis in the US, which National Grid acquired in July 2019.

Grain LNG
National Grid Grain LNG Limited.

Great Britain
England, Wales and Scotland.

Group Value Growth
Group Value Growth is Group-wide value added expressed as a proportion of Group equity. See page 32 for an explanation of Value Added.

GW
Gigawatt, an amount of power equal to 1 billion watts (10^9 watts).

GWh
Gigawatt hours, an amount of energy equivalent to delivering 1 billion watts (10^9 watts) of power for a period of one hour.

H

Hinkley-Seabank (HSB)
A project to connect the new Hinkley Point C nuclear power station to the electricity transmission network.

HMRC
HM Revenue & Customs. The UK tax authority.

HVDC
High-voltage, direct-current electric power transmission that uses direct current for the bulk transmission of electrical power in contrast to the more common alternating current systems.

I

IAS or IFRS
An International Accounting Standard (IAS) or International Financial Reporting Standard (IFRS), as issued by the International Accounting Standards Board (IASB). IFRS is also used as the term to describe international generally accepted accounting principles as a whole.

Individual financial statements
Financial statements of a company on its own, not including its subsidiaries or joint ventures and associates.

Injury frequency rate (IFR)
The number of lost time injuries (LTIs) per 100,000 hours worked in a 12-month period.

Interest cover
A measure used by the credit rating agencies, calculated as FFO plus adjusted interest divided by adjusted interest.

J

Joint venture (JV)
A company or other entity that is controlled jointly with other parties.

K

KEDLI
KeySpan Gas East Corporation, also known as KeySpan Energy Delivery Long Island.

KEDNY
The Brooklyn Union Gas Company, also known as KeySpan Energy Delivery New York.

KPI
Key performance indicator.

kW
Kilowatt, an amount of power equal to 1,000 watts.

L

LIPA
The Long Island Power Authority.

LNG
Liquefied natural gas is natural gas that has been condensed into a liquid form, typically at temperatures at or below -161°C (-258°F).

Lost time injury (LTI)
An incident arising out of National Grid's operations that leads to an injury where the employee or contractor normally has time off for the following day or shift following the incident. It relates to one specific (acute) identifiable incident which arises as a result of National Grid's premises, plant or activities, and was reported to the supervisor at the time and was subject to appropriate investigation.

M

MADPU
The Massachusetts Department of Public Utilities.

MW
Megawatt, an amount of power equal to 1 million watts.

MWh
Megawatt hours, an amount of energy equivalent to delivering 1 million watts (10^6) of power for a period of one hour.

N

National Grid Metering Limited (NGM)
The Company's UK regulated metering business.

National Grid Partners (NGP)
The Company's venture investment and innovation business established in November 2018.

National Grid Ventures (NGV)
The Company's division that operates outside its core UK and US regulated businesses, comprising a broad range of activities in the UK and US, including Geronimo, electricity interconnectors, the Grain LNG terminal and energy metering, as well as being tasked with investment in adjacent businesses, distributed energy opportunities and the development of new and evolving technologies.

National Transmission System (NTS)
The gas National Transmission System in Great Britain.

Net Promoter Score (NPS)
A commonly used tool to measure customer experience to gauge the loyalty of a company's customer relationships. It is an index ranging from -100 to +100.

Net Zero
Net zero means that a person, legal entity (such as a company), country or other body's own emissions of greenhouse gases are either zero or that its remaining greenhouse gas emissions are balanced by schemes to offset, through the removal of an equivalent amount of greenhouse gases from the atmosphere, such as planting trees or using technology like carbon capture and storage.

New England
The term refers to a region within northeastern US that includes the states of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont. National Grid's New England operations are primarily in the states of Massachusetts and Rhode Island.

Northeastern US
The northeastern region of the US, comprising the states of Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island and Vermont.

NYPSC
The New York Public Service Commission.

O

Ofgem
The UK Office of Gas and Electricity Markets is part of the UK Gas and Electricity Markets Authority (GEMA), which regulates the energy markets in the UK.

OPEB
Other post-employment benefits.

Ordinary shares
Voting shares entitling the holder to part ownership of a company. Also known as common stock. National Grid's ordinary shares have a nominal value of $12^{204/473}$ pence following the share consolidation approved at the General Meeting of the Company held on 19 May 2017.

P

Paris Agreement
The agreement, also known as the Paris Climate Accord, within the United Nations Framework Convention on Climate Change dealing with greenhouse gas emissions mitigation, adaptation and finance starting in the year 2020, and adopted by consensus on 12 December 2015.

Price control
The mechanism by which Ofgem sets restrictions on the amounts of revenue we are allowed to collect from customers in our UK businesses. The allowed revenues are intended to cover efficiently incurred operational expenditure, capital expenditure and financing costs, including a Return on Equity invested.

R

Rate base
The base investment on which the utility is authorised to earn a cash return. It includes the original cost of facilities, minus depreciation, an allowance for working capital and other accounts.

Rate plan
The term given to the mechanism by which a US utility regulator sets terms and conditions for utility service, including, in particular, tariffs and rate schedules. The term can mean a multi-year plan that is approved for a specified period, or an order approving tariffs and rate schedules that remain in effect until changed as a result of future regulatory proceedings. Such proceedings can be commenced through a filing by the utility or on the regulator's own initiative.

Regulated controllable costs
Total operating costs under IFRS less depreciation and certain regulatory costs where, under our regulatory agreements, mechanisms are in place to recover such costs in current or future periods.

Regulatory asset value (RAV)
The value ascribed by Ofgem to the capital employed in the relevant licensed business. It is an estimate of the initial market value of the regulated asset base at privatisation, plus subsequent allowed additions at historical cost, less the deduction of annual regulatory depreciation. Deductions are also made to reflect the value realised from the disposal of certain assets that formed part of the regulatory asset base. It is also indexed to the RPI to allow for the effects of inflation.

Regulatory IOUs
Net under/over-recoveries of revenue from output-related allowance changes, the totex incentive mechanism, legacy price control cost true-up and differences between allowed and collected revenues.

Retained cash flow (RCF)
A measure of the cash flows of the Group used by the credit rating agencies. It is calculated as funds from operations less dividends paid and costs of repurchasing scrip shares.

Revenue decoupling
Revenue decoupling is the term given to the elimination of the dependency of a utility's revenue on the volume of gas or electricity transported. The purpose of decoupling is to encourage energy-efficiency programmes by eliminating the disincentive a utility otherwise has to such programmes.

Definitions and glossary of terms continued

RIIO
Revenue = Incentives + Innovation + Outputs, the regulatory framework for energy networks issued by Ofgem.

RIIO-T1
The regulatory framework for transmission networks that was implemented in the eight-year price controls that started on 1 April 2013.

RIIO-2
The regulatory framework for energy networks expected to be issued by Ofgem to start on 1 April 2021.

RIPUC
The Rhode Island Public Utilities Commission.

RPI
The UK retail price index as published by the Office for National Statistics.

S

Scope 1 greenhouse gas emissions
Scope 1 emissions are direct greenhouse gas emissions that occur from sources that are owned or controlled by the Company. Examples include emissions from combustion in owned or controlled boilers, furnaces, vehicles, etc.

Scope 2 greenhouse gas emissions
Scope 2 emissions are greenhouse gas emissions from the generation of purchased electricity consumed by the Company. Purchased electricity is defined as electricity, heat, steam or cooling that is purchased or otherwise brought into the organisational boundary of the Company. Scope 2 emissions physically occur at the facility where electricity is generated.

Scope 3 greenhouse gas emissions
Scope 3 emissions are indirect greenhouse gas emissions as a consequence of the operations of the Company, but are not owned or controlled by the Company, such as emissions from third-party logistics providers, waste management suppliers, travel suppliers, employee commuting, and combustion of sold gas by customers.

SEC
The US Securities and Exchange Commission, the financial regulator for companies with registered securities in the US, including National Grid and certain of its subsidiaries.

SF_6
Sulphur hexafluoride is an inorganic, colourless, odourless and non-flammable greenhouse gas. SF_6 is used in the electricity industry as a gaseous dielectric medium for high-voltage circuit breakers, switchgear and other electrical equipment. The Kyoto protocol estimated that the global warming potential over 100 years of SF_6 is 23,900 times more potent than that of CO_2.

Share premium
The difference between the amount shares are issued for and the nominal value of those shares.

STEM
Science, technology, engineering and mathematics.

Stranded cost recoveries
The recovery of historical generation-related costs in the US, related to generation assets that are no longer owned by us.

Subsidiary
A company or other entity that is controlled by National Grid.

Swaption
A swaption gives the buyer, in exchange for an option premium, the right, but not the obligation, to enter into an interest-rate swap at some specified date in the future. The terms of the swap are specified on the trade date of the swaption.

T

Tax Convention
Tax Convention means the income tax convention between the US and the UK.

Taxes borne
Those taxes that represent a cost to the Company and are reflected in our results.

Taxes collected
Those taxes that are generated by our operations but do not affect our results. We generate the commercial activity giving rise to these taxes and then collect and administer them on behalf of HMRC.

Tonne
A unit of mass equal to 1,000 kilogrammes, equivalent to approximately 2,205 pounds.

Tonnes carbon dioxide equivalent (CO_2e)
A measure of greenhouse gas emissions in terms of the equivalent amount of carbon dioxide.

Totex
Total expenditure, comprising capital and operating expenditure.

Treasury shares
Shares that have been repurchased but not cancelled. These shares can then be allotted to meet obligations under the Company's employee share schemes.

U

UK
The United Kingdom, comprising England, Wales, Scotland and Northern Ireland.

UK Corporate Governance Code (the Code)
Guidance, issued by the Financial Reporting Council in 2018, on how companies should be governed, applicable to UK listed companies, including National Grid, in respect of reporting periods starting on or after 1 January 2019.

UK GAAP
Generally accepted accounting principles in the UK. These differ from IFRS and from US GAAP.

Underlying EPS
Underlying results for the year attributable to equity shareholders of the Company allocated to each ordinary share.

Underlying results
The financial results of the Company, adjusted to exclude the impact of exceptional items and remeasurements that are treated as discrete transactions under IFRS and can accordingly be classified as such, and to take account of volumetric and other revenue timing differences arising due to the in-year difference between allowed and collected revenues.

US
The United States of America, its territories and possessions, any state of the United States and the District of Columbia.

US GAAP
Generally accepted accounting principles in the US. These differ from IFRS and from UK GAAP.

US state regulators (state utility commissions)
In the US, public utilities' retail transactions are regulated by state utility commissions, including the New York Public Service Commission (NYPSC), the Massachusetts Department of Public Utilities (MADPU) and the Rhode Island Public Utilities Commission (RIPUC).

V

Value growth
Value growth is the Value Added, adjusted to normalise for a 3% long-run RPI inflation rate, expressed as a proportion of Group equity. See page 249.

Want more information or help?

Equiniti

For queries about ordinary shares:

0800 169 7775
This is a Freephone number from landlines within the UK, mobile costs may vary. Lines are open 8.30am to 5.30pm, Monday to Friday, excluding public holidays. If calling from outside the UK: +44 (0) 121 415 0931. Calls from outside the UK will be charged at the applicable international rate.

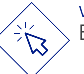
Visit help.shareview.co.uk for information regarding your shareholding (from here you will also be able to email a query securely).

National Grid Share Register
Equiniti
Aspect House
Spencer Road, Lancing
West Sussex BN99 6DA

The Bank of New York Mellon

For queries about American Depositary Shares:

1-800-466-7215
If calling from outside the US:
+1-201-680-6825



www.mybnymdr.com
Email: shrrelations@cpushareownerservices.com

BNY Mellon – ADR
PO Box 505000
Louisville, KY 40233-5000

Further information about National Grid, including share price and interactive tools, can be found on our website: http://investors.nationalgrid.com

Beware of share fraud

Investment scams are often sophisticated and difficult to spot. Shareholders are advised to be wary of any unsolicited advice or offers, whether over the telephone, through the post or by email. If you receive any unsolicited communication, please check the company or person contacting you is properly authorised by the Financial Conduct Authority (FCA) before getting involved. Be ScamSmart and visit www.fca.org.uk/scamsmart. You can report calls from unauthorised firms to the FCA by calling 0800 111 6768.

Financial calendar

The following dates have been announced or are indicative:

18 June 2020	2019/20 full-year results
1 July 2020	ADRs go ex-dividend for 2019/20 final dividend
2 July 2020	Ordinary shares go ex-dividend for 2019/20 final dividend
3 July 2020	Record date for 2019/20 final dividend
9 July 2020	Scrip reference price announced
22 July 2020 (5pm London time)	Scrip election date
27 July 2020	2020 AGM
19 August 2020	2019/20 final dividend paid to qualifying shareholders
12 November 2020	2020/21 half-year results
25 November 2020	ADRs go ex-dividend for 2020/21 interim dividend
26 November 2020	Ordinary shares go ex-dividend for 2020/21 interim dividend
27 November 2020	Record date for 2020/21 interim dividend
3 December 2020	Scrip reference price announced
14 December 2020 (5pm London time)	Scrip election date for 2020/21 interim dividend
13 January 2021	2020/21 interim dividend paid to qualifying shareholders

Dividends

The Directors are recommending a final dividend of 32.00 pence per ordinary share ($2.0126 per ADS) to be paid on 19 August 2020 to shareholders on the register as at 3 July 2020. Further details on dividend payments can be found on page 37. If you live outside the UK, you may be able to request that your dividend payments are converted into your local currency.

Under the Deposit agreement, a fee of up to $0.05 per ADS can be charged for any cash distribution made to ADS holders, including cash dividends. ADS holders who receive cash in relation to the 2019/20 final dividend will be charged a fee of $0.02 per ADS by the Depositary prior to the distribution of the cash dividend.

Have your dividends paid directly into your bank or building society account:

- your dividend reaches your account on the payment day;
- it is more secure – cheques sometimes get lost in the post; and
- no more trips to the bank.

Elect to receive your dividends as additional shares:
Join our scrip dividend scheme; no stamp duty or commission to pay.

Electronic communications

Please register at www.shareview.co.uk.

It only takes a few minutes to register – just have your 11-digit Shareholder Reference Number to hand. You will be sent an Activation Code to complete registration.

Once you have registered, you can elect to receive your shareholder communications electronically.

Registered office

National Grid plc was incorporated on 11 July 2000. The Company is registered in England and Wales No. 4031152, with its registered office at 1–3 Strand, London WC2N 5EH.

Share dealing

Postal share dealing: Equiniti offer our European Economic Area resident shareholders a share dealing service by post. This service is available to private shareholders resident within the European Economic Area, the Channel Islands or the Isle of Man. If you hold your shares in CREST, you are not eligible to use this service. For more information and to obtain a form, please visit www.shareview.co.uk or call Equiniti on 0800 169 7775.

Internet and telephone share dealing: Equiniti also offer telephone and online share dealing at live prices. For full details together with terms and conditions, please visit www.shareview.co.uk. You can call Equiniti on 03456 037037 for further details, or to arrange a trade. Lines are open Monday to Friday, 8.00am to 4.30pm for dealing, and until 6.00pm for enquiries.

ShareGift: If you only have a small number of shares that would cost more for you to sell than they are worth, you may wish to consider donating them to ShareGift. ShareGift is a registered charity (No. 1052686) which specialises in accepting such shares as donations. For more information, visit www.sharegift.org or contact Equiniti.

Individual Savings Accounts (ISAs): ISAs for National Grid shares are available from Equiniti. For more information, call Equiniti on 0345 300 0430 or visit www.shareview.co.uk/ISA.

Cautionary statement

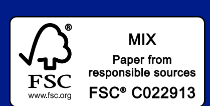
This document comprises the Annual Report and Accounts for the year ended 31 March 2020 for National Grid and its subsidiaries.

It contains the Directors' Report and Financial Statements, together with the independent auditor's report thereon, as required by the Companies Act 2006. The Directors' Report, comprising pages 1 – 107 and 216 – 252 has been drawn up in accordance with the requirements of English law, and liability in respect thereof is also governed by English law. In particular, the liability of the Directors for these reports is solely to National Grid.

This document contains certain statements that are neither reported financial results nor other historical information. These statements are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These statements include information with respect to our financial condition, our results of operations and businesses, strategy, plans and objectives. Words such as 'aims', 'anticipates', 'expects', 'should', 'intends', 'plans', 'believes', 'outlook', 'seeks', 'estimates', 'targets', 'may', 'will', 'continue', 'project' and similar expressions, as well as statements in the future tense, identify forward-looking statements. These forward-looking statements are not guarantees of our future performance and are subject to assumptions, risks and uncertainties that could cause actual future results to differ materially from those expressed in or implied by such forward-looking statements. Many of these assumptions, risks and uncertainties relate to factors that are beyond our ability to control or estimate precisely, such as the impact of COVID-19 on our operations, our employees, our counterparties, our funding and our regulatory and legal obligations, but also more widely in terms of changes in laws or regulations, including any arising as a result of the United Kingdom's exit from the European Union; announcements from and decisions by governmental bodies or regulators, including proposals relating to the RIIO-2 price as well as increased economic uncertainty resulting from COVID-19; the timing of construction and delivery by third parties of new generation projects requiring connection; breaches of, or changes in, environmental, climate change, and health and safety laws or regulations, including breaches or other incidents arising from the potentially harmful nature of our activities; network failure or interruption, the inability to carry out critical non-network operations, and damage to infrastructure, due to adverse weather conditions, including the impact of major storms as well as the results of climate change, due to counterparties being unable to deliver physical commodities, or due to the failure of or unauthorised access to or deliberate breaches of our IT systems and supporting technology; failure to adequately forecast and respond to disruptions in energy supply; performance against regulatory targets and standards and against our peers with the aim of delivering stakeholder expectations regarding costs and efficiency savings; and customers and counterparties (including financial institutions) failing to perform their obligations to the Company. Other factors that could cause actual results to differ materially from those described in this document include fluctuations in exchange rates, interest rates and commodity price indices; restrictions and conditions (including filing requirements) in our borrowing and debt arrangements, funding costs and access to financing; regulatory requirements for us to maintain financial resources in certain parts of our business and restrictions on some subsidiaries' transactions, such as paying dividends, lending or levying charges; the delayed timing of recoveries and payments in our regulated businesses and whether aspects of our activities are contestable; the funding requirements and performance of our pension schemes and other post-retirement benefit schemes; the failure to attract, develop and retain employees with the necessary competencies, including leadership and business capabilities, and any significant disputes arising with our employees or the breach of laws or regulations by our employees; the failure to respond to market developments, including competition for onshore transmission; the threats and opportunities presented by emerging technology; the failure by the Company to respond to, or meet its own commitments as a leader in relation to, climate change development activities relating to energy transition, including the integration of distributed energy resources; and the need to grow our business to deliver our strategy, as well as incorrect or unforeseen assumptions or conclusions (including unanticipated costs and liabilities) relating to business development activity.

For further details regarding these and other assumptions, risks and uncertainties that may affect National Grid, please read the Strategic Report and the risk factors on pages 227 – 230 of this document. In addition, new factors emerge from time to time and we cannot assess the potential impact of any such factor on our activities or the extent to which any factor, or combination of factors, may cause actual future results to differ materially from those contained in any forward-looking statement. Except as may be required by law or regulation, the Company undertakes no obligation to update any of its forward-looking statements, which speak only as of the date of this document.

The contents of any website references in this document do not form part of this document.



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The paper used in this report has been Carbon Balanced with the World Land Trust, an international conservation charity, who offset carbon emissions through the purchase and preservation of high conservation value land.

Through protecting standing forests, under threat of clearance, carbon is locked in that would otherwise be released. These protected forests are then able to continue absorbing carbon from the atmosphere, referred to as REDD (Reduced Emissions from Deforestation and forest Degradation). This is now recognised as one of the most cost-effective and swiftest ways to arrest the rise in atmospheric CO_2 and global warming effects. Additional to the carbon benefits is the flora and fauna this land preserves, including a number of species identified at risk of extinction on the IUCN Red List of Threatened Species.

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National Grid plc
1–3 Strand
London WC2N 5EH
United Kingdom

www.nationalgrid.com