nationalgrid

Annual Report and Accounts 2017/18

Bring Energy to Life

Contents

National Grid Annual Report and Accounts 2017/18

Strategic Report

The Strategic Report includes an overview of our strategy and business model, the principal risks we face and information about our performance. In addition to the financial review included within this section, we provide additional analysis and commentary, including the performance of our operating segments, within the unaudited commentary sections of the financial statements. This additional analysis forms part of our Strategic Report.

Corporate Governance

The Corporate Governance report, introduced by our Chairman, contains details about the activities of the Board and its committees during the year. We include reports from the Audit; Finance; Safety, Environment and Health; Nominations; and Remuneration Committees. We also include details of our shareholder engagement activities.

Financial Statements

Our financial statements include: the independent auditor's reports; consolidated financial statements prepared in accordance with IFRS as adopted by the EU and as issued by the IASB; related commentary and notes to the consolidated financial statements; and the Company's financial statements prepared in accordance with FRS 101.

Additional information

This section includes additional disclosures and information, definitions and a glossary of terms, summary consolidated financial information, and other useful information for shareholders, including contact details for more information or help.

Front cover
Cirhan Truswell, Senior Commercial Analyst, at our carbon weighting project, Burton, UK.

National Grid plc is an electricity and gas utility focused on transmission and distribution activities in both the United Kingdom and the United States. Business segments include UK Electricity Transmission, UK Gas Transmission, National Grid Ventures and other activities, and US Regulated Gas and Electricity distribution and transmission networks.

Group financial highlights

Statutory operating profit*
£3,493m
(2016/17: £3,208m)

Statutory EPS*
103.8p
(2016/17: 48.1p)

Value Added
57.9p/share
(2016/17: 51.6p/share)

Underlying operating profit*
£3,495m
(2016/17: £3,375m)

Underlying EPS*
60.4p
(2016/17: 58.6p proforma)

Capital investment
£4,251m
(2016/17: £3,862m)

Group return on equity (RoE)
12.3%
(2016/17: 11.7%)

For definitions and reconciliations of statutory and non-IFRS performance measures, and regulatory performance measures see pages 206-214.

All financial metrics for the current year, which are calculated on a ‘per share’ basis, reflect a reduction in the weighted average number of shares as of 2 June 2017, following the sale of the UK Gas Distribution business. The weighted average number of ordinary shares outstanding for the period includes the effect of the 11 for 12 share consolidation. Prior year metrics have not been restated, unless specifically identified as such.

Operational highlights

Group safety performance
0.10 IFR
(2016/17: 0.10 IFR)
(See page 15)

Greenhouse gas emissions
7.7m tonnes
(CO_2 equivalent)
(2016/17: 9.1)

Employee engagement index
77%
(2016/17: 77%)

We use a number of technical terms and abbreviations within this document. For brevity, we do not define terms or provide explanations every time they are used. Please refer to the glossary on pages 218-222 for this information, as well as an important notice in relation to forward-looking statements with our cautionary statement on page 224.

*From continuing operations.

Our reporting
Our financial results are reported in sterling. We convert our US business results at the weighted average exchange rate during the year, which for 2017/18 was \$1.36 to £1 (2016/17 \$1.28 to £1). We use adjusted profit measures, which exclude the impact of exceptional items and remeasurements. These are used by management to assess the underlying performance of the business. Reconciliations to statutory financial information are shown on page 206-214.

Online report
The PDF of our Annual Report and Accounts 2017/18 includes a full search facility. You can find the document by visiting the ‘About us’ section at www.nationalgrid.com.

Further reading
Throughout this report you can find links to further detail within this document or online. Please look out for the following icon:

Inside front cover and page 1
Engineers, Gas Transmission, Aylesbury, UK.

About National Grid

We are 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 business model

Our business model, set out below, summarises our Company's key drivers, how we create and preserve value over the longer term, and how we generate cash flows.

What we do

We play a vital role in connecting millions of people to the energy they use through our regulated utility businesses in the UK and US, with principal operations in electricity and gas transmission and distribution, as well as National Grid Ventures.

Our purpose, vision and values

Our purpose is to Bring Energy to Life. We believe it's crucial to have a clear sense of what we stand for as a company and what it is that binds us all together. This is what we call our purpose. In simple terms it's what inspires us to serve our customers as well as we can, and it's what makes us proud about the work we do.

Our vision is: we will exceed the expectations of our customers, shareholders and communities today and make possible the energy systems of tomorrow.

Our values are: every day we do the right thing and find a better way.

Adapting to change

We are responding to changes in our business environment, so we can ensure we maintain our position in the industry. We are able to generate short-term profitability and create long-term, sustainable value in an evolving energy landscape, as shown by our performance described in pages 28-33.

Our strategic priorities

Our three strategic priorities are: optimise our operational performance; look for opportunities to grow our core business; and make sure National Grid is better equipped for the future.

Being a responsible business

For us, being a responsible business means being a force for positive environmental and social change. We consider communities in all our operations, so we can fully understand their needs, keep them safe, and make sure they are fairly represented in our decisions and actions.

If we are to achieve our vision, we need to be aware of the needs of all our stakeholders. We need to make sure we deliver value for them every day, and continue to do so as the energy landscape changes.

How we make money

Our regulators in the UK and US set the type and level of charges we are allowed to pass on to our customers to simulate market competition. We also make money from businesses that operate in markets outside our core regulated businesses.

UK Regulated

44% of Group statutory operating profit
44% of Group adjusted operating profit

UK Electricity Transmission

We own and operate the electricity transmission network in England and Wales, with day-to-day responsibility for balancing supply and demand. We are also system operator for the Scottish networks, but do not own them.

4,474
Miles (7,200 kilometres) of overhead line
(2016/17: 4,474 miles; 7,200 kilometres)

346
Substations
(2016/17: 342)

969
Miles (1,560 kilometres) of underground cable
(2016/17: 932 miles; 1,500 kilometres)

UK Gas Transmission

We own and operate the gas National Transmission System (NTS) in Great Britain, with day-to-day responsibility for balancing supply and demand.

4,760
Miles (7,660 kilometres) of high-pressure pipe
(2016/17: 4,760 miles; 7,660 kilometres)

24
Compressor stations
(2016/17: 24)

Our role as System Operator

As Great Britain's System Operator (SO) we make sure Great Britain's gas and electricity is transported safely and efficiently from where it is produced to where it is consumed. We balance supply and demand in real time and we facilitate the connection of assets to the transmission system.

Further reading

- Our business environment – page 4
- How we create value for our stakeholders – page 6
- Our purpose, vision, values and strategy – page 12
- Financial review – page 22
- Our commitment to being a responsible business – page 34

US Regulated

50% of Group statutory operating profit
49% of Group adjusted operating profit

US Regulated Electricity

We both own and operate transmission facilities across upstate New York, Massachusetts, New Hampshire, Rhode Island and Vermont. We own and operate electricity distribution networks in upstate New York, Massachusetts and Rhode Island.

8,881

Miles (14,293 kilometres) of overhead line
(2016/17: 8,835 miles; 14,219 kilometres)

740

Distribution substations
(2016/17: 763)

387

Transmission substations
(2016/17: 377)

US Regulated Gas

We own and operate gas distribution networks across the northeastern US, located in upstate New York, New York City, Long Island, Massachusetts and Rhode Island.

35,419

Miles (57,001 kilometres) of gas pipeline
(2016/17: 35,265 miles; 56,753 kilometres)

National Grid Ventures and Other Activities

6% of Group statutory operating profit
7% of Group adjusted operating profit

National Grid Ventures was formed on 1 April 2017 and brought together our businesses that are adjacent to our core regulated operations to create a new division. This operating segment represents our main strategic growth area outside our regulated core in competitive markets across the US and the UK. The business comprises all commercial operations in Metering, LNG at the Isle of Grain and electricity interconnectors, with a focus on investment and future activities in emerging growth areas.

Our other activities mainly relate to UK property development, together with insurance and corporate activities in the UK and US.

11.1m

Metering: gas meters

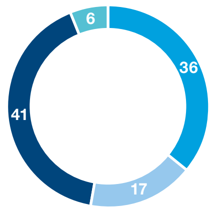
1,000,000m^3

LNG: tank space

6.4

GW capacity of interconnectors in operation or under construction

Substantial asset base as at 31 March 2018* (%)



Substantial asset base as at 31 March 2017 (%)

1. UK Electricity Transmission	35
2. UK Gas Transmission	16
3. US Regulated	43
4. National Grid Ventures and Other Activities	6

*excludes % share of UK Gas Distribution (Cadent) assets. See page 23 for further details.

For information about the accounting implications arising from the announced potential sale of 25% in Cadent, see note 35 on page 177.

What are transmission and distribution?

Our role in connecting people to the energy they use mainly involves either transmission or distribution.

'Transmission' means transporting energy from the location where it is generated or imported, to a distribution system.

'Distribution' means transporting energy to consumers at a lower voltage (for electricity) or pressure (for gas) ready for domestic use.

Further reading

Definitions can be found on pages 218-222

You can find more information about what we do on our website: www.nationalgrid.com

Our business environment

Our environment is shaped by four themes: the impact on consumer bills, energy security, environmental sustainability and technology. As the energy ecosystem evolves, so do the needs of our stakeholders.

£35.48

UK transmission network costs per average annual household dual fuel bill – representing around 3% of the total bill

- Electricity transmission: £26.16
- Gas transmission: £9.32
- These costs cover the transport of energy and maintaining very high levels of reliability

Impact on consumer bills

Commentary

Consumers expect a reliable energy system that delivers gas and electricity when and where it is needed. They pay for the cost of this infrastructure and improvements to it through the part of their energy bills that covers network costs. These costs are subject to regulatory approval.

2017/18 developments	Our response
UK In the UK, affordability of energy is a critical topic, as highlighted in the 2017 General Election campaign. Price caps featured in both the Conservative and Labour manifestos and an energy price cap bill is currently progressing through Parliament. The Labour Party also indicated in its manifesto that it was considering renationalising utility networks. The Government commissioned the Cost of Energy Review in the summer of 2017. Its main findings were that the cost of energy is too high, and that the energy policy, regulation and market design are not fit for the purposes of the emerging low-carbon energy market. **US** The cost of energy remains a concern for consumers and regulators who expect affordable, reliable and cleaner energy at a low price. Costs of energy as a percentage of total spending have declined, mainly as a result of low natural gas prices and household energy efficiency improvements. Additionally, costs of low-carbon technologies such as solar, batteries and energy management systems have fallen, so they are increasingly being adopted.	• Our US and UK regulated businesses continue to strive for greater efficiency, seeking innovative ways to reduce both the time and cost to repair or replace assets. This approach minimises the costs to consumers. • In the UK, we have been able to generate £540 million of savings for consumers in the first five years of the RIIO arrangements. We have also volunteered that £480 million of RIIO-T1 allowances for electricity transmission investments should be deferred, which will help ease the impact on consumer bills. • We do not believe that renationalisation of National Grid would be in the best interests of UK consumers, and we have communicated externally the ways in which we have created and driven value for customers and society since privatisation. • In the US, approval of new electricity and gas delivery rates in upstate New York allows us to continue our new Energy Affordability Program, which provides a bill decrease for most income-eligible customers. New energy efficiency solutions will result in bill decreases for our moderate income customers.

46%
(UK capacity)

32%
(UK production)

21%
(US capacity)

15%
(US production)

Electricity generation supply from renewable sources in 2017

Energy security

Commentary

The energy system is in a phase of transition from high to low carbon. Coal plants are closing down and being replaced with nuclear, renewables and gas, as well as emerging battery storage. Electricity margins need to be monitored and actively managed as we move to a generation mix with greater volumes of intermittent and distributed generation.

2017/18 developments	Our response
UK Over the summer of 2017, the majority of the UK's energy supply came from renewable sources. The UK also saw its first day free of generation from coal in April 2017. As the region shifts towards an increasingly decarbonised generation mix, baseload electricity prices are expected to increase. UK wholesale gas prices have been trending upwards as sources of gas storage have decreased with the closure of the Rough gas field and general global shifts in preferences from coal to gas. **US** The reliability of energy infrastructure remains a concern for consumers, regulators and policy makers. Regulators are seeking investment to improve the security and resilience of energy networks. Natural gas supply has outpaced demand due to technological improvements in shale gas extraction, and wholesale gas prices have remained at historic low levels. Wholesale electricity prices have largely mirrored natural gas pricing due to the increasing reliance of the energy industry on natural gas as a fuel.	• National Grid Ventures has made significant progress in the construction of three new electricity interconnectors from the UK to Belgium, France and Norway. • The Grain LNG import terminal received the first ever UK LNG cargos from the US and Peru, highlighting our ability to help deliver a more diverse gas supply for the UK. • In the UK, we published our System Needs and Product Strategy report, which sets the scene for future requirements, and consults on the future of balancing services products. • In the US, approval of new electricity and gas delivery rates in upstate New York means we can invest $2.5 billion over three years to modernise our electricity and natural gas networks.

26%
(UK)

28.5%
(US)

Percentage of greenhouse gas emissions attributable to the energy sector in the UK and US

Environmental sustainability

Commentary

Our world is changing as a result of human activity and its impact on the environment. The Paris Agreement sends a clear signal that the shift to a low-carbon economy is inevitable, and it is now accepted that sustainable business is good business – creating value for people, the environment and businesses. This includes reducing greenhouse gas emissions, managing non-renewable resources, and preserving and protecting habitats and ecosystems.

2017/18 developments	Our response
UK During 2017, the UK saw a number of records broken for renewable energy – including the first day when wind, nuclear and solar generated more power than gas and coal. The UK Government published 'A Green Future: Our 25-year Plan to Improve the Environment', setting out the UK's long-term approach to protecting and enhancing the natural environment. In July 2017, the Government announced a ban on the sale of new petrol and diesel cars from 2040. **US** In June 2017, President Trump announced that the country would cease all participation in the 2015 Paris Agreement on climate change mitigation, triggering a three-year exit process. However, state renewable energy support eclipses many federal policies. State regulators continue to support energy innovation projects through programmes such as New York State's 'Reforming the Energy Vision'.	• Reducing greenhouse gas emissions forms part of the Company's KPIs (see page 16). • Our environmental strategy, 'Our Contribution', focuses on the areas where we can make the greatest contribution. You can read more about our approach and work on page 35. • National Grid Ventures has been created to focus, in part, on investments in renewables, including utility-scale solar, wind and battery storage. • We continue to work with BEIS and Ofgem on the development of future energy systems as we respond to the shift to low-carbon energy in the UK. • We are working with customers and stakeholders in the UK to gather insights on the future role of gas in managing the transition to a low-carbon future. • Although the US pulled out of the Paris Agreement, we continue to support it and align ourselves with state and local leaders who share our climate and environmental goals.

43%
(UK)

29%
(US)

Electric vehicle fleet growth in 2017

Technology

Commentary

The energy landscape is being transformed by technologies such as renewable generation, district heating, electric vehicles and battery storage. This transformation is being driven by a range of factors: political and regulatory push, consumer pull and the rapid pace of change in digital technologies.

2017/18 developments	Our response
Demand for more sustainable energy is accelerating the pace of change within the energy industry. Faster-than-expected price reductions for key technologies have boosted the speed of developments in areas such as solar energy, energy storage, electric vehicles and distributed generation. Battery pack prices have fallen 24% since 2016, electric vehicle growth has continued apace in both the UK and US, and UK small scale solar is expected to double by 2025. Digitisation of energy networks from generators to households is further changing how people engage with energy. We face the challenge of adapting our networks to meet new demands, and making sure we act on the opportunities that will benefit our customers and other stakeholders.	• We created a Group technology and innovation team to develop our new technology strategy, to monitor disruptive technology and business model trends, and to act as a bridge for emerging technology into the core regulated businesses and business development teams. We are also involved in early-stage energy technology venture investments. • National Grid Ventures, established in April 2017, focuses on business development, technology and innovation. • We are taking advantage of the latest technological innovations to improve our performance. For example, we are using robotics for gas pipeline inspection, improving asset health and lowering costs.

The impact of Brexit

We believe UK-EU cooperation on energy is positive for UK and EU consumers in terms of energy security, affordability and decarbonisation.

We continue to keep the implications of Brexit under review, especially regarding our access to energy markets and the impacts on interconnectors' revenues and costs. Our interconnector partners share a financial interest in the ownership and profits from their operation. For the past 12 months, we have been assessing these issues and have devised scenarios to cover the majority of likely outcomes. Based on the worst case scenario ('no deal' on free trade), we have determined that the risk of increased costs of tariffs and any possibility that our partners might be compelled to 'switch off' the interconnectors is low.

Throughout the year, we have been engaging with our customers and stakeholders, especially with our regulators, as we seek to inform them of the Brexit outcome we believe would be in the best interests of consumers.

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 – and to continue doing so as the energy landscape changes. The table below sets out our focus for the key relationships that will help us Bring Energy to Life and deliver the energy networks of the future.

Our stakeholders	Who they are and why they are important	How we are creating value over the long term	Where you can read more
Our customers	Our customers are the users of our products and services. In the UK, our key customers are electricity and gas distributors and generators. In the US, we have more than seven million retail bill payers.	Our customers want energy that is delivered safely, reliably, sustainably and affordably. **Targeted outcome:** Creating or adapting infrastructure to provide ready access to clean energy, through smart grids and evolving our networks to reflect changing patterns of demand and supply over time.	Progress against our strategy, Principal operations
The communities we work in	Our operations affect communities where we work and live. Being a responsible and sustainable business is fundamental to the way we work.	By integrating sustainability into our decision-making, we value the needs of communities. **Targeted outcome:** Preserving natural resources and respecting the interests of our communities.	Our commitment to being a responsible business
Our regulators	In the UK, Ofgem regulates our electricity and gas businesses and transmission businesses. In the US, our retail activities are regulated by state utility commissions. Our wholesale activities (including energy generation and interstate transmission) are regulated by the Federal Energy Regulatory Commission (FERC).	We are heavily engaged with our regulators in debates guiding future energy policy direction. **Targeted outcome:** Frameworks within which we can meet the changing energy needs of the communities we serve. Incentives for innovation and performance.	Business environment, Principal operations
Our suppliers	Our suppliers provide us with the goods and services we rely on to deliver for our customers. They range from substantial multinational companies to small-scale local businesses providing bespoke services when they are needed.	We are committed to long-term, sustainable and fair working practices with our suppliers, who must work to our Supplier Code of Conduct. **Targeted outcome:** Development of stronger, long-term relationships critical for the delivery of future projects.	Our commitment to being a responsible business
Our people	Our business is built by our people. At 31 March 2018, we had more than 22,000 employees.	We work to make sure we keep our people as safe as possible. We train them to deliver to the best of their abilities and strive to maintain high levels of engagement. In the UK and US, we have inclusion and diversity policies, as well as statistical information, that demonstrate our commitment to providing an inclusive, equal and fair working environment. **Targeted outcome:** Access to and retention of a high-performing workforce with the capabilities we need, delivering innovation.	Our commitment to being a responsible business
Our investors	Equity investors: We earn financial returns in accordance with our regulatory contracts in the UK and US. These contracts incentivise us to invest in long-term sustainable infrastructure in an efficient and cost-conscious way. Debt investors: Our debt investors provide capital in the form of loans and bonds, allowing us to optimise the way in which we finance our investment.	Our investors desire long-term, sustainable growth. **Targeted outcome:** Annual asset growth in the range of 5-7%. Dividend per share growth at least in line with the rate of UK RPI growth each year for the foreseeable future. Balance sheet strength reflected in strong credit metrics.	Financial review

£60m

Potential savings over 20 years, helping minimise household energy bills

2,145

Tonnes potential CO_2 equivalent savings each year, helping reduce our impact on the environment

1st

Winner of the Innovation Project Award at the 2017 Institution of Gas Engineers and Managers Gas Industry Awards

A world first in the pipeline

A robot will revolutionise how we maintain our underground high-pressure gas pipes, while adding value by saving money and reducing our impact on the environment, as Project Lead Dave Hardman explains.

Our high-pressure gas pipes help bring gas to 23.4 million UK homes. It's vital we keep all 4,760 miles (7,660 kilometres) in good condition, which is hard when they're buried underground. But we're going to change how we check them, using a pioneering robot being developed with the help of £5.7 million of funding from Ofgem, through its Network Innovation Competition.

Currently, the only way we can check our site pipework is by digging. We choose these locations based on what we know about their age, and when they were last repaired. Sometimes there's repair work to do, but not always. The Gas Robotic Agile Inspection Device (GRAID) will give us the inside story on the state of the pipes, taking away the guesswork. And that means better value for our repair budget. Once GRAID starts work in late 2018, it could save around £60 million over 20 years. Crucially, such savings help minimise household energy bills. And the carbon emissions we'll cut are equivalent to the amount 477 homes would use in a year.

It'll need to be tough. Natural gas acts like a liquid at high pressure. It creates five times the force a submarine faces underwater. To overcome this challenge, the robot's twin chassis design stabilises it while magnetic tracks make it cling to the pipes. An engineer will drive GRAID from the surface, making it stop, reverse and zoom in on sections of pipe, measuring thickness and looking for corrosion.

We're sharing the story with our industry and beyond, including rail infrastructure.

Pictures shown above
GRAID robot developed for use in high-pressure underground gas pipelines.

Chairman's statement

"We remain on course to deliver long-term sustainable growth."

Dividend policy

Our dividend policy aims to grow the ordinary dividend per share at least in line with the rate of UK RPI growth each year for the foreseeable future. Accordingly, the Board has recommended an increase in the final dividend to 30.44 pence per ordinary share ($2.0606 per American Depositary Share). If approved, this will bring the full year dividend to 45.93 pence per share ($3.0775 per American Depositary Share), an increase of 3.75% over the 44.27 pence per ordinary share in respect of the financial year ended 31 March 2017.

See note 8 on page 124 for more information on dividends.

Annual General Meeting 2018

The 2018 AGM will be held at 11:30am on 30 July 2018 at the ICC, Birmingham.

In focus

Responsible business
www.nationalgrid.com/group/responsibility-and-sustainability

Our KPIs
pages 14-17

In 2017/18 National Grid performed well, both financially and operationally as a Group, and strategically in evolving our regulated US businesses towards achieving higher growth and better returns.

While the UK continues to be the larger contributor to overall operating profit following the 2017 sale of a 61% stake in our UK Gas Distribution business, the shape and dynamics of the overall business are changing. Our operations in the US are larger than our operations in the UK in terms of employee numbers, and the US also now offers stronger growth prospects over the medium term. The UK continues to be the larger contributor in terms of operating profit.

We continue to be mindful of the large-scale change that is affecting the energy sector and are working hard to ensure our strategy and business model adapt accordingly.

Share price

I am very conscious that the decline in our Total Shareholder Return of 18.9% this financial year has been disappointing because of the decline in the share price over 2017/18 as a whole. Our share price performance was driven by a combination of factors, including rises in bond yields and negative sentiment around political and regulatory uncertainty in the UK. However, for the vast majority of our 3.6 billion shares in issue, we enjoy a long-term, stable and supportive shareholder base.

Throughout the year, we worked hard to engage with investors and to communicate clearly that National Grid remains on course to continue delivering long-term, sustainable growth.

Strategy

It is the Board's role to set the strategic direction of the Company and to scrutinise management's performance in terms of delivering the strategy. This year, the Board was pleased with the continued delivery of the core regulated businesses in the UK, the progress of our strategy to improve the returns and growth opportunities in our US regulated businesses, and the progress made in the development of our interconnectors business.

Culture

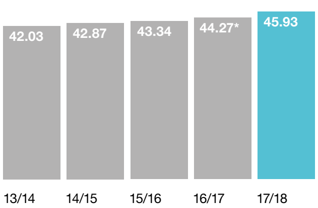
In 2017/18, the Board started to implement the recommendations of the Board effectiveness review we undertook the previous year, several of which touched upon culture. The National Grid Board sees one of its key roles as being to exemplify the Company's values of 'do the right thing' and 'find a better way'. We have continued this year to enhance the Board's leadership role in development of the Company's culture.

Enhanced transparency

In light of recent events such as the collapse of Carillion, we believe it is even more important we provide investors with enhanced transparency in respect of our assets and liabilities, a part of which is discharging our responsibility to make the Annual Report and Accounts fair, balanced and understandable.

Some of the technicalities of International Financial Reporting Standards (IFRS) make reporting of performance challenging for regulated utilities like National Grid, so we are providing additional information on page 23 to help inform investors about significant assets and liabilities that do not form part of the audited accounts.

Full year dividend (pence per share)



* excludes the special dividend of 84.375p.

Final dividend of

30.44p/share

expected to be paid on
15 August 2018

In order to present a more comprehensive picture of our results and financial position, throughout this report we have used a number of non-IFRS and regulatory performance measures. Some of these measures form part of the incentive arrangements for our Executive Directors.

UK political environment
In 2017/18, National Grid was involved in discussions with the UK Government on energy issues related to Brexit, in particular the importance of remaining within the European Internal Energy Market (IEM) after March 2019. Currently, the UK and the EU share 4GW of electricity through interconnectors, including 1GW of electricity interconnection with Ireland. We believe ensuring access to European energy markets remains tariff-free post-Brexit is in the best interests of energy users in the UK and throughout Europe.

As a result of the Labour Party manifesto for the 2017 general election, we have given serious consideration to the prospect of renationalisation of National Grid should the Labour Party win the next UK general election.

The Board believes that since privatisation in 1990, National Grid has created and driven value for customers, society and investors in many ways, including:
- Over the past decade alone, we have invested over £13 billion into required network modernisation in England and Wales, and we plan to continue to invest more than a billion pounds every year.
- According to Ofgem, the cost of transporting electricity through Britain's energy network has fallen by 17% relative to the retail price index since the mid 1990s.
- Our own research shows that since privatisation National Grid has created at least £12 billion of benefits for consumers, exceeding the benefits created for shareholders by more than 65%.

We plan to increase our advocacy of these and other benefits of privatisation over the coming months.

US Tax Reform
In December 2017, the US enacted significant tax reform which included the reduction of the corporate tax rate from 35% to 21%. The change in tax law holds significant benefits for our customers by reducing the costs we pass on to them for our services, while being economically neutral for National Grid over the long-term. We are continuing to work with each of our regulators in the US to finalise how the Tax Reform should be included in customer rates.

Environmental sustainability
Our environmental sustainability performance was strong in 2017/18. Highlights included being significantly ahead of our target of reducing greenhouse gas emissions by 45% compared to 1990 a year ahead of schedule (we have achieved a 65% reduction to date) and being named on the Carbon Disclosure Project's 'A' list of companies, which puts us in the top 5% of global participants in terms of carbon disclosure and performance.

Special dividend
I was pleased in 2017/18 that we were able to return money to investors following the sale of 61% of our UK Gas Distribution business. In total, we returned some £4 billion to investors through a special dividend of 84.375 pence per share on 2 June 2017, and an £835 million share buy-back programme, which was completed in January 2018.

Awards
In 2017/18, National Grid won UK Business in the Community's Award for Environmental Leadership in recognition of our work to reduce our carbon footprint during construction. We also won Business in the Community's award for Outstanding Employment after impressing judges with the quality of our apprentice opportunities and other initiatives to employ young people. In the US, our Massachusetts business was named one of the most energy efficient utilities in America by the American Council for an Energy-Efficient Economy.

Board changes
I would like on behalf of the Board to thank our departing Finance Director Andrew Bonfield for the significant contribution he has made to National Grid over the last eight years and to wish him every success for the future.

Pierre Dufour has decided that due to ill health he will not be seeking re-election at the forthcoming AGM. I would like to thank him for his contribution and wish him all the very best in the future.

The Board was delighted to appoint Amanda Mesler as an independent Non-executive Director with effect from 17 May 2018. Amanda has more than 25 years of extensive international leadership and general management experience at CEO and Board level. She brings a wealth of experience in different sectors to National Grid's Board, in particular in the area of the application of technology.

Ruth Kelly stepped down from the National Grid Board in July 2017 and I would like to thank her for the significant contribution she made both to the Board and to the various Committees with which she was involved.

Thank you
On behalf of the Board I would like to say thank you to all National Grid employees for their hard work and commitment, without which the achievements of 2017/18 would not have been possible.

Sir Peter Gershon
Chairman

Chief Executive's review

Performance highlights

57.9p/share
Value Added
(2016/17: 51.6p/share)

6%
Asset growth
(2016/17: 5%)

12.3%
Group Return on Equity (RoE)
(2016/17: 11.7%)

77%
Employee engagement index
(2016/17: 77%)

In 2017/18 National Grid made significant progress in the execution of our strategic priorities.

In both the US and the UK, we demonstrated we not only recognise the imperative to change with the times, but that we also possess the willingness and expertise necessary to drive our industry forward.

Over the course of the year, we delivered a number of important projects that aligned with our strategic priorities of growing the business, optimising operational performance and ensuring the Company is positioned to thrive in the future.

Our overall financial performance was good. Our statutory operating profit grew 9% and underlying operating profit on a constant currency basis grew 6% to £3.5 billion.

Our Group Return on Equity (RoE) was 12.3%, up from 11.7% the previous year, and Value Added was £2 billion, equivalent to 57.9 pence per share.

We invested £4.3 billion into the business, growing our asset base by 6%.

We also performed well against the other key metrics by which we benchmark our progress.

In terms of safety, our employee lost time injury frequency rate was 0.10, which is consistent with world class safety performance, evidence of our continued total commitment to ensuring no one is harmed as a result of our operations.

Moreover, in both the US and the UK, we continued to achieve close to 100% reliability across our networks.

Performance highlights

In both the US and the UK, in 2017/18 we worked hard to create real value for customers and shareholders, and to implement cutting edge innovation.

US

In the US, we enjoyed a good year, characterised by strong growth. We invested a record $3.3 billion into infrastructure and we increased Return on Equity to 8.9%, from 8.2% the previous year.

In line with our strategic priority of growing the business, we filed for updated rate allowances with regulators in key jurisdictions. These allowances dictate the rates we can charge for the services we provide to customers. We filed new rate cases for gas distribution in Massachusetts and for electricity and gas distribution in Rhode Island (page 189).

We also reached agreement with regulators for our Niagara Mohawk rate filing in upstate New York, the first time our rates there had been fully reviewed in five years.

The successful Niagara Mohawk filing means we are now able to push ahead with infrastructure projects worth some $2.5 billion over the next three years. These projects will significantly enhance reliability of gas and electricity supplies for homes and businesses across upstate New York.

Other US operational highlights in 2017/18 included the completion and energisation of the first phase of our new $70 million South Street Substation in Providence, Rhode Island, and the commencement of our Metropolitan Natural Gas Reliability Project to upgrade existing gas distribution infrastructure in Brooklyn.

Additionally, we launched a customer experience transformation programme to improve the way we interact with customers at a number of key touch points, from responding to telephone enquiries to processing payments and setting up new connections.

We also created a single capital delivery function to manage construction of all future major projects for the US electricity, gas and transmission businesses. We anticipate the new capital delivery function will achieve significant savings by leveraging efficiencies of scale in all areas of construction and project management.

In 2017 we also successfully launched our Gas Enablement Programme in Rhode Island to optimise the operational performance of our gas business through modernisation of all aspects of our work, from asset management to customer service. The programme will now be rolled out across all US geographies in which we operate, as we expect it to deliver significant benefits for customers.

UK

In the UK, we faced new political and regulatory pressures, notably on issues such as affordability and renationalisation, as Sir Peter mentioned on page 9. In response to these pressures, we worked hard throughout the year to communicate the many ways in which we create and drive value for customers and society.

The speed of progress occurring in our industry was starkly highlighted on 21 April 2017, when Britain had its first working day free of coal power generation since the Industrial Revolution.

Highlights of 2017/18 for National Grid in the UK included the start of work to create a legally separate company for the electricity System Operator and the creation of significant value for consumers through the completion of several other landmark projects that showcased our ability to deliver world-class efficiency and innovation.

For example, in February 2018, I was honoured to welcome HRH The Prince of Wales and HRH the Duchess of Cornwall to the opening of the ambitious, billion-pound London Power Tunnels project. Completed on time and under budget, the London Power Tunnels, which include new substations in Highbury and Kensal Green, are the most significant investment into the UK capital's electricity transmission system since the 1960s.

We also continued to invest in innovation throughout 2017/18, notably in the use of cutting-edge robotics for underground pipe inspections (page 7). Additionally, we developed far-reaching plans to establish a strategic rapid charging network across the UK's motorway system in order to facilitate the coming electric vehicle revolution (page 29).

Over the course of the year, mindful of the fact we operate within an evolving regulatory environment, we also began preparing for a new regulatory framework (RIIO-T2), which will come into effect when the current one expires in March 2021.

To this end, we responded to Ofgem's Framework Consultation, which aims to establish the wider methodology of RIIO-T2, and we also engaged customers and other interested parties to discover their objectives from the new period of regulation.

In January 2018, I was disappointed by Ofgem's initial response to our proposal with regard to connecting Hinkley Seabank (HSB) to the electricity network. Ofgem's response indicated the regulator is considering ways in which to keep returns on investment below a level commensurate with the risk we attach to the project. We believe this proposal would not be in the best interests of consumers or the wider energy sector as it seeks investment in the future, and we will continue to work with Ofgem in the hope of finding a way forward.

Exploring new opportunities

In April 2017, we established National Grid Ventures to explore growth opportunities in some of the most exciting areas of our industry, including solar, battery storage and interconnectors.

National Grid Ventures is managing the £1.3 billion construction of three interconnectors from the UK to Belgium, Norway and France, and is also studying the commercial viability of a fourth to Denmark.

Additionally, National Grid Ventures is leading National Grid's work to establish partnerships with market leaders in renewable energy, for example our partnership with Tesla on a large-scale battery storage project on the island of Nantucket in the US.

National Grid Ventures also launched a Technology and Innovation team to explore opportunities to proactively drive value and growth through early stage adoption of cutting edge technologies.

You can read about the exciting work National Grid Ventures is doing on page 32.

People

National Grid is committed to doing everything we can to ensure all members of staff work in an environment in which they feel secure and are able to thrive. In 2017/18, in light of widespread news coverage of sexual harassment in a range of industries, we undertook a fundamental review of our policies on sexual harassment and bullying to ensure they are fit for purpose.

We also worked hard throughout the year to promote careers that STEM subjects can unlock. As one of the world's leading engineering companies, we are fortunate to be able to help young people from a diverse range of backgrounds kick-start rewarding careers, through apprenticeships or other forms of professional training. In 2017/18, for example, I was delighted we were able to enrol 369 people into professional training schemes in the US and the UK.

Bring Energy to Life

During the year I was pleased with the progress we made in raising awareness within the business of our Purpose, which is to Bring Energy to Life, our Values, which are to find a better way and to do the right thing, and our Vision, which is to exceed the expectations of the people we serve and to make possible the energy systems of tomorrow.

I believe our purpose, vision and values are powerful tools with which to build trust by demonstrating our commitment to the societies we serve is genuine, not only through provision of our traditional services, but also by championing the kind of change that facilitates progress and meaningfully improves lives.

Looking ahead

Over the coming year, while continuing to work to improve our safety culture, we will also focus on improving our core competencies in terms of operational and customer performance.

In line with our regulatory strategy, we will work hard to make sure the outcomes of our rate filings in the US continue to be successful and that our dialogue with Ofgem in the UK ahead of RIIO-T2 is effective. We will also seek to recruit and develop talented people throughout the business to help us deliver our strategy and vision.

As we grow the business, we will embrace opportunities to evolve as a purpose-led organisation, while also continuing to play a leadership role within our industry, particularly in the area of energy transformation.

We will also develop both National Grid Ventures and our existing expertise in increasingly important areas, such as digital technologies, data analytics and artificial intelligence.

Thank you

I was really proud during the year to be part of an organisation, that worked so hard on so many fronts – improving the quality of life of millions of people by providing vital services in an ever more effective way.

National Grid faces many challenges, but our performance during the year showcased the collective spirit I believe will ensure we go on delivering sustained value for our stakeholders and for wider society.

Thank you to everyone who worked hard for National Grid in 2017/18.

J. Pettigrew

John Pettigrew
Chief Executive

Our purpose, vision, values and strategy

To make sure National Grid is well positioned to respond to changes in our business environment and within the energy industry, we continue to adhere to and promote our purpose, vision, values and strategy.

Our purpose

'Bring Energy to Life'.

Our vision

'We will exceed the expectations of our customers, shareholders and communities today and make possible the energy systems of tomorrow'.

Our values

'Every day we do the right thing and find a better way'.

Our strategy

'We have three strategic priorities for our business that will help us achieve our vision: find new ways of optimising our operational performance, look for opportunities to grow our core business, and make sure National Grid is better equipped for the future'.

Our purpose

Having a clear sense of what we stand for as a company and what it is that binds us all together is vitally important. This is what we call our purpose. In simple terms it's what drives our desire to serve our customers and makes us proud about the work we do.

Essentially, 'Bring Energy to Life' means getting the heat, light and power that customers rely on to their homes and businesses. But 'Life' also means supporting the communities that we are a part of and live among to support the economic growth and sustainability of wider society.

Our vision

Our vision describes how we create value – not just today, but in the future too.

The needs of our customers, shareholders and communities are at the heart of everything we do. So, our vision statement clearly describes the ambitious challenge we have set ourselves – to make sure we deliver value for them every day.

Our vision also looks to the future, reminding us of the critical role we will play for future generations. We continue to see changes in our energy system as more renewable and decentralised generation is introduced. To be relevant in this future, we have to play an active role in helping shape the energy landscape, and benefiting from what it provides.

Our values

We know that how we deliver is as important as what we deliver. If our purpose is the 'why', our values are the 'how'. They help shape our spirit, attitude and what guides us. We have to adapt and develop our values to align with the expectations of our customers and communities, without losing sight of the things that make us strong today.

Our values build on and protect our strong foundations while looking to the future. They are aligned to our purpose and help our people understand how we expect to achieve our purpose and vision for our customers and each other.

'Do the right thing' pulls together our foundational values – keeping each other and the public safe; complying with all the relevant rules, regulations and policies; respecting our colleagues, customers and communities; and saying what we think and challenging constructively. 'Find a better way' challenges us to focus on performance and continuous improvement for our customers, our shareholders and communities.

Finding a better way to connect gas

It currently takes around three years and £2 million to connect new gas customers to the National Transmission System (NTS). For smaller connections, we're working to halve the cost, and reduce the time to under one year through Project CLoCC (Customer Low Cost Connections).

We will deliver these savings in three main ways. Firstly, we're developing an online gas connections portal to replace the current paper-based process. Customers will be able to generate indicative quotes within seconds, and will benefit from greater transparency on the status of their applications which they will be able to track from start to finish.

Secondly, we've developed a suite of pre-approved and pre-appraised standardised connection designs, ready to order off the shelf. This will save our customers significant time and money.

Finally, we're looking at ways to optimise commercial arrangements through changes to relevant gas regime governance. An example of this is the work we have done towards removing the absolute requirement for every new NTS exit connection to include a remotely operable valve (ROV) installation. This governance change, which became effective in January 2018, will reduce costs for customers.

The project is running under budget and on schedule to complete later in 2018.

Our strategy

We are focused on three strategic priorities for our business, which will set the foundations for our future success. These are described below.

	1. Find new ways of optimising our operational performance	2. Look for opportunities to grow our core business	3. Make sure National Grid is better equipped for the future
Why it's important	Our customers want and need us to be more efficient, so we must find ways to improve how we run our business.	To make possible the energy systems of tomorrow requires investment in our core and many areas close to our core.	We need to future-proof our business against the effects of a changing energy landscape. The operation of our networks is already affected by changes to the generation mix, while the needs and expectations of our customers are evolving.
What this means	We have looked at enhancing our productivity and customer experience through more efficient and customer-focused processes. Finding new ways of optimising our operational performance will be an important factor in our ability to compete and grow. It creates the financial capacity and the capability for us to future-proof our business.	We continue to pursue business development opportunities that are close to our core business. In the US, we are pursuing opportunities in electricity and gas transmission. In the UK, interconnectors will continue to be our focus over the next decade.	National Grid Ventures was established in April 2017. National Grid Ventures is tasked with creating value and gathering knowledge through investment in adjacent businesses, including utility-scale projects, distributed energy opportunities and the development of new and evolving technologies.
Associated principal risks to achieving our priorities	Operational: safety or environmental event; cyber security breach; failure to predict and respond to significant disruption of energy; failure to adequately manage data.	Strategic and regulatory: failure to secure satisfactory regulatory agreements; failure to deliver our proposition due to political and economic uncertainty; failure to adequately anticipate and minimise the adverse impact from disruptive forces on our business model.	
	People: failure to build sufficient capability and leadership capacity required to deliver our vision and strategy.		
How we measure ourselves	• Safety performance • Customer satisfaction scores*** • Network reliability*** • Group RoE • Greenhouse gas emissions reduction	• Regulated asset base growth • Capital investment	• Innovation investment
	The metrics below underpin all our strategic priorities: contribution of our corporate responsibility work; skills and capabilities; employee engagement; workforce diversity; adjusted EPS; Value Added		

Performance in 2017/18**

0.10 Employee lost time injuries per 100,000 hours worked in a 12-month period (2016/17: 0.10)	**6%** Asset growth (2016/17: 5%)	**59.5** Adjusted EPS (2016/17: 56.9)	**£73m** Contribution of our corporate responsibility work (2016/17: £9m)
12.3% Group RoE (2016/17: 11.7%)	**7.7m** Tonnes of CO_2 equivalent (2016/17: 9.1m)	**£4,251m** Capital investment (2016/17: £3,862m)*	**35,425** Interactions with young people on STEM subjects (2016/17: 29.6k)
57.9 p/share Value Added (2016/17: 51.6p/share)	**77%** Employee engagement index (2016/17: 77%)	**24.6%** Women in workforce (2016/17: 24.1%)	**17.9%** Ethnic minority in workforce (2016/17: 17.3%)

* Includes investments in joint ventures and associates (excluding St. William).
** For reconciliations between statutory and non-IFRS performance measures see pages 206-214.
*** Customer satisfaction and network reliability are not measured at a Group level. See pages 14-17 for the business segment performance.

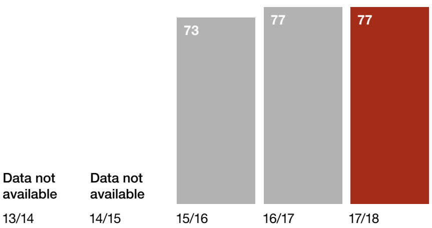
Progress against our strategy

The Board uses a range of financial and non-financial metrics, reported periodically, against which we measure Group performance. These metrics are aligned to our three strategic priorities. In addition there are a number of metrics that underpin all our strategic priorities.

Metrics that underpin all three strategic priorities

Employee engagement index
This is a measure of how engaged our employees feel, based on the percentage of favourable responses to certain indicator questions repeated annually in our employee engagement survey.

Employee engagement index (%)

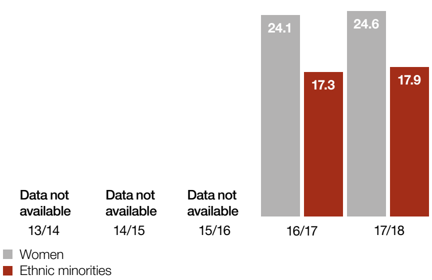


We measure employee engagement through our employee engagement survey. The results of our 2017/18 survey, which was completed by 87% of our employees, have helped us identify specific areas where we are performing well and those areas we need to improve.

This year's employee engagement score was 77%.

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 37).

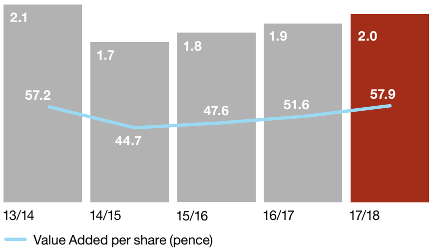
Workforce diversity (%)



During 2017/18, we continued to increase the diversity of our workforce and saw an increase over the last 12 months of female and minority groups: from 24.1% to 24.6% females (+0.5% increase) and from 17.3% to 17.9% minorities (+0.6% increase). The two years' worth of data we are showing does not include our UK Gas Distribution workforce. Data prior to 2016/17 would include this data and is no longer being shown on the graph.

Value Added
Reflects value to shareholders of dividend and growth in National Grid's assets, net of the growth in overall debt.

Value Added (£bn)

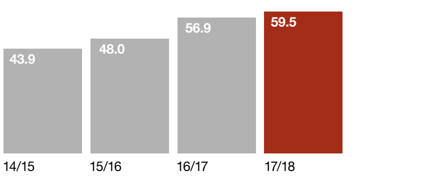


While we have no specific target, our overall aim is to grow Value Added sustainably over the long term, while maintaining our performance for our other financial KPIs. Value Added in the year of £2.0 billion or 57.9 pence per share was higher than 2016/17 (£1.9 billion or 51.6 pence per share), primarily as a result of higher RPI inflation on UK regulated assets (March 2018 RPI of 3.3%, prior year 3.1%) and improved US performance. Of the £2.0 billion Value Added in 2017/18, £1.3 billion was paid to shareholders as cash dividends and £0.2 billion as share repurchases, with £0.5 billion retained in the business.

A target for Value Growth, a derivative of Value Added, is included in the incentive mechanisms for executive remuneration within the Long Term Performance Plan (LTPP). You can find more information in our Directors' Remuneration Report on pages 63-79.

Adjusted EPS
Adjusted earnings represents profit for the year attributable to equity shareholders. This excludes exceptional items and remeasurements (see page 123). Adjusted EPS provides a measure of shareholder return that is comparable over time.

Adjusted EPS from continuing operations (pence)



For the year ended 31 March 2018, adjusted EPS increased by 2.6 pence to 59.5 pence, reflecting a lower number of shares following the return of capital, increased revenue and a 39% share of Cadent profits, partly offset by increased costs, including the impact of major US storms.

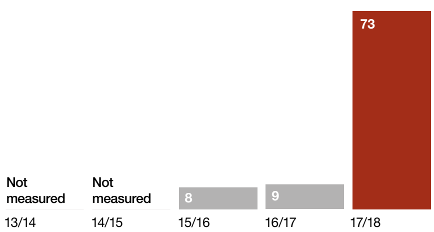
A target for adjusted EPS is included in the incentive mechanisms for certain Executive Directors' remuneration within the Annual Performance Plan (APP). You can find more information in our Directors' Remuneration Report on pages 63-79.

See page 206-214 for reconciliations to our statutory measures.

Contribution of our corporate responsibility work
Working with our communities is important in creating shared value for us as a business, the people we serve and the communities where we work.

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 make sure we are creating shared value through our social purpose activities.

Contribution of our corporate responsibility work (£m)



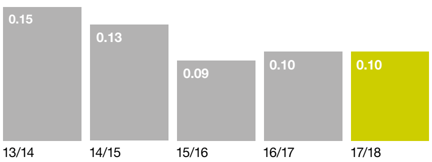
In the UK the overall contribution of our corporate responsibility work was valued at just over £66 million. This is a significant increase on last year due to the donations we have been making through the Warm Homes Fund. In the US, our contribution was just under £7 million. This gives a combined Group-wide contribution of just over £73 million.

Find new ways of optimising our operational performance

How we assess progress:

Employee lost time injury frequency rate
This is the number of employee lost time injuries per 100,000 hours worked in a 12-month period (including fatalities). Our lost time injury frequency rate for the Group has been 0.10 or lower throughout the year, which is consistent with world-class safety performance. The below data does not include UK Gas Distribution employees.

Employee lost time injury frequency rate
(per 100,000 hours worked)



Customer satisfaction
The table below summarises how we measure customer satisfaction and shows our targets for each business area.

Customer satisfaction

	Methodology	Measure
UK	RIIO-related metrics agreed with Ofgem	Score from surveys
US	Customer Trust Advice metric	Score from survey
NGV	Net Promoter Score (NPS)[1]	Score from survey

	16/17	17/18	Target
UK Electricity Transmission	7.4	7.7	6.9[2]
UK Gas Transmission	8.0	7.6	6.9[2]
US – Residential[3]	60.7%	56.6%	57.4%
NGV	–	+34	–

1. NPS is a commonly used tool to measure customer experience. It is an index ranging from -100 to +100.
2. Figures represent our baseline targets set by Ofgem for reward or penalty under RIIO (maximum score is 10).
3. Our US customer satisfaction methodology is the Customer Trust Advice survey metric. The survey specifically focuses on the services we provide for our customers and represents their views of us.

Our customer satisfaction KPI comprises Ofgem's UK electricity and gas transmission customer satisfaction scores, the US residential Customer Trust Advice survey metric and National Grid Ventures's Net Promoter Score metric. This year our UK Gas Transmission score was 0.4 points lower than last year.

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, fell below target primarily due to higher customer bills and storm-related outages.

NPS measures the willingness of customers to recommend National Grid to others and is a measure of their loyalty. This is the first year we have reported a customer satisfaction score for National Grid Ventures. The score i s the average across National Grid Metering Domestic, National Grid Metering I&C (Industrial & Commercial), Grain (LNG Primary Shippers, LNG Road Tanker Operators) and Interconnectors. We currently do not have a target score.

We are also measuring NPS in the core UK business to understand our customers' views and to introduce a benchmark measure. We will comment more on this next year.

Network reliability
Network reliability is measured separately for each of our business areas. The table below represents our performance across all our networks. Our targets are set out in the table for our UK networks, and are set individually for each of our US jurisdictions.

Network reliability

		Target or base %	16/17 %	17/18 %	Performance against target
UK Electricity Transmission	T	99.9999	99.999964	99.999984	exceeded
UK Gas Transmission	T	100	99.97500	99.996151	not achieved
US Electricity Transmission	B	99.9	99.97	99.953	no target
US Electricity Distribution	B	99.9	99.994	99.995	no target

Key:
T – Target
B – No target set, as set individually by each jurisdiction. Accordingly, we set a base and report performance above the base.

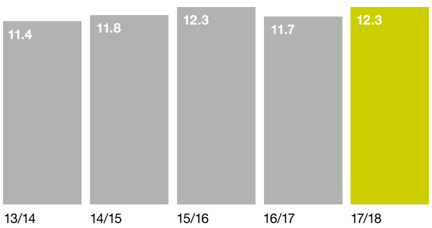
Find new ways of optimising our operational performance continued

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 have not met our targets for UK Gas Transmission. UK Gas Transmission missed its target as there was cessation to the flow at one supply point on the NTS on a small number of occasions. You can find more information about our UK principal operations on pages 28-29, and our US principal operations on pages 30-31.

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

Group RoE (%)

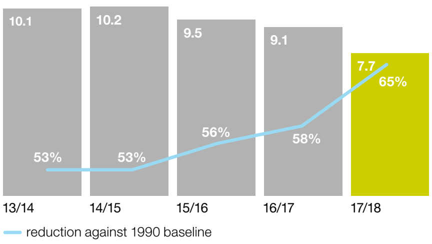


Group RoE increased during the year to 12.3%, from 11.7% in 2016/17. The UK regulated businesses delivered a solid operational return of 12.1% in aggregate (2016/17: 13.1%), including an assumption of 3% long-run average RPI inflation. The US operational return of 8.9% was up on last year's 8.2%, as the US business delivered a 20% increase in underlying operating profit (at constant currency), reflecting increased revenues from new rate plans in MECO, KEDNY and KEDLI.

A target for Group RoE is included in the incentive mechanisms for certain Executive Directors' remuneration within both the APP and the Long Term Performance Plan LTPP. You can find more information in our Directors' remuneration on pages 63-79.

Climate change
This is a measure of our reduction of Scope 1 and Scope 2 greenhouse gas emissions of the six primary Kyoto greenhouse gases. Our target is to reduce our greenhouse gas emissions by 45% by 2020, 70% by 2030, and 80% by 2050, compared with our 1990 emissions of 21.6 million tonnes.

Greenhouse gas emissions (Scope 1 and 2 (million tonnes of carbon dioxide equivalent))



Our Scope 1 greenhouse gas emissions for 2017/18 equate to 4.8 million tonnes of carbon dioxide equivalent (2016/17: 5.8 million tonnes) and our Scope 2 emissions (including electricity line losses) equate to 2.9 million tonnes (2016/17: 3.4 million tonnes); combined this is a 65% reduction against our 1990 baseline. These figures now include line losses, but exclude UK Gas Distribution. These are equivalent to an intensity of around 505 tonnes per £1 million of revenue (2016/17: 424).

Our Scope 3 emissions for 2017/18 were 31.9 million tonnes (2016/17: 34 million tonnes).

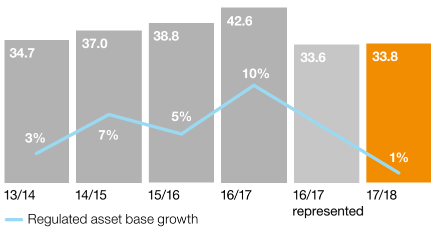
We measure and report in accordance with the World Resources Institute and World Business Council on Sustainable Development Greenhouse Gas Protocol. 100% of our Scope 1 and 2 emissions and 92% of our Scope 3 emissions are independently assured against ISO 14064-3 Greenhouse Gas assurance protocol. This statement, along with more information about our wider sustainability activities and performance can be found in the 'responsible business' section of our website www.nationalgrid.com.

Reporting disclosure of our Scope 1, 2 and 3 emissions is part of the Task Force on Climate-related Financial Disclosures (TCFD) recommendations. You can read more about TCFD on page 192.

Look for opportunities to grow our core business

How we assess progress:
Regulated asset base 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 revenue allowances in future years. It also contributes to our Group target of 5-7% asset growth each year.

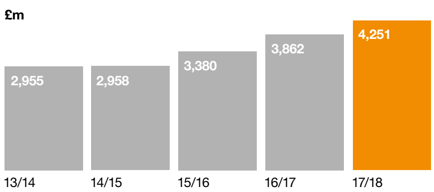
Total regulated asset base (£m) **and regulated asset base growth** (%)



In total, our UK RAV and US rate base increased by £0.2 billion (0.6%) in the year to £33.8 billion. This reflects the continued high levels of investment in our networks in both the UK and US, offset by the impact of the weaker US dollar. Excluding the impact of FX, growth was 5.7%. Following the sale of a 61% interest in the UK Gas Distribution business on 31 March 2017, the Group's total RAV and rate base for 2016/17 decreased to £33.6 billion (from £42.6 billion), as shown above.

Capital investment
'Capital investment' and 'investment' refer to additions to plant, property and equipment, and intangible assets, and contributions to joint ventures and associates, other than the St William Property Limited joint venture during the year. St William Property Limited is excluded based on the nature of this joint venture arrangement.

Capital investment (continuing operations (£m))



Capital investment increased in the year by £389 million (10%). Increased investment in our US Regulated business, higher spend on UK gas pipelines, and increased investment in our interconnector projects were partly offset by an unfavourable exchange rate impact of £145 million.

Make sure National Grid is better equipped for the future

Performance highlights

57.9p/share
Value Added
(2016/17: 51.6p/share)

6%
Growth in our total assets
(2016/17: 5%)

12.3%
Group Return on Equity (RoE)
(2016/17: 11.7%)

77%
Employee engagement index
(2016/17: 77%)

How we assess progress:

Innovation

We are in the midst of an energy revolution with the economic landscape, developments in technology, evolving business models and consumer behaviour all changing at an unprecedented rate.

We are focusing our innovation activities on four value themes:

Managing assets – looking for innovative ways to manage the life of our assets. The better we understand what affects them, the better we can maintain them at the lowest cost and least disruption to our customers.

Efficient build – finding ways to reduce the cost of building new infrastructure, such as improving the design of the network and trialling equipment that can be used more flexibly, as well as looking at ways to improve the design of the network.

Service delivery – we are exploring new ways to provide value for our customers and consumers as the energy system evolves. By understanding the present and future expectations of our customers and stakeholders, we can develop the right kind of products and services.

Corporate responsibility – we are constantly researching and developing safer working practices, including using materials with less potential to cause harm to the environment.

Investment in research and development during the year for the Group was £13 million (2016/17: £14 million; 2015/16: £19 million). On pages 204-205, you can read more about some of the innovation work we have been progressing during 2017/18.

For example, in the UK, we have signed a £40 million innovation partnership with Siemens to research and develop the use of gas-insulated lines on the electricity transmission network. Within this partnership, we also plan to develop an alternative SF_6 free insulating gas mixture that has less than 0.05% of the global warming impact of SF_6.

On Deeside, we are converting an existing substation into a trial facility to test new technologies off network. It will be the first facility in Europe where assets can be tested around the clock.

Power Potential is a £9.5 million System Operator project in collaboration with UK Power Networks. £8.0 million of the project is funded through the 2016 Network Innovation Competition (NIC). The project aims to create a regional reactive power market for distributed energy resources and generate additional capacity on the network.

Our Gas Transmission projects have included using light detection and ranging to carry out aerial inspections of our pipeline; 3D printing to allow an asset to be repaired rather than replaced; and artificial intelligence to more efficiently identify and mitigate corrosion issues across the network.

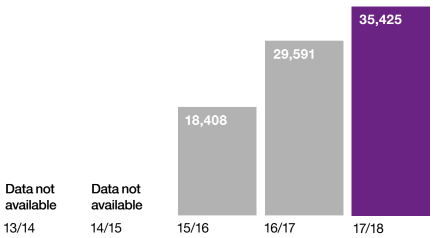
In the US, we are pre-approved to construct up to 20 MW of photovoltaic (PV) facilities in Massachusetts as part of our 'Solar Phase II' programme. These sites are designed with advanced grid interactive control features, beyond what typical PV facilities are required to provide. We are also engaged with Electric Power Research Institute (EPRI) on distributed energy resources integration, energy storage, asset management, system operations, information and communication technology, and system planning.

Lessons learned from the Worcester Smart Energy Solutions pilot in Massachusetts and the Volt VAR Optimization and Conservation Voltage Reduction pilot in Rhode Island, have helped shape larger scale grid modernisation proposals in each of our jurisdictions.

Skills and capabilities

We support developing the skills and capabilities of young people through skills-sharing employee volunteering, especially in science, technology, engineering and mathematics (STEM) subjects, because it supports our future talent recruitment and our desire to see young people gain meaningful employment. While we have no specific target, our aim is to encourage many young people to get involved in STEM subjects.

Skills and capabilities (Interactions)



We measure quality (>1 hour) interactions with young people on STEM subjects. In the UK, in 2017/18, we have had 2,699 interactions with young people on STEM subjects, and 32,726 interactions in the US. Overall we have seen a total of 35,425 interactions with young people on STEM, an increase of 5,834. The 2017/18 data excludes UK Gas Distribution. All figures prior to 2017/18 include UK Gas Distribution.

Internal control and risk management

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

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 to achieving their business objectives. Each risk is assessed by considering the financial and reputational impacts, and how likely the risk is to materialise. The business area identifies and implements actions to manage and monitor the risks. The risks and actions identified are collated in risk registers and reported at functional and regional levels of the Company quarterly. The most significant risks for the UK and US businesses are highlighted in regional risk profiles and reported to the Group Executive Committee and the Board twice a year. In addition to these reports, the Group Executive Committee and the Board may also identify and assess principal risks. These risks and any associated management actions are cascaded through the organisation as appropriate.

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 and liquidity 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 the Group-level with implementation owned by the business. Our enterprise risk management process provides a framework through which we can consistently identify, assess and prioritise, manage, monitor and report risks. The process is designed to support the delivery of our vision and strategy, described on pages 12-13.

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 of the Group's risk profile with the Executive Committee and the Board. The risks are reported and debated with the Group Executive Committee and Board every six months.

A broad range of factors are considered when determining what our principal risks should be. Brexit is not currently one of our principal risks but the implications continue to be kept under review, especially in relation to our access to energy markets and the impacts on interconnector revenues and costs. For the past 12 months, our Brexit working group has been assessing these issues and has devised scenarios to cover the likely outcomes. Based on the worst case scenario ('no deal' on free trade), we have determined that the risk of increased costs of tariffs and any possibility that our partners might be compelled to 'switch off' the interconnectors is low. Throughout the year, we have been engaged with our customers and stakeholders, especially with our regulators, as we seek to inform them of the Brexit outcome we believe would be in the best interests of consumers.

The Board has also considered the potential for renationalisation of energy supply networks by the UK Labour Party. Should the UK Labour Party come into power, the timing and routes for energy supply network renationalisation generally are currently uncertain, and therefore the impact upon National Grid plc remains unclear. Renationalisation options we have considered have included acquisition of the listed plc, the UK business, the transfer of transmission assets to 'regional communities' and regulatory change. The Government has to pay fair compensation for the Company's property which will be determined at the time, and which could be calculated in a number of different ways. We have canvassed a wide range of stakeholders including government officials, consumers and members of the public to understand the impact of renationalisation on certain stakeholder groups.

In addition to the issues above, senior leaders and the Board have also considered certain aspects of the principal risks in more detail, including cyber security, emerging technology, compliance with new General Data Protection Regulation, asset safety, US tax reform, and Ofgem's 'minded to' consultation on the delivery model for a project to connect the Hinkley Point C power station to the electricity network.

The principal risks are tested annually to establish the impact of the risks 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 the viability statement (see page 26). The Board, Executive Committee and other leadership teams discuss the results of the annual testing of our principal risks at the end of the year.

Changes during the year

This year, a reassessment of the Company's principal risks and approach to risk appetite was undertaken by the Executive Committee and the Board. The purpose of the assessment was to validate that we have identified the right risks in view of our strategy, priorities, and changing external environment, to identify potential new or emerging risks, and to develop a risk appetite framework that will aid better decision-making within the business.

The output from these workshops resulted in two new principal risks: 'Failure to predict and respond to a significant disruption of energy that adversely impacts our customers and/or the public' and 'Failure to deliver any one of our customer, investor and wider stakeholder propositions due to increased political and economic uncertainty'. One risk was removed from the list of principal risks and several have been reworded and/or consolidated to better reflect the current meaning of the risk. The principal risks are presented in the table opposite.

The workshops also resulted in changes to our risk appetite framework, including an update to the categories in view of current priorities and the determination of the risk appetite position for each risk appetite category. A system of classification of risks into categories (Operational, Strategic, Regulatory, People and Financial) has been implemented in accordance with the revised risk appetite framework. Risk categories help to distinguish the management approach to mitigation. During this coming year, we will embed the new framework within the organisation.

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 includes considering inherent risks, which 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 193-196, as well as our key financial risks, which are incorporated within note 30 to our consolidated financial statements on pages 158-164.

Operational risks

Operational risks relate to the risk of 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 and accepting the risk is not in line with our vision and values.

Our operational principal risks have a low likelihood of occurring, but have a high level of impact should the event occur without effective prevention and mitigation controls. The risk owners, executive leaders, and their teams develop and monitor actions to control the risks. Operational risks are managed through policy, standards, and procedure-based controls, active prevention and monitoring. The operational risks link to our strategic priority of 'Find new ways of optimising our operational performance'. Principal risk assessment included reasonable worst case scenario testing – i.e. gas transmission pipeline failure, loss of licence to operate, cyber security attack – and the financial and reputation impact should a single risk or multiple risks materialise. External events over this past year – the extreme weather events, the WannaCry cyber security attack, new data privacy legislation – were considered in the assessment and testing, as well as in the development of mitigation actions.

Please also refer to page 192 for the discussion of climate-related influences on risk management.

Risks

Catastrophic asset failure results in a significant safety and/or environmental event.

Risk trend: ↔

Major cyber security breach of business, operational technology and/or critical national infrastructure (CNI) systems/data.

Risk trend: ↑

Failure to predict and respond to a significant disruption of energy that adversely affects our customers and/or the public.

Risk trend: ↑

Failure to adequately identify, collect, use and keep private the physical and digital data required to support Company operations and future growth.

Risk trend: ↔

Actions taken by management

We continue to commit significant resources and financial investment to maintain the integrity and security of our assets and data. This year, we have continued to focus on risk mitigation actions designed to reduce the risk and help meet our business objectives. Monitoring action status has been incorporated into various business processes and senior leadership meetings. Examples of actions include:

- Our Group-wide process safety management system is in place to make sure a robust and consistent framework of risk management exists across our higher hazard asset portfolio.
- We have implemented 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. In support of this, we developed a capability framework to make sure our people have the appropriate skills and expertise to meet the performance requirements in these standards.
- We continually invest in strategies that are commensurate with the changing nature of the security landscape. This includes collaborative working with the Department for Business, Energy and Industrial Strategy (BEIS) and the Centre for Protection of National Infrastructure (CPNI) on key cyber risks, as well as development of an enhanced CNI security strategy; and our involvement in the US with developing the National Institute of Standards and Technology Cyberspace Security Framework.
- Business continuity and emergency plans are in place and practised to ensure we quickly and effectively respond to a variety of incidents – storms, physical and cyber-related attacks, environmental incidents and asset failures.
- We have a mature insurance strategy that uses a mix of self-insurance, captives and direct (re)insurance placements. This provides some financial protection in respect of property damage, business interruption and liability risks.

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, and 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 'look for opportunities to grow our core business' and 'make sure National Grid is better equipped for the future'. The political climate and policy decisions of our regulators this past year were key considerations in assessing our risks.

Risks

Failure to influence future energy policy and secure satisfactory regulatory agreements.

Risk trend: ↑

Failure to deliver our customer, stakeholder and investor proposition due to increased political and economic uncertainty.

Risk trend: ↑

Failure to adequately anticipate and minimise the adverse impact from disruptive forces such as technology and innovation on our business model.

Risk trend: ↔

Actions taken by management

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-T2 and US rate case filings and continuously work to foster open and effective relationships with our regulators and other stakeholders.

Processes and resources are in place to review, undertake due diligence and progress new investment opportunities, dispose of existing businesses, and identify and execute on opportunities that provide organic growth. These processes, along with twice-yearly National Grid Board strategy offsite 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 strategies, the advancement and proliferation of new energy technologies, and the performance of our Group portfolio.

We created the Group Technology and Innovation team to develop our strategy with regards to new technology, to monitor disruptive technology and business model trends, and to act as a bridge for emerging technology into the core regulated businesses and business development teams. In addition, the partnership with Energy Impact Partners was established in 2015 to gain exposure to emerging start-up companies.

The new National Grid Ventures function will further the focus on new strategies, business development and technology and innovation.

People

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. Obtaining 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

Failure to build sufficient capability and leadership capacity (including effective succession planning) required to deliver our vision and strategy.

Risk trend: ↔

Actions taken by management

Strategic workforce planning has been embedded 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 required, including the UK annual residential work experience week and the US Pipeline and Graduate Development Programmes.

The rigour of our succession planning and development planning process has been improved over the year, particularly at senior levels, and is now being applied deeper into the organisation. Our Strategic Talent Acquisition team now includes internal executive search capability and market mapping of critical roles. Ongoing attention is required in relation to the ethnic diversity of our management population. There are multiple activities under way to drive this agenda, including 'blind' talent and selection processes, development interventions and a global review of our inclusion and diversity strategy and resources.

Financial risks

While all risks have a financial liability, financial risks are those which directly 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, which are incorporated within the notes to our consolidated financial statements, are described in note 30 to our financial statements on pages 159-164.

Our internal control process

We have a number of processes to support our internal control environment. These processes are managed by dedicated specialist teams, including: risk management; ethics and compliance management; corporate audit and internal controls; and safety, environment and health. Oversight of these activities is provided through regular review and reporting to the appropriate Board committees, as described in the Corporate Governance section on pages 41-79.

Monitoring internal control is conducted through established boards and committees at different levels of the organisation. Deficiencies are reported and corrected at the appropriate entity-level. The most significant risk and internal controls issues are monitored at the Senior Executive and Board level. The Audit Committee is responsible for keeping under review and reporting to the Board on effectiveness of reporting, internal control policies, compliance with Sarbanes-Oxley, UK Bribery Act legislation, appropriateness of financial disclosures and procedures for risk and compliance management, business conduct, and internal audit. The Board is also kept informed of issues by the Group Executive Committee, sub-committees of the Board through verbal and written reports, the CEO updates, and the legal updates from the Group General Counsel and Company Secretary. 'Deep dive' sessions are conducted on significant risk issues throughout the year.

Reviewing the effectiveness of our internal control and risk management

The Board continually monitors and assesses the effectiveness of our internal control systems and risk management processes covering all material systems, including financial, operational and compliance controls, to make sure they remain robust. The latest review covered the financial year to 31 March 2018 and the period to the approval of this Annual Report and Accounts. In this review, the Board considered the effectiveness of areas such as the control environment, risk management and internal control activities, including those described below. It noted that no material weaknesses had been identified by the review and confirmed that it was satisfied the systems and processes were functioning effectively.

Fostering a culture of integrity is an important element of our risk management and internal controls system. National Grid's values: 'do the right thing' and 'find a better way' provide a framework for reporting business conduct issues, educating employees and promoting a culture of integrity at all levels of the business. We have policies and procedures in place to communicate behaviour expected from employees and third parties, and to prevent and investigate fraud and bribery and other business conduct issues. We monitor and address business conduct issues through several means, including a bi-annual review by the Audit Committee.

Overall compliance strategy, policy and frameworks are set at the Group-level with implementation owned by the business. The business is responsible for identifying compliance issues, continuous monitoring, and developing actions to improve compliance performance. We monitor and address compliance issues, through several means including reviews at US and UK leadership meetings and a bi-annual review by the Audit Committee.

A feature of our internal controls system is our three lines of defence model. This model is a way of explaining the relationship between functions and how responsibilities for risk and controls are allocated and monitored. Each business function owns and is responsible for managing its own particular risk and controls (the first line of defence). Central management teams (the second line of defence) act as an advisory function on implementing the principal risk assessments and actions taken to mitigate and manage those risks. Our internal audit function then audits selected controls to provide independent assessments of the effectiveness of our risk management and internal control systems (the third line of defence).

The Certificate of Assurance (CoA) from the CEO to the Board provides overall assurance around the effectiveness of our risk management and internal controls systems. The CoA process operates via a cascade system and takes place annually in support of the Company's full year results. The Audit Committee considers the CoA and provides a recommendation to the Board in support of its review.

Internal control over financial reporting

The periodic Sarbanes-Oxley (SOX) Act reports on management's opinion on the effectiveness of internal control over financial reporting are received by the Board in advance of the half and full year results. They concern the Group-wide programme to comply with the requirements of s404 of the SOX Act and are received directly from the Group Controls Team; and through the Executive and Audit Committees. A programme is currently under way to identify and implement process improvements and best practices.

We have specific internal mechanisms that govern the financial reporting process and the preparation of the Annual Report and Accounts. Our financial controls guidance sets out the fundamentals of internal control over financial reporting, which are applied across the Company. Our financial processes include a range of system, transactional and management oversight controls. In addition, our businesses prepare detailed monthly management reports that include analysis of their results, along with comparisons to relevant budgets, forecasts and prior year results. These are presented to, and reviewed by, senior management within our Finance function.

These reviews are supplemented by quarterly performance reviews, attended by the CEO and Finance Director. The reviews consider historical results and expected future performance and involve senior management from both operational and financial areas of the business. Each month, the Finance Director presents a consolidated financial report to the Board.

As part of our assessment of financial controls in previous years, we identified a number of deficiencies in our financial control framework. We are making progress in remediating these deficiencies. For more information, including reporting, see the report of the Audit Committee on page 49.

Financial review

We delivered a strong financial performance this year, driven by increased US revenues. We completed our £4 billion return of capital and funded increased investment while maintaining a healthy balance sheet.

This section

We explain how we create value for our shareholders and provide commentary on our key financial performance metrics.

For details on how we define our alternative performance measures and regulatory performance measures, refer to pages 206-214.

More detailed analysis is located in the Financial Statements as follows:

Consolidated income statement: page 96.

Principal operations by segment: page 111.

Statement of financial position: page 100.

Consolidated cash flow statement: pages 102-103.

Borrowings: page 141.

Commentary on UK and US regulation: pages 186-191.

Commentary on our financial performance and position for the year ended 31 March 2017 compared with 31 March 2016: pages 215-216.

Capital investment:

Additions to property, plant and equipment, plus contributions to JVs and associates, other than the St William property JV (contributions to St William are linked to property site transfers).

Regulated asset base:

When considering the size of our asset base, we reference our regulated asset base. This represents a measure by our regulators of the invested capital on which we are authorised to earn a cash return, and includes our regulatory asset value in the UK, plus our rate base in the US.

How we create value for our shareholders

We are a long-term asset-backed business. The diagram below illustrates how our regulated businesses create financial value over time in the UK and US.

Revenue and profits	Cash flows	Investment
The vast majority of our revenues are set in accordance with our regulatory agreements (see pages 186-191), and are calculated based on a number of factors including investment in network assets; performance against incentives; allowed returns on equity and cost of debt; and customer satisfaction.	Our ability to convert revenue to profit and cash is important. By managing our operations efficiently, safely and for the long term, we are able to generate strong sustainable cash flows to finance returns through dividends, and also to provide funds for growth.	We invest efficiently in our networks to deliver strong and sustainable growth in our regulated asset base over the long term. We continually assess, monitor and challenge investment decisions so we can continue to deliver safe, reliable, and cost-effective networks.

In addition to our regulated operations we own a UK metering business generating income primarily through meter rentals. We also own a diverse and growing portfolio of commercial energy businesses operating in competitive markets across the UK and US. These include our Grain LNG terminal and electricity interconnectors between the UK and continental Europe, and between the US and Canada. These are generally electricity and gas infrastructure assets with a low risk profile and stable cash flows, underpinned by long-term contracts or regulatory arrangements. We also own a property business, developing and selling surplus land in our portfolio.

In order to deliver this value, we:
- aim to operate within our regulatory frameworks as efficiently and compliantly as possible;
- perform well against our regulatory incentives, in order to deliver customer benefits and good returns;
- manage our cashflow requirements and secure low cost funding; and
- maintain a disciplined approach to investment in our networks.

Our financial performance explained

In addition to our statutory reporting under IFRS, we believe it is helpful to report a range of alternative performance measures (or non-IFRS measures), and regulatory performance measures, as summarised below.

Profitability and earnings from the continuing business
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. Further details of these items are included in Note 4 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 2017/18, our underlying results exclude £104 million of timing differences, as well as £142 million of storm costs (which are significant in aggregate this year) where we expect to recover the bulk of the costs incurred through regulatory mechanisms in the US.

Prior period pro forma including Cadent overlay: To aid comparability with prior years, we show an estimate of adjusted and underlying results and earnings for the continuing business in 2016/17 and 2015/16, including an estimated contribution from our 39% interest in UK Gas Distribution (now Cadent).

Profitability and earnings

The table below shows our Group profit after tax and earnings per share for the year to 31 March 2018.

Results from continuing operations – at actual exchange rates

	Group profit after tax from continuing operations			Earnings per share from continuing operations		
	2017/18 £m	2016/17 £m	% change	2017/18 pence	2016/17 pence	% change
Statutory profit after tax	**3,592**	1,810	98%	**103.8**	48.1	116%
adjust for: exceptional items and remeasurements	**(1,531)**	331		**(44.3)**	8.8	
Adjusted profit after tax	**2,061**	2,141	(4)%	**59.5**	56.9	5%
adjust for: timing	**(62)**	(279)		**(1.7)**	(7.4)	
adjust for: major storms	**91**	–		**2.6**	–	
Underlying profit after tax	**2,090**	1,862	12%	**60.4**	49.5	22%
adjust for: Cadent overlay	**–**	167		**–**	9.1	
Underlying profit after tax (pro forma)	**2,090**	2,029	3%	**60.4**	58.6	3%

On a statutory basis, Group profit after tax from continuing operations was £3,592 million and EPS was 103.8p. Exceptional items and remeasurements principally reflected a £1,510 million tax credit arising from the reduction in the US tax rate, financial derivative remeasurement gains of £119 million pre-tax, and a net £103 million charge arising from our retained investment in Quadgas HoldCo Limited. Adjusted profit after tax (excluding exceptional items and remeasurements) of £2,061 million included £62 million, relating to timing offset by £(91) million as a result of major storms.

On an underlying basis, Group profit after tax was £2,090 million, up £61 million (3%) and earnings per share were 60.4p up 1.8p (3%) compared to prior year pro forma (including Cadent overlay). Revenues increased as a result of new US rate plans in New York and Massachusetts, partly offset by lower UK transmission income, reflecting the return of efficiencies and lower delivered outputs. Costs (excluding pass-through costs) were higher, partly as a result of increased workload and additional depreciation related to asset growth. The weaker dollar in 2017/18 reduced operating profit compared to last year. Net financing costs were lower, with higher interest on inflation-linked debt, offset by gains on disposals of financial investments. Tax was lower compared to 2016/17 partly as a result of decreases in both UK and US tax rates.

Financial position and capital investment

During 2017/18 our net assets under IFRS decreased from £20.4 billion to £18.8 billion, reflecting the £4.0 billion distribution to shareholders, relating to last year's disposal of our UK Gas Distribution business and the impact of the weaker dollar. This was partly offset by pension gains, and the reduction in deferred tax liabilities due to the reduction in the US federal tax rate, and retained profits in the year, further details of which can be found on page 115. The Group's net assets under IFRS, excluding net debt of £23 billion, were £41.9 billion (2017: £39.7 billion excluding net debt of £19 billion).

To help readers' assessment of the financial position of the Group, the table below shows an aggregated position for Group, as viewed through 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, but 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 have recognised in relation to US tax reform this year, which, from a regulatory perspective remains as a future obligation. 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. 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.

Asset growth: rate base, RAV and other invested capital

	At actual exchange rates			At constant currency		
Year ended 31 March	2018 £m	2017* £m	% change	2017/18 £m	2016/17* £m	% change
UK Electricity Transmission RAV	**13,045**	12,479	5%	**13,045**	12,479	5%
UK Gas Transmission RAV	**6,014**	5,755	5%	**6,014**	5,755	5%
US rate base	**14,762**	15,398	-4%	**14,762**	13,751	7%
National Grid Ventures and Other business invested capital	**2,167**	2,055	5%	**2,167**	1,984	9%
Total	**35,988**	35,687	1%	**35,988**	33,969	6%
UK other regulated assets/liabilities	**(519)**	(479)		**(519)**	(479)	
US other regulated assets/liabilities	**1,921**	1,665		**1,921**	1,487	
Other assets and liabilities	**(343)**	(241)		**(343)**	(260)	
Total Group regulated and other assets	**37,047**	36,632		**37,047**	34,717	

* Re-presented for opening balance adjustments following the completion of the UK regulatory reporting pack process in 2017.

The UK RAV increased by £0.8 billion, reflecting significant capital expenditure, together with inflation. RPI inflation at 3.3% (April to March) was slightly above our 3% long-term expectation. UK RAV growth also included capitalised efficiencies or 'performance RAV' of £67 million this year. Other UK regulated assets and liabilities principally comprise regulatory IOUs, arising from timing (including totex timing adjustments) and output-related allowance changes, which are expected to be recovered from or refunded to customers in future periods. Excluding foreign exchange impact, US rate base increased by £1.0 billion (7%) reflecting the step up in US investment, which was 15% higher than in 2016/17.

In total, our UK RAV and US rate base increased by £0.2 billion, net of a £1.6 billion reduction due to foreign exchange movements decreasing the rate base reported in sterling. Excluding foreign exchange our UK RAV and US rate base increased by £1.8 billion (6%) in the year to £33.8 billion. The increase reflects the continued high levels of investment in our networks in both the UK and US.

US other regulated assets and liabilities principally comprise assets in the course of construction (which will transfer to rate base once commissioned), timing balances and other cost or revenue deferrals, which are expected to be recovered or refunded in future periods. National Grid Ventures and other business-invested capital comprises the assets and liabilities of the operating businesses within National Grid Ventures and Other activities. Other assets and liabilities includes our interest in the RAV of Cadent after taking account of debt within the holding structure.

Net debt:

Net debt is the aggregate of cash and cash equivalents, current financial and other investments, and derivatives (excluding commodity contract derivatives and the fair value of a put option to dispose of a 14% interest in Cadent) as defined in note 27 to the financial statements.

Adjusted net debt is principally adjusted for pension deficits and hybrid debt instruments. For a full reconciliation see page 211.

RCF/adjusted net debt:

A key measure we use to monitor financial discipline is retained cash flow divided by adjusted net debt. We monitor this metric carefully as it is a key element of the information used by rating agencies to assess our creditworthiness. See page 211.

Value Added:

Our dividend is an important part of returns to shareholders along with growth in the value of the asset base attributable to equity investors, net of the overall growth in debt. These are reflected in the Value Added metric used to measure our performance, and that underpins our approach to sustainable decision-making and long-term incentive arrangements.

Capital investment

For the year ended 31 March 2018, investment of £4,251 million was £389 million higher than last year, principally driven by increased investment in our US regulated businesses including higher levels of gas mains replacement. Investment in National Grid Ventures also increased as we continue to construct the Nemo Link, our second French interconnector and the North Sea Link.

Net debt, cash flow and credit metrics

During the year we continued to borrow to fund growth in the business. The level of net debt remains appropriate for the size of our business.

Net debt and RCF to adjusted net debt metrics

	2018	2017	% change
Net debt (£m)	**23,002**	19,274	(19)%
Adjusted net debt (£m)	**22,777**	20,290	(12)%
Retained cash flow (£m)	**2,199**	3,020	(27)%
RCF/adjusted net debt*	**9.7%**	14.9%	(520) bps

* RCF/net debt calculated including scrip share buyback costs.

During 2017/18, net debt increased by £3.7 billion. This was driven by the return of capital related to the UK Gas Distribution disposal (£4.0 billion), outflows from interest, ordinary dividends, tax and other financing flows of £2.2 billion and payments related to discontinued operations of £0.2 billion. These were partly offset by cash inflows from operations (net of cash capital investment) of £0.8 billion and other non-cash movements such as foreign exchange and accretion of interest reducing net debt by £1.9 billion.

RCF/adjusted net debt (after deducting scrip buyback costs) was 9.7% for the year (2016/17: 14.9%; 2015/16: 10.5%). The RCF/adjusted net debt metric in 2016/17 was significantly improved by the disposal of our UK Gas Distribution business on 31 March 2017, which reduced closing net debt by £10 billion. Our long-term target for RCF/adjusted net debt is to exceed 9.0%, which is consistent with the A3 rating threshold used by Moody's, the rating agency.

We additionally monitor interest cover, which is a measure of the cash flows we generate compared with the net interest cost of servicing our borrowings. Interest cover for the year was 4.4 times (2016/17: 5.0 times; 2015/16: 5.5 times). Our long-term target is to maintain interest cover in excess of 3.0 times.

Other regulatory performance measures

Value Added

Value Added in the year was £2.0 billion or 57.9 pence per share as set out below:

	Year ended 31 March		
	2018 £bn	2017 £bn	change £bn
Total Group regulated and other assets[1]	**37.0**	**34.7**	**+2.3**
Net debt[1,2]	**(23.0)**	(21.2)	-1.8
Dividend paid[3]			+1.3
Share buyback[3]			+0.2
Value Added – 2017/18			**+2.0**

1. 2016/17 values presented on a constant currency basis using a closing exchange rate of $1.40:£1.
2. Net debt at 31 March 2017 adjusted to reflect £4 billion relating to the return of capital following the disposal of our UK Gas Distribution business.
3. Excludes special dividend and share buy back associated with return of capital post UK Gas Distribution sale.

	Year ended 31 March (pence)			
	2018	2017	change	% change
Value Added per share	**57.9**	51.6	6.3	**12%**

Value Added in the year was higher than 2016/17 principally as a result of improved underlying profits in our US business and higher inflation on our UK regulated assets. Of the £2.0 billion Value Added in 2017/18, £1,316 million was paid to shareholders as cash dividends and £178 million as scrip repurchases (offsetting the scrip issuance during the year), with £510 million retained in the business.

Group RoE:

We 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, National Grid Ventures and other activities and joint ventures.

Regulated returns on equity:

These 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. Further details are included on pages 211-213.

Returns on equity (RoE)

We measure our performance in generating value for our shareholders by dividing our annual return by our equity base.

	2017/18	2016/17	change
UKET	**13.1%**	13.6%	-50 bps
UKGT	**10.0%**	10.8%	-80 bps
UK Transmission	**12.1%**	12.7%	-60 bps
US Regulated	**8.9%**	8.2%	+70 bps
Group	**12.3%**	11.7%	+60 bps

Group RoE has increased during the year to 12.3% from 11.7% in 2016/17. During the year the US regulated business delivered strong performance reflecting a full year of increased revenues from new rate plans in MECO, KEDNY and KEDLI. Group RoE also benefited from gains on disposal of financial investments and lower tax rates in both the US and the UK.

See page 16 for further information.

UK regulated return on equity

On a weighted average basis, UK Transmission RoE has decreased 60 bps to 12.1%. This reduction in RoE reflects a reduction in incentive performance year-on-year, particularly as a result of the decline in legacy revenue incentive recoveries in the Gas Transmission business. UK average totex out-performance was at a similar level to last year, representing 100 bps of our out-performance over the 10.1% allowed return.

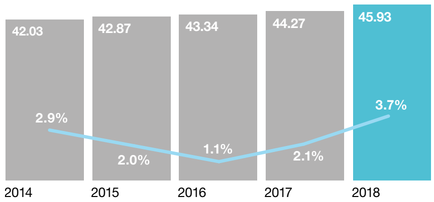
US regulated return on equity

US RoE for 2017/18 increased 70 bps to 8.9%, compared to 2016/17, reflecting the benefit of new rate cases and capital trackers on the sizeable investment programme. The 8.9% achieved return compares to an allowed return of 9.4%.

Dividend growth

The Board is committed to a long-term sustainable dividend policy. Our dividend policy aims to grow the ordinary dividend per share at least in line with the rate of UK RPI growth each year for the foreseeable future. The Company had £4,796 million of distributable reserves at 31 March 2018 available to support the dividend policy. As set out in the Chairman's statement, the Board has recommended an increase in the final dividend to 30.44 pence per ordinary share ($2.0606 per American Depositary Share). If approved, this will bring the full year dividend to 45.93 pence per ordinary share ($3.0775 per American Depositary Share). If approved, the final dividend will absorb approximately £1.0 billion of shareholders' funds.

Dividend per share (pence) **and dividend per share growth** (%)



National Grid plc, the parent company of the Group, is a non-trading investment holding company which derives its distributable reserves from dividends paid by subsidiary companies. 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.

The dividend policy is influenced by a number of the principal risks (see pages 18-21) which could adversely affect the performance of the Group.

In determining the level of dividend in any year in accordance with the policy, the Directors also consider a number of other factors that influence the proposed dividend, including:

- the level of retained distributable reserves;
- availability of cash resources;
- the level of dividend cover;
- future cash commitments and investment plans in line with the strategy; and
- potential strategic opportunities.

Viability statement

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

As described on page 18, the Executive Committee held risk workshops using scenario planning techniques. As a result, we have refreshed our risk profile adding two new principal risks, rewording or consolidating several risks, and removing one principal risk. The workshop discussions also considered the potential impacts of Brexit and extreme weather events on our risk profile and incorporated such concerns as threats to the applicable principal risks.

Over the course of the year, the Board has considered the principal risks shown in the table below in detail. The Board has discussed the potential financial and reputational impact of the principal risks against our ability to deliver the Company's business plan.

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. Although it has considered adopting a longer period, the Board believes that five years is the most appropriate time-frame over which we should assess the long-term viability of the Company. 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. No risks of this sort were identified; and
- it matches our business planning cycle.

Each principal risk was considered for inclusion in 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:

Operational impacts

Scenario 1 – A terror-related cyber attack
Scenario 2 – A gas transmission pipeline failure in the US
Scenario 3 – A cyber security attack in the UK that results in a financial penalty of £600 million in accordance with the directive on security of Network and Information Systems (NIS)
Scenario 4 – Emerging technology leading to significant numbers of people going 'off grid'

Performance impacts

Scenario 5 – The breach of personal data information
Scenario 6 – The nationalisation of the energy sector in the UK
Scenario 7 – A breach of compliance rules for onshore competition in the UK

In addition to testing individual principal risks, the impact of a cluster of the principal risks materialising over the assessment period was also considered. Scenarios developed to represent reasonable worst-case examples of principal risk clusters were assessed for cumulative impact upon our reputation and stakeholder trust. We chose a combination of risks which, in the opinion of the Board, represented a Reasonable Worst Case Scenario.

Scenario 8 – A cyber security attack or safety/environmental event as a result of catastrophic asset failure and data breach occurring together within the assessment period

The reputational and financial impacts for each scenario were considered (to the nearest £500 million). The 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.

The Board assessed our reputational and financial 'headroom', and reviewed principal risk testing results against that headroom. 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, 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 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 page 18, the Directors have a reasonable expectation that the Company will be able to continue operating and meet its liabilities over the period to May 2023.

Principal risk	Viability scenario	Matters considered by the Board
Major cyber security breach of business, operational technology and/or Critical Network Infrastructure (CNI) systems/data.	Scenario 1 – A terror-related cyber attack.	The Board received monthly updates in the CEO report and more detailed quarterly reports on cyber security. The Board has also undertaken cyber security training. We have agreed a structured scorecard for future reports to the Board.
Failure to predict and respond to a significant disruption of energy that adversely affects our customers and/or the public.	Scenario 3 – A cyber security attack in the UK that results in a financial penalty of £600 million in accordance with the NIS Directive.	The Board received biannual updates on network reliability and quarterly updates on cyber security. 'Deep dive' reports on asset health were also provided. Reliability information was provided to the Board through CEO reports.
Catastrophic asset failure resulting in a significant safety and/or environmental event.	Scenario 2 – A gas transmission pipeline failure in the US.	Safety is a fundamental priority and is looked at in detail by the Safety, Environment and Health Committee who have delegated authority from the Board. The Board receives a report from the Committee Chairman after every meeting. Our Electricity and Gas Engineering Reports to this Committee also provide progress updates on our asset management improvement programs.
Failure to adequately identify, collect, use and keep private the physical and IT data required to support Company operations and future growth.	Scenario 5 – The breach of personal data information.	Quarterly updates of the Company's information systems were reviewed. An update on the General Data Protection Regulation (GDPR) was given in November, which included the Company's state of readiness of compliance with GDPR.
Failure to build sufficient leadership capacity (including succession planning) required to deliver our vision and strategy.	N/A	The Board received bi-annual updates related to the make up of the workforce and the leadership team. The updates considered the capabilities necessary to support delivery of the strategic priorities. The Nominations Committee considered the structure, size and composition of the Board and its committees and succession planning. Additionally it tracks the development of individuals with the potential to be Directors and members of the executive management team and established the criteria for any new position.
Failure to deliver any one of our customer, investor and wider stakeholder propositions due to increased political and economic uncertainty.	Scenario 6 – The nationalisation of the energy sector in the UK.	The Board has been kept updated on political and economic issues that have the potential to affect our stakeholders and our strategy to mitigate any associated risks. These included: • the impact of Brexit and access to the Internal Energy Market; • the potential threat of nationalisation under a Labour government; • US tax reform; • UK and US regulatory strategy; • bi-annual UK/US/National Grid Ventures customer updates; and • the annual Update on Key Issues on Policy for 2018/19 reviewed issues related to political and economic uncertainty.
Failure to influence future energy policy and secure satisfactory regulatory agreements.	Scenario 7 – A breach of compliance rules for onshore competition in the UK.	The Board received updates and reviews of: • US and UK regulatory strategy; • our response to Ofgem's compensation proposal concerning the Hinkley-Seabank transmission project; • the impact of Brexit; • the role of the System Operator; and • the annual Update on Key Issues on Policy for 2018/19 reviewed issues related to energy policy and regulation.
Failure to adequately anticipate and minimise the adverse impact from disruptive forces such as technology and innovation on our business model.	Scenario 4 – Emerging technology leading to significant numbers of people going 'off grid'.	Two Board strategy sessions were held during the year which included consideration of technology and innovation matters. The Board also received a separate update on technology and innovation. Bi-annual National Grid Ventures strategy overviews were also held.

Principal operations – UK

This year our UK business has made progress on plans to create a legally separate Electricity System Operator, achieved major project milestones and is finding smarter ways to balance the system.

Delivering our strategy

UK highlights

Performance optimisation

- £540 million customer savings in the first five years of RIIO.
- UK RoE 12.1%, allowed return 10.1%.
- 99.999984% and 99.996151% – our network reliability figures for Electricity and Gas transmission respectively.
- 7.7 and 7.6 – our customer satisfaction figures for Electricity and Gas Transmission respectively.

Growth

- £1,309 million UK capital investment (2017: £1,241 million).
- Early preparation for RIIO-T2 started.
- 4.5% growth in RAV (2017: 4.3%).

Picture above
Tunnel boring machine for the London Power Tunnels project which involves building 10 new circuits and 20 miles (32 kilometres) of tunnels under the capital.

Highlights

Our UK business performed well in 2017/18 and we maintained our focus on safe, customer-led, reliable, innovative and efficient operations.

In December Ofgem published its RIIO transmission annual reports for electricity and gas. We were pleased that it recognised the fact that network companies continue to deliver for consumers.

Operational performance

From a safety perspective, for the full year 2017/18 we performed significantly better than our high potential incidents target, which tracks the events with the potential to cause more serious harm. We have also worked hard on risk assessments both ahead of work and at the point of work across our UK business.

As well as a continued focus on safety, we are constantly looking for other ways to optimise our operational performance. We met our customer satisfaction targets for 2017/18. The figures for our Electricity and Gas Transmission businesses were 7.7 and 7.6 respectively. This compares with our agreed baseline of 6.9. The figure for Gas Transmission was lower than in 2016/17 when customers gave us a rating of 8.0.

We have also made positive progress in our first year using Net Promoter Score. We are gaining more insight into the needs of our customers (and theirs). For example, a continuing theme has been the need for greater transparency from us.

Here are a few examples of what we have done this year to improve transparency:

Our Gas Transmission business has a new online customer connections portal, which is in the testing phase. You can read more about this project on page 12.

Our Electricity Transmission business has improved its customer application process, reducing the average time to produce a connection offer. We introduced a series of initiatives that enable us to condense the application process using a dedicated cross-functional team. Our average historical lead time was close to 90 days. This is now 60 days.

As new sources of energy connect to the network, we need to find smarter ways to balance the system. To help us do this, the System Operator launched its first System Needs and Product Strategy consultation.

This consultation gave us a better understanding of the services we will need to procure in future. We had 128 stakeholder responses and used this feedback to shape the Product Roadmap for frequency response and reserve services, which we published in December.

We are reducing the number of balancing services products, simplifying their procurement and improving the products themselves. We are also trialling close to real-time procurement to reflect the rapid growth in renewable generation.

The System Operator is also closely involved in far-reaching electricity charging reforms. During 2017/18, together with Ofgem and industry partners, we established Charging Futures as a platform to coordinate reform on electricity access and charging. The aim is to ensure a level playing field for all participants and to recover revenue in a fair way. At the first forum 64 organisations took part, while more than 280 stakeholders have also signed up to hear more about the plans.

Our Electricity and Gas Transmission businesses have continued to provide reliable services. We report on our key performance indicators in detail on pages 14-17. This year the network reliability figures for Electricity Transmission and Gas Transmission were 99.999984% and 99.996151% respectively.

To protect that for the future, this year we have updated some of our back-office systems to improve data and management control. In gas we have made substantial progress in our asset health data collection efforts. In electricity we have rolled out a single view of the plan for all sites ensuring that there is a unified view of all work, outage and resource going forward.

We continue to invest in our understanding of asset health in order to ensure high network reliability. One example is work we do on overhead lines to improve how we map the operating environment. This work will enable us to better assess the likelihood of asset failure and which towers and spans are experiencing the most wear. The work supports our long-term strategy to improve the need for overhead line investment. It led to a 'Next Generation' award from the Institute of Asset Management for project lead, Jon Hennah.

Our Gas Transmission business has made good progress on Project GRAID, which is developing an innovative robotic inspection device for underground pipework. This year we have developed the robot for offline trials ahead of live site trials later in 2018. For more details on this work, see page 7.

This year we marked the completion of phase one of the London Power Tunnels project which will ensure we can meet London's growing electricity demand.

In late February adverse weather affected the UK, leading to high demand for energy on the system. Our networks performed strongly, maintaining secure supplies of electricity and gas. As part of our response we issued a Gas Deficit Warning. This signalled to the market that we required more gas to keep the system running safely and reliably. This is part of our standard approach to balancing supply and demand, and worked effectively.

Shaping the future of energy

2017 underlined the speed of change in the energy sector. In April, Great Britain experienced a day without any coal generation, while between June and September low-carbon sources met more than 51% of the nation's electricity generation needs.

The changes that we have already introduced in the System Operator including the operation of a new scheduling algorithm for balancing the system have all ensured that we have continued to deliver energy where and when our customers require it. We continue to develop our balancing tools.

We are also finding ways to ensure that National Grid is better equipped for the future, particularly through innovation. For example, we are investing to ensure we can bring new technologies onto the network. On Deeside, we are converting an existing substation into a trial facility to test new technologies off network. This year Ofgem approved the substation conversion costs of about £11 million.

In July 2017 the UK Government announced plans to ban the sale of new petrol and diesel cars and vans from 2040. Meanwhile, our own 'Future Energy Scenarios' analysis suggests the potential for rapid growth in electric vehicles (EVs) through to 2050. This year we have developed a proposal for a strategic charging network to enable a backbone of charging points at motorway service areas and other strategic locations. This would support the installation of rapid high-capacity chargers and help to tackle anxieties people have about the perceived range of EVs. We are engaging with Government and UK car manufacturers on the way ahead for EVs.

In last year's Annual Report and Accounts we reported on the launch of Power Potential, a joint project between National Grid and UK Power Networks. It aims to create a new reactive power market for distributed energy resources and generate extra capacity on the network. We are now calling for organisations to participate in the project, which is initially being trialled in the south east of the UK. This year we are also building a novel distributed energy resources management system (DERMS) as a platform to manage these resources at scale.

Meanwhile, the Power Responsive programme continues to encourage growth in demand side response and storage. The programme is facilitated by National Grid and 650 members have joined since April 2017. There are now 2,150 stakeholders from more than 1,000 organisations taking part.

Looking ahead

Ahead of the new regulatory framework (RIIO-T2) which begins in 2021 we will continue to engage with stakeholders and work with Ofgem to clarify the parameters of T2.

Next year we will also be working closely with Ofgem on two further landmark developments.

We will create a legally separate Electricity System Operator (ESO) within the National Grid Group by April 2019. As part of this, Ofgem has been consulting on the new licence. We have developed our separation programme internally, which is on track and we have started publishing more details of the plans that the ESO is putting in place. This began with a consultation on its longer-term goals and its plan for 2018/19, demonstrating how the ESO will take an enhanced role in facilitating the transition to a low-carbon energy system.

We will also begin detailed work on our HSB project to connect EDF's new Hinkley Point C nuclear power station onto the network from 2024. Ofgem confirmed this year that the project is required and proposed a model for delivery, which it has called the Competition Proxy Model (CPM).

We do not believe that this model is in the best interests of consumers and have responded robustly to Ofgem's proposal. In our view, CPM, as currently proposed, does not replicate the outcome of a competitive process, as it does not reflect either the actual cost of financing this project or the risk being taken with construction work of this complexity and scale. We believe that Ofgem has under-estimated the costs of delivering HSB under the proposed model, and as such has come to an unfounded view of consumer benefit.

We are committed to working with Ofgem to find a solution. However, we are considering all options open to us should the regulator decide to proceed with this model in its current form.

Next year we will continue to focus on safe, customer-led, reliable, innovative and efficient operations. Achieving greater efficiency in our businesses will be a priority for us — particularly important considering the price cap for supply to consumers that the Government is seeking to impose.

In focus

Since January 2017 we have raised £270,000 for Alzheimer's Society, our chosen employee charity in the UK. This figure exceeded the fundraising target we set ourselves.

We are committed to playing an active role in the communities where we work. You can read more about the work we are doing in the responsible business section on page 38.

Statutory operating profit

£1,528m
(2016/17: £1,868m)

Adjusted operating profit

£1,528m
(2016/17: £1,883m)

Capital investment

£1,309m
(2016/17: £1,241m)

Picture top right
His Royal Highness The Prince of Wales with John Pettigrew, CEO National Grid at the opening of the London Power Tunnels on 7 February 2018.

Principal operations – US

A look at our US business's operational performance, core business growth, and how we are shaping the future of energy.

Delivering our strategy

A focus on growth, customer value, and the clean energy transition

Performance optimisation

- rate cases.
- customer experience transformation.
- new energy infrastructure.
- gas mains replacement.

Growth

- large-scale renewables.
- electric vehicle charging.
- renewable gas.
- smarter grid.

Statutory operating profit

£1,734m
(2016/17: £1,278m)

Adjusted operating profit

£1,698m
(2016/17: £1,713m)

Capital investment

£2,424m
(2016/17: £2,247m)

Picture above
Nick Monte repairs an electricity cable, USA.

Highlights

The US business has performed well during 2017/18, focusing on growth, customer value, and the clean energy transition.

Overall, our revenue increased by 10% and we are growing our rate base by 7%. Our energy infrastructure spend across our footprint during 2017/18 was $3 billion. And we added around 65,000 new customer accounts – gas, electric, and distributed generation, combined.
We filed two rate cases during the year – new base gas distribution rates in Massachusetts and new base electricity and gas distribution rates in Rhode Island – where rates had remained the same for eight and five years, respectively. And in upstate New York, we reached agreement with the NY Public Service Commission (PSC) for a three-year rate plan.

Although the United States decided in June to pull out of the Paris Climate Agreement, we continue to support the Paris climate deal and align ourselves with state and local leaders who share our climate and environmental goals. One example is the appointment of Dean Seavers, National Grid Executive Director, US, to co-chair the national Alliance Commission on US Transportation Sector Efficiency, convened by the Alliance to Save Energy. The commission has said it will develop recommendations to reduce energy use in the US transportation sector by 50% by 2050 while meeting future mobility needs.

Operational performance

The US business saw a 6% reduction in the number of injuries requiring medical attention beyond first aid and a 19% reduction in the number of preventable road traffic collisions during 2017/18. We implemented safety, health and environment (SHE) plans at local levels to address current risks and injury trends. We also established our guiding principles of safety which sets out how our people can play a role in promoting a safer environment for everyone. We will continue to focus on improving our safety culture to address key risk and hazard mitigation strategies in 2018/19.

Our key performance indicators are reported in detail on pages 14-17. We have worked hard to find ways of operating more efficiently and with innovative technology. The work we have done has supported National Grid's three strategic priorities: find new ways of optimising our operational performance; look for opportunities to grow our core business; and make sure National Grid is better equipped for the future. Below are some examples of what we have done this year under each priority:

One way we have been able to optimise our core business performance is through our gas business enablement initiative. This involves standardising and simplifying processes that will help us better manage our assets, deliver our work, and serve our customers. An example of this is a new ability to capture field data and complete work orders via mobile technology.

Our new Customer Response Center (CRC) is also designed to improve our operational performance. The CRC opened in May 2017 with the goal of establishing two-way communications with customers so we can better anticipate and respond to customer needs in everyday interactions.

One example of growing our core business is the new South Street substation in Providence, Rhode Island. In late March, we began the first phase of energisation at the $70 million, state-of-the-art substation that is providing reliable energy to downtown Providence. Safety was our fundamental priority for the new substation. Employees are not in danger of high arc flash incidents, as arcs are extinguished under vacuum.

Revitalisation of the former power station, a historic riverfront building, is generating educational and economic development in the city and across the state. It has been transformed into space for Brown University administration and both Rhode Island College and University of Rhode Island nursing students.

The Metropolitan Natural Gas Reliability Project in Brooklyn, New York, is another way we are growing our core business. Through this project, which started in May 2017, we are installing approximately 1.7 miles (2.7 kilometres) of 30-inch transmission pipeline operating at 350 psi.

Our rate case filings allow us to make sure we are better equipped for the future, as does our continued work with Grid Modernization in Massachusetts, with Reforming the Energy Vision (REV) in New York, and with the Power Sector Transformation in Rhode Island.

Approval this past winter of new electricity and gas delivery rates in upstate New York means we can invest $2.5 billion over three years to modernise our electricity and natural gas networks, and promote economic growth across upstate and improve customer service.

The plan allows us to continue our new Energy Affordability Program, which provides a bill decrease for most income-eligible customers, and to introduce new energy efficiency solutions for our moderate-income customers.

An important objective in 2018 is for us to achieve a good outcome in our Massachusetts and Rhode Island rate case filings. Together, these companies represent around 30% of our US rate base.

In Massachusetts, resetting distribution prices would help us upgrade an 11,000 mile gas distribution network, improve service quality safety, meet regulatory expectations, and modernise operations for the benefit of customers across 116 cities and towns in the state.

In Rhode Island, new rates will allow us to continue improving service quality, provide the safety and reliability our customers rely on, and pursue new initiatives focused on renewable energy, modernising the network and helping income-eligible customers. Programmes to support Governor Gina Raimondo's call for the Power Sector Transformation Initiative are also important elements of our rate filing.

Storm response was a big focus for us this past autumn and winter, both within and outside our service area.

In September, Hurricane Irma caused massive damage to the US southeastern area, including Florida. At the storm's peak, there were 7.8 million outages. More than 130 National Grid US employees responded as part of the Edison Electric Institute Mutual Assistance network to support restoration activities for Tampa Electric.

In late September, Hurricane Maria left Puerto Rico without electricity. More than 150 National Grid employees from New York assisted with restoration over a six-month period, from November to April.

Closer to home, in upstate New York, damaging thunderstorms and tornadoes caused thousands of outages in May and June 2017. Our response earned us Edison Electric Institute's emergency assistance and emergency recovery award.

In late October, we responded to a storm that hit the Northeast US particularly hard, with heavy rain and wind gusts up to 80 mph. The storm was much worse than originally forecasted. Across our service area, more than 500,000 customers lost power. We were grateful for mutual aid from other utilities and the quick mobilisation of construction and tree crews to aid restoration efforts. In Massachusetts, we restored 85% of affected customers in 48 hours, and in Rhode Island, we restored over 90% of peak customers affected in 2½ days. Regulators in both Massachusetts and Rhode Island opened an investigation to review our storm performance. Although we had sufficiently prepared for the forecast weather, they felt we should have been better prepared for what actually transpired. We thoroughly reviewed lessons learned and highlighted opportunities to improve our restoration efforts in future weather events.

In March three consecutive nor'easters caused power outages to more than 800,000 of our Massachusetts and Rhode Island customers. Recognising the vital contributions of the volunteers and emergency responders that supported our customers' needs, we donated $100,000 to the American Red Cross to support disaster relief efforts in both states.

Picture top right
Line-workers repairing storm-damaged cables.

Shaping the future of energy

We are shaping the future of energy by pursuing four distinctive policy priorities, as described below:

80%x2050: Massachusetts, New York and Rhode Island have each adopted targets mandating 80% CO_2 emission reductions by 2050 across their entire economies (1990 baseline). To balance sustainability and to achieve compelling customer outcomes, we are adhering to three design principles:

- address the highest emitting fuels and sectors first;
- optimise the use of existing networks; and
- avoid price shocks through strategic pacing of the changes.

Large-scale renewables (LSRs): We support state policies to promote renewable energy development in Massachusetts, New York and Rhode Island. LSRs are interconnected to the transmission system and deliver energy, including hydroelectric power, to wholesale customers. We expect state policy-makers to support these resources via contractual agreements.

Electrify transportation: We are a strong supporter of electrifying on-road transportation because of its promise to significantly reduce greenhouse gas emissions. Across our service area, we are helping expand deployment of charging infrastructure, informing customers about electric transportation options, and preparing for future integration of electric vehicles into the network.

We have hosted several 'ride and drive' events at our facilities to increase employee awareness about vehicle options, battery performance, charging types, and cost of ownership. We also have sponsored state-wide 'ride and drive' events in collaboration with the Executive Office of Energy and Environmental Affairs in Massachusetts.

Future of gas: We support natural gas capacity expansion projects in an effort to address gas supply demand forecasts, residential conversions to natural gas, network reliability and renewable natural gas initiatives, and the reduction of greenhouse gas emissions.

In addition to our operational performance work described above, the following programmes, grants, and awards support our policy priorities:

In November, we joined forces with the Department of Energy's Pacific Northwest National Laboratory to work together on research in the areas of transmission grid modernisation and energy storage technologies.

Also in November, we announced plans to install a 48 megawatt-hour battery energy storage system (BESS), on the island of Nantucket, 30 miles (48 kilometres) off the Massachusetts coast, to help address the island's significant growth and demand for electricity. The BESS will be six megawatts with an eight-hour duration, which is also described as a 48 megawatt-hour system, and is being provided by Tesla.

In December, the Massachusetts Clean Energy Center awarded energy storage grants totalling $4.53 million to five projects supported by National Grid. One grant will assist in the construction and operation of an energy storage system that will be deployed alongside one of our large-scale solar installations located in Shirley, Massachusetts.

We received the first-ever National Association of Regulatory Utility Commissioners 'Utility Industry Innovation in Gas Award' for our Natural Gas Demand Response Program. This uses advanced technology to help commercial and industrial customers shift their energy use, which will help us manage peak demand during the coldest winter days.

Once again, the three states we service were ranked among the leading states in the nation when it comes to energy efficiency, according to the American Council for an Energy-Efficient Economy. Massachusetts took first place, Rhode Island moved up to third from last year's fourth place ranking, and New York was placed seventh.

Looking ahead

Looking ahead, we will stay focused on our quest to become a great operating company. This means developing our employees in a safe workplace, providing our customers affordable energy, and enabling strong economies in our communities.

Some of the ways we will address these goals are by improving both our capital and operational expenditure efficiency, improving our customer metrics, generating operating profit from new sources, and limiting customer bill increases.

We will continually improve our performance by finding a better way and investing in our growth.

National Grid Ventures and Other activities

The launch and progress of National Grid Ventures: a new unit to drive growth outside our core regulated businesses in the US and UK.

Delivering our strategy

Highlights

Performance optimisation

- National Grid Ventures +34 NPS score.
- IFA 92.6% availability for FY17/18.
- BritNed 97.7% availability for FY17/18.
- 107,000 smart meters installed by early 2018.

Growth

- 3.4 GW of new interconnector capacity on schedule to be operational in 2021/22.

Better equipped for the future

- Established Technology and Innovation team to support National Grid Ventures and our core businesses.
- Targeting investment in new and evolving technologies.

Picture above
Nemo Link HVDC cable on board vessel for installation.

Highlights

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

National Grid Ventures was established on 1 April 2017. The new unit, which operates separately from our core regulated businesses, comprises a broad range of activities in competitive markets in Great Britain and the US, including electricity interconnectors, Europe's largest liquefied natural gas (LNG) terminal, and energy metering.

National Grid Ventures is also tasked with creating value and gathering knowledge through investment in adjacent businesses, including utility-scale projects, distributed energy opportunities and the development of new and evolving technologies.

In the last year, National Grid Ventures has made significant progress in the construction of three new electricity interconnectors from Great Britain to Belgium, France and Norway.

The Isle of Grain LNG import terminal received the first ever Great Britain LNG cargos from the US and Peru, highlighting our ability to deliver a more diverse gas supply for Great Britain.

National Grid Ventures is committed to providing a high level of service to customers across all of its businesses. It achieved a high overall NPS score of +34.

Our 'Other' activities comprise UK Property and US non-regulated businesses, which include LNG operations and corporate costs. The UK Property business generated operating profit of £84 million (2016/17: £65 million).

In aggregate, the National Grid Ventures and Other segment delivered £231 million of underlying operating profit and accounted for £518 million of continuing investment in 2017/18, after corporate costs of £87 million (2016/17: £127 million).

Operational performance

Electricity interconnectors: National Grid Ventures is the leading developer and operator of electricity interconnectors from and to Great Britain, with two subsea links in operation and three currently under construction.

BritNed is a joint venture between National Grid and TenneT, the Dutch transmission system operator. It owns and operates a 1 GW HVDC link between Great Britain and the Netherlands. BritNed availability was 97.7% in FY17/18. A substantial proportion of the flow over BritNed was in the import direction from the Netherlands to Great Britain.

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). IFA availability was 92.6% in FY17/18. As with BritNed, a substantial proportion of the flow was in the import direction from France to Great Britain.

Nemo Link, developed between National Grid and Elia, the Belgian transmission system operator, will connect Richborough in Great Britain and Herdersbrug in Belgium. The subsea cable will be 80 miles (130 kilometres) in length and will have a capacity of 1 GW. Cable-laying work is due to be completed in May 2018, while construction of the converter stations in both countries is on track to be completed in October 2018. Overall, the project remains on schedule and the interconnector is due to be operational in the first quarter of 2019.

North Sea Link (NSL) will connect Blyth in Great Britain and Kvilldal in Norway. Developed between National Grid and the Norwegian transmission system operator Statnett, NSL will be the longest subsea cable in the world at 447 miles (720 kilometres). The 1.4 GW link is expected to be operational in 2021/22. Construction started in Norway in 2016, while cable laying work will start in Great Britain later this year.

Initial construction work has also started on the 149 mile (240 kilometres) IFA2 interconnector. Developed with RTE, the 1 GW subsea cable will connect Hampshire in the UK and Normandy in France. The link is expected to be operational in 2020.

LNG Storage: Isle of Grain LNG is one of three LNG importation facilities in Great Britain. It operates under long-term contracts with customers and provides importation services of ship berthing, temporary storage, ship reloading and re-gasification into the NTS.

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 road tanker operators to load and transport LNG in bulk across the UK via road or rail. Grain LNG had reloaded 3,950 road tankers by March 2018.

Statutory operating profit

£231m
(2016/17: £62m)

Adjusted operating profit

£231m
(2016/17: £177m)

Capital investment

£518m
(2016/17: £374m)

Metering: National Grid Metering (NGM) provides installation and maintenance services to energy suppliers in the regulated market in Great Britain. It maintains an asset base of around 11.1 million domestic, industrial and commercial meters. Customer satisfaction scores for NGM remain positive for domestic, industrial and commercial businesses.

National Grid Smart (NGS) became operational in November 2016, supporting energy suppliers in fulfilling their UK smart meter roll-out obligations. NGS offers a variety of services from meter asset financing and customer relationship management through to installation and maintenance services. NGS installed its 107,000th smart meter by early 2018.

Shaping the future of energy

The economics for solar and wind generation are becoming increasingly attractive, and the ongoing significant growth in large-scale renewables is set to continue into the long term. 2017 was the 'greenest year ever' for the UK, with over half of electricity generation last summer coming from renewable sources. Similarly, US states remain committed to aggressive CO_2 reduction targets.

National Grid Ventures is actively engaged in the renewables space in the US. Through the partnership with Sunrun, we have seen increased conversion rates, particularly where Sunrun has co-branded with National Grid. In addition, National Grid Ventures manages our stake in Enbala, which develops technology to help utilities optimise increasingly complex electricity grids. National Grid Ventures also manages our stake in Energy Impact Partners, a strategic investment firm that invests in companies improving sustainable energy generation.

In December 2017, we announced we would join the Breakthrough Energy Coalition, which brings together private investors, global corporations that produce or consume energy in vast quantities, and financial institutions with the capital necessary to finance the world's largest infrastructure projects.

Looking ahead

NEMO Link, IFA2 and North Sea Link are on track to be operational between 2019 and 2021/22, giving National Grid Ventures a portfolio of more than 6 GW of interconnector capacity.

In addition to driving growth in existing businesses, National Grid Ventures will look to develop opportunities in new and evolving technologies. In 2018, National Grid Ventures opened up a new presence in California, with the establishment of a Technology and Innovation team tasked with direct investment in expansion and growth stage start-ups that are ready to partner with our emerging and core businesses.

Property: National Grid Property deals with the management and regeneration of our brownfield surplus estate in the UK. Our specialist team works with stakeholders such as Historic England, local authorities and communities to reduce risk across our portfolio and create new healthy, balanced communities and employment land.

During 2017/18, we disposed of 44 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 fourth year. Around 1,100 homes are already under construction, with planning permission secured for a further 1,880 homes.

Picture top right
NEMO Link team member holding cross-section of HVDC interconnector.

Our commitment to being a responsible business

Businesses should be a force for positive social and environmental change. To do this, companies have to act responsibly in everything they do, and in the way that they do it. This belief is fundamental to the way we work at National Grid.

Our risk management framework

Our risk management process provides a framework through which we can constantly identify, assess, prioritise, manage, monitor and report our risks. Through a 'top down, bottom up' approach, all business areas identify the main risks to our business model and to achieving their business objectives. Each risk is assessed by considering the financial and reputational impacts, and how likely the risk is to materialise. Consideration is given to the impact on the external environment and the effect on our stakeholders. Each business area identifies and implements actions to manage the risks.

Monitoring risks and controls is conducted through established boards and committees at different levels of the organisation. Deficiencies, such as a significant breach of policies, are reported and corrected at the appropriate entity level. The most significant risk and controls issues are monitored at the Senior Executive and Board level.

In focus

You can read more about our approach to internal control and risk management on pages 18-21.

We describe our purpose, vision and values on page 12.

In focus

Our KPIs are described on page 14-17. You can find detailed sustainability performance metrics on our website: www.nationalgrid.com/group/responsibility-and-sustainability

Our approach

Businesses are a key part of the communities where they work and we believe they should be aiming to leave a positive purpose-led legacy for future generations. At National Grid, we work hard to bring energy to life and exceed the expectations of our customers, shareholders and communities.

We took part in the 2017 UK Social Mobility Employer Index and were ranked 34th out of the 98 companies that took part. Following feedback, we have introduced changes to our recruitment processes and the data we capture so we can better understand and address social diversity. We are undertaking a significant piece of work to move the focus of our corporate responsibility activities towards supporting social mobility both in the UK and US. We will describe the outcomes from this work in next year's report.

Being a responsible business covers every aspect of our work, both what we do and how we do it. When we are undertaking major infrastructure projects, we work with our customers, stakeholders and communities to gather their views to help inform what we do. For example, at our new Highbury substation in London we are building retail units and residential apartments to help support urban regeneration in the area, half of which are affordable homes. We support communities through our employee volunteering programmes, partnering with charities and civil society, and providing community groups with financial support. In the US, for example, 650 National Grid employees participated in 17 coordinated Earth Day projects in communities across all three states, including clean-up events in public parks, city beautification projects, tree plantings, and a door-to-door LED lightbulb exchange.

We have policies in place that support our approach to being a responsible business. We report on a number of non-financial performance measures relating to these policies. You can find details about our key non-financial performance measures on pages 14-17, and also on our website, in the Responsibility and Sustainability section.

Our priorities

Our priorities are shaped by the Company's strategic priorities, and a number of other factors, including the risks we face as a business, the views of our customers and stakeholders, and the challenges faced by the communities where we operate. We are signatories to the United Nation's Global Compact and support its Sustainable Development Goals (SDGs). These goals promote prosperity while protecting the planet. All 17 goals are important, and there are five (see below) that are particularly linked to our responsible business focus areas.


Re-use of resources

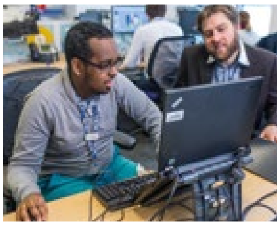
Environmental sustainability

We are passionate about operating our business in an environmentally responsible way and making sure sustainability shapes our thinking and decision-making. This helps us to optimise our operational performance, provide value for our customers, and benefit the environment.


Rhode Island housing

Communities

We support the communities where we work and live to help them thrive and be socially inclusive. Being a welcomed part of the community helps us to work effectively and deliver for our customers.


National Grid EmployAbility

People

We are working hard to overcome some of the biggest energy challenges of the 21st century as generation moves from fossil fuels to renewable sources and transportation moves towards electric vehicles. We need to make sure we have highly motivated people, with the right skills, equipping us for the future.

Supporting the United Nation's Sustainable Development Goals

Our approach focuses on environmental sustainability, communities and people, and helps to support five of the United Nation's Sustainable Development Goals. You can find out more about this on our website in our responsible business section.

- **Goal 4:** Ensure inclusive and quality education for all and promote lifelong learning
- **Goal 7:** Ensure access to affordable, reliable, sustainable and modern energy for all
- **Goal 8:** Promote inclusive and sustainable economic growth, employment and decent work for all
- **Goal 13:** Take urgent action to combat climate change and its impacts
- **Goal 15:** Sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss

Our contribution to a low-carbon economy

- We reduced Scope 1 and 2 emissions by 15.4% in 2017/18.
- We have enhanced the value of natural assets at 30 sites. We aim to enhance a total of 50 sites by 2020.
- In 2017 we updated our strategy, setting new global and regional targets:
  - Reduce carbon intensity of our construction projects.
  - Implement carbon pricing on major investment projects.
  - Drive net gain in environmental value on our major construction projects.

In focus

You can read more about our approach to environmental sustainability on the Responsibility and Sustainability section of our website.

Environmental sustainability

We know that our business operations have the potential to affect the environment. Managing any risks, whether these are short-term through our physical operations, such as air quality and pollution, or long-term through our greenhouse gas emissions or resource use, is fundamental to our approach to environmental sustainability.

Additionally, an environmental event arising from catastrophic asset failure is one of our operational risks. You can read more about this on page 19, together with our approach to mitigation.

Our priorities

Our environmental strategy, Our Contribution, was originally developed in 2012 with a wide range of internal and external stakeholders, and has been refined over the years to reflect changing stakeholder priorities. It focuses on three areas: climate change, resources and caring for the natural environment. Our strategy is delivered through our environmental policies.

We focus on:

- reducing our carbon footprint;
- maximising the value of resources and reducing the impact on the environment through re-use and recycling; and
- using our land holdings in ways that benefit our business, the environment and the communities in which we live and work.

This is all underpinned by maintaining high environmental management standards.

As a company, we support climate change science. Reducing greenhouse gas emissions is an important area of focus for us, and is one of our KPIs. You can read more about this, and our performance, on page 16.

As a result, we also support the Paris Agreement and have made our own commitment to reduce our greenhouse gas emissions by 70% by 2030 and 80% by 2050. This aligns with the trajectory required to meet the goal of the Agreement: to limit global warming to a 2˚C temperature rise from 1990 levels.

In June 2017, the Financial Stability Board released its final report on the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). The voluntary framework for disclosure of climate-related information in financial filings is structured around four themes: governance, strategy, risk management, and metrics and targets. We recognise the importance of these disclosures and are committed to implementing the recommendations.

We have included information relating to how we are managing our climate impact and how our business is evolving in response to the risk and opportunities we see arising from climate change in various parts of this Report. The table on page 192 shows how our disclosures map against the TCFD recommendations, and where relevant information can be found. This represents our first set of disclosures. We recognise this will evolve and expand over time.

This year we were delighted to win Business in the Community's Award for Environmental Leadership. In the US, our Massachusetts business was named one of the most energy efficient utilities in America by the American Council for an Energy-Efficient Economy.

New life for old IT equipment

Max Morgan, from our Information Services team, describes what we do and who benefits when we reuse or recycle our old IT equipment.

Being at the forefront of information technology is crucial for National Grid. It means regularly upgrading systems to make sure they can handle the challenges of our changing business.

When our IT equipment comes to the end of its useful life, we want to dispose of it in a responsible way. We have three goals: to make sure we don't harm the environment, to secure our data, and to benefit the communities where we work.

In the first eight months of 2017, working with a recycling specialist, we were successful in reusing or recycling more than 7,000 pieces of IT equipment. Nothing ended up as landfill.

Circular economy

We reuse a lot of IT equipment internally, to equip new starters, for example, or to test the latest business applications. It's part of our 'circular economy' approach. We recognise that the best way to reuse a laptop, for example, is to continue using it as a laptop, perhaps for a different job. Maintaining equipment for as long as is feasible means we buy less new IT equipment, which reduces the environmental impacts associated with building and transporting it.

Our specialist recycling partner collects surplus equipment from us such as PCs, laptops and mobile phones. Some items they clean and refurbish; some they dismantle, salvaging reusable components such as circuit boards and hard disks. They break down the rest into raw materials, including precious metals. Nothing is wasted. Even the packaging we wrap around our old IT equipment is used again.

Metal, plastic, even glass from the IT equipment can be put to further use. The money generated by selling these materials pays for our donations to local charities or schools. During 2017/18 we've helped hospices and charities dedicated to healthcare and conservation among others, in both the UK and US.

Responsible disposal of assets

We chose our recycling partner after a competitive tender. We discovered through this process that there are many approaches to recycling, not all of which are acceptable to us. However, our partner can meet all our requirements for the responsible disposal of our assets.

Health and wellbeing

We have continued to focus our wellbeing efforts on encouraging behavioural change within our workforce, through education and training.

Our wellbeing programmes have raised awareness to employees of risks associated with modern living, and the impact it can have on their health. Campaigns in 2017 included: diabetes awareness, circadian rhythms, body weight, cancer prevention, nutrition, heart health, sleep quality, fatigue and immunisations.

The cornerstone of our mental health work has been in-depth training sessions in both the UK and US. These sessions are designed to provide employees and leaders with the knowledge and confidence to notice and respond to mental health issues in the workplace.

Living Wage

We are accredited by the Living Wage Foundation and our commitment to our direct employees also extends to contractors and their work on behalf of National Grid. We believe that everyone should be appropriately rewarded for the vital work they do. We also go above the Living Wage requirements and voluntarily pay our trainees the Living Wage. A Living Wage review takes place annually to ensure continued alignment and individual salaries are increased as required.

In focus

For more information about UK gender pay gap, visit our website: www.nationalgrid.com/uk/understanding-our-uk-gender-pay-gap

People

We are working hard to overcome some of the biggest energy challenges of the 21st century as generation moves from fossil fuels to renewable sources and transportation moves towards electric vehicles. We need to make sure we have highly motivated people, with the right skills, working for us, and helping equip us for the future.

Our focus on people covers our current and future employees. We aim to have an engaged and diverse workforce to stimulate innovation, reflect the communities where we work, and deliver great customer service.

The culture we strive for stems from embracing our values of everyday we do the right thing and find a better way. 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 of not achieving this on page 20.

Engaging our people

Through our approach to developing our people and the wider benefits of working at National Grid we aim to have an engaged and productive workforce. To attract and retain employees we make sure our remuneration package is both fair and competitive. Through a third party company, we also carry out an annual employee survey 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 14.

The wellbeing of our workforce is also important. This year our employee lost time injury frequency rate remained at 0.10. Our ambition is to achieve a safety performance below 0.10.

Safeguarding the future

We continue to raise awareness of the career opportunities in the energy utility industry in both the UK and US. In the UK, the need for a skilled workforce to develop, deliver and use new technologies within the energy sector is becoming more acute according to the EU Skills Workforce Strategy. STEM skills underpin our business, so we promote STEM as an exciting career path for young people through education outreach activity such as the Big Bang Fair, work experience, and hosting school visits to our sites.

In the US we have signed a memorandum of understanding with the State University of New York (SUNY), which outlines our commitments to education, internships, and hiring opportunities. We also continue to grow our partnerships through the Center for Energy Workforce Development (CEWD) and the National Energy Education Network (NEEN).

National Grid was the winner of Business in the Communities award for Outstanding Employment. This award recognised our apprenticeship schemes and the work we do to support hard-to-reach groups of young people gain vital skills for work, such as our EmployAbility programme in the UK.

Whistleblowing

We have confidential external whistleblowing 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.

In focus

To find out more about our people, visit: www.nationalgrid.com/group/our-people

See also 'how we add value' on page 6

Empowering people with special educational needs to excel

'EmployAbility – Let's work together' is an employee-led initiative that aims to bring together businesses and local communities to support individuals with special educational needs. Supported internships are provided to those people who might otherwise struggle to find meaningful employment.

Only 6% of people with learning disabilities gain paid employment in the UK. At National Grid, we think we can do better – last year, 65% of our supported interns found employment.

Melanie attended a special educational needs school. She started her supported internship with us last year and excelled from the beginning. She found a natural ability to deal with people, while her confidence and self-esteem grew.

As her internship was coming to an end, two local employers offered her full-time employment. Now Melanie is a valued member of the 14Forty team who run our restaurant at Warwick, providing customers with excellent service and supporting her colleagues.

Melanie said: 'Without National Grid's EmployAbility scheme, my future looked very uncertain. I feel happy and proud that I have achieved so much.'

We are working with the Government and others to encourage more employers to get involved in this life-changing programme.

Promoting an inclusive and diverse workforce

In 2017 we implemented inclusion and diversity policies in the UK and the US. The purpose of the policies is to demonstrate our commitment to providing an inclusive, equal and fair working environment through:

- driving inclusion and promoting equal opportunities for all;
- ensuring the workforce, whether part-time, full-time or temporary, will be treated fairly and with respect;
- eliminating discrimination; and
- ensuring selection for employment, promotion, training, development, benefit and reward, will be on the basis of merit and in line with regional legislation.

17.9% of our total workforce have declared themselves to be of 'minority' racial or ethnic heritage. We recognise the value a diverse workforce and an inclusive culture bring to our business and have many initiatives to encourage and promote this. For example, our UK employee resource groups created our second edition of 'Remarkable', which highlights the full diversity of our people. We have implemented a diverse panel interview approach in the UK and US to appoint senior leaders. In the UK, this resulted in an increase in gender diversity and BAME representation on our Network Capability Electricity leadership team. We have also established development programmes for women (US) and BAME (UK) employees to build leadership capability.

Our US business achieved 100% in the Human Rights Campaign's Corporate Equality Index; received the Age Smart Award by Columbia University and is noted as a top 50 employer by 'CAREERS and the disABLED' magazine. These recognitions reinforce our commitments to all our employees.

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.

Our leaders advocate a diverse workforce. For example, John Pettigrew gave a keynote speech at the Women in Energy conference 2018. Several of our senior leaders have taken part in our reverse mentoring programme.

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, our Executive Committee. It 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.

Following the appointment of a new Non-executive Director on 17 May 2018, the Board's gender demographic is currently: Male 8, Female 4, Total 12 (Male 66.7%, Female 33.3%).

Gender demographic as at 31 March 2018

	Our Board[1]	Senior management[2]	Whole Company[3]
Male	8	171	17,366
Female	3	77	5,657
Total	**11**	**248**	**23,023**
Male (%)	72.7	69	75.4
Female (%)	27.3	31	24.6

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. See page 14 for more information.

Total headcount[4]

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

Work-pattern

	Full-time		Part-time[5]	
	#	%	#	%
UK	5,599	95.1	286	4.9
US	16,352	99.6	62	0.4
NGV	685	96.5	25	3.5
Total[6]	**22,650**	**98.4**	**373**	**1.6**

Gender

	Male		Female	
	#	%	#	%
UK	4,365	74.2	1,520	25.8
US	12,526	76.3	3,888	23.7
NGV	466	65.6	244	34.4
Total[6]	**17,366**	**75.4**	**5,657**	**24.6**

Ethnicity demographic as at 31 March 2018

'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	18,161
Minority	3,965
Total	**22,126**
White (%)	82.1
Minority (%)	17.9

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, severance, etc.

	Voluntary	Non-voluntary	Total
UK	6.0%	2.2%	8.2%
US	5.1%	2.4%	7.5%
NGV	5.1%	1.4%	6.5%
Total[6]	**5.3%**	**2.3%**	**7.6%**

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 FTE.
6. Included in 'Total' are Non-executive Directors and Executive Officers who are not categorised as UK, US or NGV.

Learning days per employee

From 1 April 2017 to 31 March 2018 the total number of training days delivered per employee, (as recorded in our HR systems), across the whole of National Grid is 6.5 days.

Promotion rate

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

	Promotion rate %
UK	10.3
US	12.4
NGV	7.9
Total	**11.7**

Keeping our Board and Executive Committee updated

Our Board and Executive Committee receive regular updates on matters relating to our people. The Board receives regular updates on four key focus areas for our people and organisation: our culture, diversity, the people we need for the future and efficiency. The Board also receives updates on our employee opinion survey results and action plans. Additionally, this year the Board has discussed and considered the culture of the Company and stakeholder engagement activities (see page 48 for more details).

The Executive Committee also receives a quarterly update on people-related matters. In addition to these reports, the Committee receives regular talent updates and considers the remuneration structure for senior management. It also monitors safety and operational performance and receives reports in relation to matters of business conduct, risk and compliance matters for review, including breaches of 'Always Doing the Right Thing' and biannual reports from the US and UK Ethics and Compliance Committees in conjunction with the Ethics and Business Conduct reports that they receive twice a year.

Our role in communities

An important part of our vision is to exceed the expectations of our communities. We do this by providing a safe and reliable service, and by helping our communities to thrive through our responsible business activities. We also know that, from time-to-time, when we are carrying out large construction projects that our work can have a negative impact on communities. We work with communities to reduce this impact and to help support their social and economic needs.

Safe reliable energy

Providing a reliable and safe service at as low a cost as possible is important to our customers and to us as we work hard to exceed their expectations.

The safety of our employees, contractors and the public is one of our highest priorities and this is reflected in our KPIs, described on page 15. We have policies, procedures and training in place to make sure we maintain our safety performance at the high level that we expect.

The reliability of our networks is world-class, running at more than 99.9% availability in both the UK and US. You can read more about this on page 15, as well as how we manage our operational risks on page 19.

We ask our customers what they think of us and we act on their feedback. You can read about our customer satisfaction performance on page 15.

£73m

The value of our volunteering, fundraising and community contributions in 2017/18

Supporting communities to thrive

We don't just supply power to communities, we are part of them. As a purpose-led organisation, we believe that helping to build strong communities is good for the people who live there, good for our business and good for the wider economy.

The overall additional value we bring to communities is estimated to be £73 million.

We achieve this by partnering with civil society, providing communities with one-off grants to support their social, economic and environmental development. We encourage our employees to pursue skills-based volunteering and fundraising opportunities. In the future, we will be focusing on helping to address social mobility, both in the UK and US.

We voluntarily set up a £150 million Warm Home Fund after the sale of a 61% stake in our UK Gas Distribution business to help address fuel poverty. To date, we have given out just over £63 million to improve homes and help people across England, Wales and Scotland by, for example, enabling them to have central heating systems for the first time.

Our employees also support local schools and colleges with work experience opportunities and careers advice sessions, as described on page 17. Last year we had more than 35,400 quality STEM interactions with young people.

We are partnering with Hudson Valley Community College in the US to offer entry-level natural gas industry training. This will help meet the challenge of an ageing engineering workforce in the energy industry. Investing in future generations links in with one of our strategic priorities to ensure that National Grid is better equipped for the future.

In the UK we are part of the Government's Inclusive Economic Partnership, a partnership between the business sector, Government and civil society. We are supporting work in the vital areas of mental health in the workplace and equipping people to successfully transition to the world of work.

Preventing modern slavery

We strive to make sure that modern slavery is not taking place anywhere in our business or in our supply chain. We rely on our suppliers to deliver our human rights requirements within their own supply chains and we expect all suppliers to be compliant with the Modern Slavery Act. Each year we publish our modern slavery statement on our UK website.

We work with our suppliers and peers to understand what approach they are taking to combat modern slavery. In 2017 we completed a desktop risk assessment of our top 250 suppliers. We are now engaging with those suppliers that have been identified as potentially high risk and will be working with them to complete a range of assessment questions to develop risk mitigation plans for any identified issues.

We are also developing a framework for our buyers so that the sustainability risk criteria, including those relating to modern slavery, can be embedded into the initial stages of the sourcing process and integrated into the selection criteria. Any risks identified will be reviewed through the contract management process.

Affordable housing in Rhode Island

We're supporting United Way of Rhode Island in its affordable housing project, Housing for All. Community and Customer Manager Marisa Albanese explains why.

Affordable housing is a basic need. We know it contributes to the stability and growth of communities. Yet a shortage of affordable housing is an ongoing problem facing working families and individuals in some of the communities we serve in Rhode Island. That's why United Way of Rhode Island stepped in with Housing for All, which we support.

Our work with United Way takes various forms. We match donations our people make through fund-raising campaigns. Some of us also volunteer on United Way projects and committees.

Housing for All came out of a United Way summit to find solutions to the root causes of the housing problem in Rhode Island. As one of the state's energy suppliers, we directly touch the lives of people struggling with their household bills. We see the need to be part of the discussion and the solution. So we gave United Way $50,000 to help fund four projects to address some of the issues raised at the summit.

We'll be working with United Way to help monitor the work of the four agencies managing these projects, to evaluate progress, and to offer our expertise when it's needed. This by itself won't solve the problem of housing costs in Rhode Island, but it's a step in the right direction.

Good business conduct

To provide an understanding of the Company's development, performance and position, we describe our respect for human rights and anti-corruption and anti-bribery matters below.

Human rights

Respect for human rights is incorporated into our employment practices and our values, which are integral to our ethical business conduct guide – 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. However, due to the jurisdictions in which we operate, the nature of the work we undertake, and our associated supply chain, human rights is not considered to be a principal risk to our business.

Although we do not have specific policies relating to human rights, slavery or human trafficking, our procurement policies integrate sustainability into the way we do business throughout our supply chain, so that 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 Supplier Code of Conduct we expect our suppliers to keep to all laws relating to their business, as well as adhere to the principles of the United Nations Global Compact, the Ethical Trading Initiative Base Code, the UK Modern Slavery Act 2015, 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 being responsible, 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. 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. For the seventh successive year, we have been recognised by the Ethisphere Institute as one of the World's Most Ethical Companies.

Governance and oversight

We regularly review and update our framework 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 bribery. You can read more about the Audit Committee's role on page 44. None of our investigations over the last 12 months have identified cases of bribery.

Anti-bribery policy

Our Group Policy Statement – Anti-Fraud and Bribery – applies to all permanent employees, temporary agency staff and contractors. It sets out our zero-tolerance approach to bribery.

To ensure compliance with the UK Bribery Act 2010, we carried out a risk assessment across the Company so we could highlight higher risk areas and make sure adequate procedures were in place to address them. 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.

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 and Find a Better Way. The document is issued to all employees and is supported by a regular programme of communications to promote a strong ethical culture. Additionally, we provide briefings for high risk areas of the business, such as Procurement.

Suppliers

Our Supplier Code of Conduct is issued to our suppliers and sets out our requirements that they have in place a programme with procedures to prevent and detect bribery and corruption, in accordance with all applicable local, state, federal or national 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. Our Global Procurement team carries out regular supplier screening to identify any requirements for prosecutions or sanctions within our supplier base.

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 prevent bribery. Every six months, as part of the 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).