3.
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Statement of Directors' responsibilities

The Directors are responsible for preparing the Annual Report and Accounts, including the Group financial statements and the Parent Company financial statements in accordance with applicable law and regulations.

Company law requires the Directors to prepare financial statements for each financial year. Under that law the Directors are required to prepare the Group financial statements in accordance with International Financial Reporting Standards (IFRSs) as adopted by the European Union and Article 4 of the IAS Regulation and have elected to prepare the Parent Company financial statements in accordance with United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards and applicable law), including FRS 101 'Reduced Disclosure Framework'. Under company law, the Directors must not approve the accounts unless they are satisfied that they give a true and fair view of the state of affairs of the Group and Parent Company and of the profit or loss of the Group and Parent Company for that period.

In preparing the Group financial statements, International Accounting Standard 1 requires that Directors:
- properly select and apply accounting policies;
- present information, including accounting policies, in a manner that provides relevant, reliable, comparable and understandable information;
- provide additional disclosures when compliance with the specific requirements in IFRSs are insufficient to enable users to understand the impact of particular transactions, other events and conditions on the entity's financial position and financial performance; and
- make an assessment of the Group's ability to continue as a going concern.

In preparing the Parent Company financial statements, the Directors are required to:
- select suitable accounting policies and then apply them consistently;
- make judgments and accounting estimates that are reasonable and prudent;
- state whether applicable UK Accounting Standards have been followed, subject to any material departures disclosed and explained in the financial statements; and
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Company will continue in business.

The Directors are responsible for keeping adequate accounting records that are sufficient to show and explain the Group and Parent Company's transactions and disclose with reasonable accuracy at any time the financial position of the Group and Parent Company on a consolidated and individual basis, and to enable them to ensure that the Group financial statements comply with the Companies Act 2006. They are also responsible for safeguarding the assets of the Parent Company and its subsidiaries and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The Directors are responsible for the maintenance and integrity of the Company's website. Legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

Having made the requisite enquiries, so far as the Directors in office at the date of the approval of this Report are aware, there is no relevant audit information of which the auditors are unaware and each Director has taken all reasonable steps to make themselves aware of any relevant audit information and to establish that the auditors are aware of that information.

Each of the Directors, whose names and functions are listed on pages 66 – 67, confirms that:
- to the best of their knowledge, the Group financial statements and the Parent Company financial statements, which have been prepared in accordance with IFRSs as issued by the IASB and IFRS as adopted by the European Union and UK GAAP FRS 101 respectively, give a true and fair view of the assets, liabilities, financial position and profit of the Company on a consolidated and individual basis;
- to the best of their knowledge, the Strategic Report contained in the Annual Report and Accounts includes a fair review of the development and performance of the business and the position of the Company on a consolidated and individual basis, together with a description of the principal risks and uncertainties that it faces; and
- they consider that the Annual Report and Accounts, taken as a whole, are fair, balanced and understandable and provides the information necessary for shareholders to assess the Company's position and performance, business model and strategy.

This Responsibilities Statement was approved by the Board and signed on its behalf.

Directors' Report

The Directors' Report, prepared in accordance with the requirements of the Companies Act 2006 and the UK Listing Authority's Listing Rules, and Disclosure Rules and Transparency Rules, comprising pages 1 – 107 and 216 – 252, was approved by the Board and signed on its behalf.

Strategic Report

The Strategic Report, comprising pages 1 – 62, was approved by the Board and signed on its behalf.

By order of the Board

Alison Kay
Group General Counsel
& Company Secretary

17 June 2020

Company number: 4031152

Independent auditor's report
to the members of National Grid plc

Report on the audit of the financial statements

1. Opinion

In our opinion:

- the financial statements of National Grid plc (the 'parent company') and its subsidiaries (the 'Group') give a true and fair view of the state of the Group's and of the parent company's affairs as at 31 March 2020 and of the Group's profit for the year then ended;
- the Group financial statements have been properly prepared in accordance with International Financial Reporting Standards (IFRSs) as adopted by the European Union and IFRSs as issued by the International Accounting Standards Board (IASB);
- the parent company financial statements have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice, including Financial Reporting Standard 101 "Reduced Disclosure Framework"; and
- the financial statements have been prepared in accordance with the requirements of the Companies Act 2006 and, as regards the Group financial statements, Article 4 of the IAS Regulation.

We have audited the financial statements, which comprise:

Group:
- the consolidated income statement;
- the consolidated statement of comprehensive income;
- the consolidated statement of changes in equity;
- the consolidated statement of financial position;
- the consolidated cash flow statement; and
- the related notes 1 to 39 to the consolidated financial statements.

Parent Company:
- the parent company accounting policies;
- the parent company balance sheet;
- the parent company statement of changes in equity; and
- the related notes 1 to 10 to the parent company financial statements.

The financial reporting framework that has been applied in the preparation of the Group financial statements is applicable law, IFRSs as adopted by the European Union and IFRSs as issued by the IASB. The financial reporting framework that has been applied in the preparation of the parent company financial statements is applicable law and United Kingdom Accounting Standards, including FRS 101 "Reduced Disclosure Framework" (United Kingdom Generally Accepted Accounting Practice).

2. Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the auditor's responsibilities for the audit of the financial statements section of our report.

We are independent of the Group and the parent company in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the Financial Reporting Council's (the 'FRC's') Ethical Standard as applied to listed public interest entities, and we have fulfilled our other ethical responsibilities in accordance with these requirements. The non-audit services provided to the Group and parent company for the year are disclosed in note 4 to the financial statements. We confirm that the non-audit services prohibited by the FRC's Ethical Standard were not provided to the Group or the parent company.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

3. Summary of our audit approach

Key audit matters	The key audit matters that we identified in the current year were: • Impact of COVID-19; • Impact of climate change on property, plant and equipment; • Environmental provisions; • Classification of exceptional items; • Net pension obligations; • Treasury derivative transactions; and • IT user access controls.
Changes in our key audit matters since the prior year	These key audit matters are consistent with those we identified in the prior year except that: • As a consequence of the COVID-19 outbreak, which has severely affected the UK and US economies, there are financial reporting impacts particularly with respect to key judgments, estimates and disclosures within the financial statements. In addition, there are potential financial control impacts as a consequence of remote working. This caused us to perform an updated audit risk assessment. Accordingly we have identified this as a key audit matter; and • The impact of climate change on property, plant and equipment has been identified as a new key audit matter due to the increase in shareholder focus and legislation enacted during the year in relation to "net-zero" carbon by 2050 commitments by the UK government and certain US states (specifically New York and Massachusetts) in which the Group operates. This has a potentially significant impact on the Group's gas businesses and accordingly the estimated useful lives of its assets.
Materiality	The materiality that we used for the Group financial statements was £120 million, which represents 5.1% of adjusted profit before tax (profit before tax excluding the impact of reported exceptional items and remeasurements) and 6.8% of statutory profit before tax.
Scoping	Our scope covered six components of the Group in addition to procedures performed at the Group level. Of these, three were subjected to a full-scope audit whilst the remaining three were subject to specific procedures on certain account balances. Our scoping covered 99% of the Group's revenue; 97% of the Group's gross assets; and 99% of the Group's gross liabilities.

4. Conclusions relating to going concern, principal risks and viability statement

4.1. Going concern

We have reviewed the directors' statement in note 1A to the financial statements about whether they considered it appropriate to adopt the going concern basis of accounting in preparing them and their identification of any material uncertainties to the Group's and company's ability to continue to operate as a going concern for a period of at least twelve months from the date of approval of the financial statements.

We considered as part of our risk assessment the nature of the Group, its business model and related risks including where relevant the impact of the COVID-19 pandemic and Brexit, the requirements of the applicable financial reporting framework and the system of internal control. We evaluated the directors' assessment of the Group's ability to continue as a going concern, including challenging the underlying data and key assumptions used to make the assessment, and evaluated the directors' plans for future actions in relation to their going concern assessment.

We are required to state whether we have anything material to add or draw attention to in relation to the directors' statement required by Listing Rule 9.8.6R(3) and report if the statement is materially inconsistent with our knowledge obtained in the audit.

Going concern is the basis of preparation of the financial statements that assumes an entity will remain in operation for a period of at least twelve months from the date of approval of the financial statements.

We confirm that we have nothing material to report, add or draw attention to in respect of these matters.

4.2. Principal risks and viability statement

Based solely on reading the directors' statements and considering whether they were consistent with the knowledge we obtained in the course of the audit, including the knowledge obtained in the evaluation of the directors' assessment of the Group's and the company's ability to continue as a going concern, we are required to state whether we have anything material to add or draw attention to in relation to:

- the disclosures on pages 23 – 25 that describe the principal risks, procedures to identify emerging risks, and an explanation of how these are being managed or mitigated;
- the directors' confirmation on page 26 that they have carried out a robust assessment of the principal and emerging risks facing the Group, including those that would threaten its business model, future performance, solvency or liquidity; or
- the directors' explanation on page 26 as to how they have assessed the prospects of the Group, over what period they have done so and why they consider that period to be appropriate, and their statement as to whether they have a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over the period of their assessment, including any related disclosures drawing attention to any necessary qualifications or assumptions.

We are also required to report whether the directors' statement relating to the prospects of the Group required by Listing Rule 9.8.6R(3) is materially inconsistent with our knowledge obtained in the audit.

Viability means the ability of the Group to continue over the time horizon considered appropriate by the directors, which for National Grid is 5 years.

We confirm that we have nothing material to report, add or draw attention to in respect of these matters.

5. Key audit matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements of the current period and include the most significant assessed risks of material misstatement (whether or not due to fraud) that we identified. These matters included those which had the greatest effect on: the overall audit strategy, the allocation of resources in the audit and directing the efforts of the engagement team.

Throughout the course of our audit we identify risks of material misstatement ('risks'). We consider both the likelihood of a risk and the potential magnitude of a misstatement in making the assessment. Certain risks are classified as 'significant' or 'higher' depending on their severity. The category of the risk determines the level of evidence we seek in providing assurance that the associated financial statement item is not materially misstated.

These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

5.1. Impact of COVID-19

Key audit matter description

Account balances: Trade and other receivables. Refer to note 19 to the financial statements. Pensions and other post-retirement benefits. Refer to note 25 to the financial statements.

The COVID-19 pandemic has had a significant impact on the UK and US economies with consequences to the judgements and estimates made by the Group, principally in relation to the recoverability of US customer receivables and the valuation of certain pension assets. Refer to note 1E to the financial statements and the Audit Committee's discussion on pages 76 – 78.

In March 2020 the COVID-19 pandemic resulted in the UK government and several US states in which the Group operates imposing lockdowns of their populations in order to stop the spread of the disease. This had a direct and severe impact on those economies as consumer spending decreased and unemployment rose at unprecedented rates, in turn severely impacting global demand and world financial markets. This has impacted the results of the Group for the 2020 financial year and is expected to continue to impact the Group for the remainder of FY21.

Management reassessed their controls framework, which encompassed a review of the ability to operate existing controls remotely and consideration of whether existing controls were suitable for addressing areas of new or increased risk. As a result of this assessment, a new COVID-19 entity-level control was implemented to assess the completeness of accounting considerations across the Group. Further, whilst there could be a potential impact upon a number of financial statement line items, management's assessment determined that the primary risks that arose from the COVID-19 pandemic related to the valuation of:

- provisions for bad and doubtful debts in the US due to the increased uncertainty over customers' ability to settle amounts when they fall due; and
- unquoted pension assets, particularly certain assets in the property and alternative investment portfolios which are subject to increased valuation uncertainties.

In calculating bad and doubtful debts, the key judgement relates to the requirement to incorporate 'expected credit losses' into the provision. This requires management to make forward-looking estimates of the expected level of losses which will be incurred on any outstanding trade receivables. In the US, unlike in the UK, the Group has retail customers. The regulatory moratorium in the US requiring the suspension of certain debt collection and customer termination activities has increased the level of estimation uncertainty related to the bad debt calculation in respect of US trade receivables. Management has considered relevant forward-looking macroeconomic data in the US, as well as the effect on incurred losses experienced in the aftermath of the financial crisis of 2008 and Superstorm Sandy in 2012 to inform their estimation. Accordingly, we have identified this as an area of 'higher' audit risk.

The key judgements related to the valuation of certain unquoted pension assets are discussed in the 'net pension obligations' key audit matter.

Independent auditor's report
to the members of National Grid plc continued

5. Key audit matters continued

5.1. Impact of COVID-19 continued

Key audit matter description continued

A risk was also identified in relation to the impact of the pandemic on the Group's cash flows and liquidity and accordingly its going concern analysis. Management performed a detailed analysis of the potential impact of the COVID-19 pandemic on revenue, profit and cash flows, in particular the impact on US customer collections. Possible cost mitigations were also considered. This detailed analysis also included consideration of a number of downside scenarios as to the duration of the lockdown measures, and concluded that no reasonably possible downside scenario existed wherein the Group would be unable to continue as a going concern.

Related disclosure of management's and the Board's assessment of the ability to continue as a going concern, inclusive of the impact of the pandemic as a principal risk has been made in the Annual Report on page 25, and has been included as a consideration in the viability statement on page 26.

How the scope of our audit responded to the key audit matter

We performed controls testing at year end on areas of heightened risk, including the incremental COVID-19 specific control, and assessed whether management appropriately considered the related impact on existing controls.

Further, we held discussions within the Group and component engagement teams, with management, with our internal treasury, pensions and tax specialists and within the wider Deloitte network to identify the areas of risk to the financial statements as a result of the wider impacts of the pandemic. We used the outcome of these discussions to update our audit risk assessment and challenge management's impact assessment. Our responses in respect of specific areas identified as risks related to COVID-19 are outlined below. For these areas we also reviewed management's disclosures in relation to the key judgements and estimates made in assessing the impact of COVID-19, inclusive of sensitivity disclosures related to the areas of estimation uncertainty.

Provisions for bad and doubtful debts in the US: In challenging management's assumptions related to the impact of the COVID-19 pandemic on the provision for bad and doubtful debts on US retail customers, we considered the extent to which the 2008 financial crisis and impact of Superstorm Sandy were reasonable data points to use in informing those estimates. We challenged management's judgement in respect of the point in the range of calculated possible outcomes which management determined to be their best estimate.

Valuation of unquoted pension assets: We have described the procedures performed on the valuation of these pension assets in our 'net pension obligation' key audit matter.

Liquidity and ability to continue as a going concern: We have assessed the going concern model prepared by management, which considered the impact of COVID-19. We assessed the underlying assumptions, inclusive of mitigating cost actions being taken based on our understanding of the business and knowledge of the industry in which the Group operates. Where impacts were significant, our component audit teams were also involved in a more granular challenge of local management's forecasts. Further, we assessed management's evaluation of liquidity and loan covenant compliance over the period of assessment to confirm no breaches are anticipated over this timeframe.

Key observations

Our testing confirmed the incremental COVID-19 specific control operated effectively.

We concluded that management's judgements and estimates made in determining the incremental level of expected credit losses as a consequence of the COVID-19 pandemic are reasonable.

Our conclusion on the valuation of certain pension assets is set out in our 'net pension obligation' key audit matter.

Our conclusion on going concern is set out in the 'Conclusions relating to going concern, principal risks and viability statement' section of this report.

We concluded that management's disclosures included in note 1E to the financial statements in respect of the key judgements and areas of estimation uncertainty are appropriate.

5.2. The impact of climate change on property, plant and equipment

Key audit matter description

Account balance: Property, plant and equipment. Refer to notes 1E and 13 to the financial statements and the Audit Committee's discussion on pages 76 – 78.

The UK government and certain of the US states in which the Group operates have enacted legislation and established targets in respect of net zero carbon emissions by 2050. Accordingly climate change represents a strategic challenge for the Group, which has also set targets for reducing direct greenhouse gas emissions by the same date.

Natural gas, when burned, emits carbon dioxide and is considered a greenhouse gas. Therefore, the strategic challenge relates to the potential future use of the Group's assets used to facilitate gas transmission services in the UK and gas distribution services in the US in the period approaching 2050 and beyond. The remaining useful economic life of the Group's gas assets is up to 50 years in the UK and 80 in the US, extending well beyond the 2050 "net zero" commitment date. As described in note 13 to the financial statements, the impact of changing the useful economic lives of all of the Group's gas assets, such that they would be fully depreciated by 2050, would be an increase in the annual depreciation expense of £188 million, and such that they would be fully depreciated by 2060, would be an increase in the annual depreciation expense of £79 million.

As the continued use of natural gas as a primary energy source beyond 2050 appears to be in conflict with net zero targets and the impact of shortening the useful lives of the gas assets to 2050 has a material impact on annual depreciation, we identified a 'higher' risk related to the financial statement impact of those commitments, specifically pinpointed to management's judgement in determining the useful lives of gas assets in the context of the net zero commitments.

As described in note 13 to the financial statements and in the Audit Committee Report (page 78), management performed a detailed assessment of the potential uses for the Group's gas assets as part of their consideration around whether developments in the UK and US towards binding carbon reduction targets should trigger any changes to National Grid's estimates, judgements or disclosures, especially regarding gas asset lives. Management's assessment included an overview of the legislative changes in the UK and US, and an evaluation of the possible future use of National Grid's networks in a net zero energy system.

Management's best estimate of the useful economic lives of US gas assets, across all states in which it operates, is based on the depreciable life identified through depreciation studies for each asset and are approved by the respective state regulator. Accordingly, in the US, the IFRS asset depreciable lives are identical to those agreed by the Group's regulators for regulatory purposes. Management concluded it is probable that there will be a role for its US gas networks post 2050 under a range of possible scenarios, and there is nothing at present to suggest that asset lives should be shortened at this point.

In the UK, National Grid Gas Transmission (NGGT) owns and operates the UK gas transmission network (NTS). Pipelines represent the vast majority of the value that will be undepreciated by 2050. Having analysed the potential decarbonisation pathways, management has identified numerous potential uses for the Group's UK gas pipeline assets in a net zero energy system including for the continued transmission of natural gas as a back-up fuel or in order for blue hydrogen to be produced alongside carbon capture and storage; and the transmission of hydrogen or other low or zero carbon gases.

5.2. The impact of climate change on property, plant and equipment continued

Key audit matter description continued	Management concluded that their best estimate for the useful economic life of the National Transmission System (NTS) pipeline assets in the UK is 50 years (or until 2070) as this best represents when the assets will continue to support business operations in the UK. Management and the Audit Committee determined that in light of the evolving legislative developments and increasing investor attention, disclosure of a key judgement in relation to the potential future use of the Group's gas assets post-2050 and disclosure of the gas asset lives as a key estimate (note 1E to the financial statements), with appropriate sensitivity analysis (note 13 to the financial statements) were appropriate.
How the scope of our audit responded to the key audit matter	We tested management's internal control over the accounting for and disclosure of the potential impacts associated with the energy transition and climate change. We challenged management's judgement that the useful lives of the Group's gas assets extend beyond 2050 in light of the different goals, commitments and legislation relating to net zero in the UK and the US states in which the Group operates by: • reviewing potential strategic pathways to achieve net zero targets; • obtaining and reviewing government plans in the US and UK for achieving net zero which we compared to the potential strategic pathways; • reviewing information from the Group's regulators, including price controls in the UK and rate cases in the US, to consider whether they presented any contradictory evidence; • performing an assessment of the likelihood of occurrence of alternative scenarios for achieving net zero targets; • considering the potential for re-purposing the Group's gas networks for alternative uses, and in particular for transporting hydrogen; and • reviewing a number of external reports including: *Hydrogen in a low-carbon economy and Net Zero – Technical report*, produced by the Committee on Climate Change; *the UK's draft integrated National Energy and Climate Plan (NECP)* produced by the Department for Business, Energy & Industrial Strategy; and searching for contradictory evidence in respect of management's judgements. We utilised our sustainability specialists to review management's key assumptions and to challenge the viability of some of the technological advances presented within the strategic pathways. We also consulted with Deloitte specialists in other countries regarding the suitability of existing gas infrastructure for transporting hydrogen. We also reviewed the disclosures set out in note 1 to the financial statements and the sensitivity analysis set out in note 13 to the financial statements regarding the carrying value of the useful economic lives of the Group's gas assets.
Key observations	Our testing confirmed that the relevant controls over management's assessment of the impact of the energy transition and climate change operated effectively. We observe that whilst some indicators do exist suggesting that the useful economic lives of the Group's gas assets may be limited to 2050, these are mitigated by other statements by governments and advisory bodies which suggest gas, and therefore gas transmission and distribution assets, will continue to have a role beyond 2050. Furthermore, the emergence of a substantial hydrogen infrastructure could introduce a longer term role for National Grid gas assets past 2050, if technological developments allow the utilisation of existing assets in this infrastructure. Whilst the targets, goals and ambitions in respect of net zero have now been formalised in legislation in the jurisdictions in which the Group operates, there is widespread recognition that work needs to be done to define the possible future decarbonisation pathways. We note that whilst state energy policy in the US states in which the Group operates is codified by the legislature, it is the regulators who are charged with implementing state energy policies. We concluded it was reasonable to assume that there will be a valuable use for the Group's US gas assets beyond 2050 and that in the absence of any determination by the Group's regulators, it continues to be reasonable to use the regulatory asset lives for the calculation of depreciation in accordance with IFRS. In the UK, we note that there is no alignment between the useful lives of the Group's gas assets for IFRS depreciation purposes, and the period of recovery of the regulatory asset value under regulation. Nevertheless, we conclude that it is reasonable to assume that there will be a valuable use for these assets until 2070. We consider the disclosures in note 1 to the financial statements and the sensitivity analysis in note 13 to the financial statements to be appropriate. We are satisfied that management's other disclosures in the Annual Report relating to the uncertainty surrounding the future use of the Group's gas assets are consistent with the financial statements and our understanding of the business.

5.3. Environmental provisions

Key audit matter description	**Account balance: Provisions. Refer to notes 1E, 26 and 35 to the financial statements and the Audit Committee's discussion on pages 76 – 78.** At 31 March 2020 the Group has £2,071 million (2019: £1,639 million) of environmental provisions, of which £175 million (2019: £189 million) are in the UK and £1,896 million (2019: £1,450 million) in the US. The Group's environmental provisions relate to a number of sites owned and managed by the Group together with certain US sites which are no longer owned. In the US the provision is in respect of 257 sites which vary in the level of clean-up required. Of the total US environmental provisions of £1,896 million, more than half relates to three former sites which were identified by the Environmental Protection Agency (EPA) as sites of significant contamination (Superfund sites). The EPA has the authority to force the parties responsible for the contamination of these sites either to perform clean-ups or reimburse the government for work led by the EPA. There are a number of estimation uncertainties across all of the sites. We identified a 'higher' risk in relation to certain sites which are complicated because of their size, the number of parties involved and/or the stage of remediation the project is at. The uncertainties that exist in relation to these sites include: the impact of regulation; the form, timing, extent and associated cost of remediation needed; the methods and technologies used in remediation; the allocation of responsibility; and the discount rates applied to the forecast cash flows. There were significant increases in the provisions recorded for two US Superfund sites in the year and a small reduction at the third. We determined that the estimation of the undiscounted cash outflows specific to these sites was the most significant and sensitive to a change in reasonably possible outcomes. In respect of the US Superfund site with the most significant increase in provision, there were two reasons for management's reassessment of the estimated cash outflows. An updated design report was received in the year which indicated that the work required to remediate the site was more extensive than had previously been expected, resulting in a higher estimated total cost. In addition, following an EPA order management increased its estimate of the share of the costs the Group would bear amongst the Potentially Responsible Parties (PRPs).

Independent auditor's report
to the members of National Grid plc continued

5. Key audit matters continued

5.3. Environmental provisions continued

Key audit matter description continued

Regarding the other Superfund site with a significantly increased provision, an updated survey clarified the extent of remediation work which needs to be performed, leading to an increase in the Group's share of the expected costs.

Management are required to make judgements in selecting an appropriate discount rate which reflects changes in UK gilt and US treasury rates as current market assessments of the time value of money. The Group decreased the real discount rates applied to the undiscounted cash flows from 1% in the prior year to 0.5% for both the UK and the US provisions.

How the scope of our audit responded to the key audit matter

We tested the controls over the compilation of forecast cash flows and the determination of the discount rate.

We performed detailed risk assessments to categorise US sites based on size and the level of estimation uncertainty, determined by the stage of the remediation and the extent of work required. In respect of US sites other than the Superfund sites, we worked with our internal environmental specialists to assess cash flow estimates across a sample of sites. In order to assess the completeness of the year end liabilities we also completed public domain searches on Federal databases across all Group subsidiaries to determine whether any relevant costs or applicable sites were omitted.

With respect to the US Superfund sites, we agreed underlying cost assumptions to third-party build information, approved engineering design reports and other benchmarks and utilised our internal environmental provision specialists to assist us in evaluating managements' key assumptions. We also considered information obtained from the Group's legal advisors and relevant EPA correspondence in our evaluation of the recorded provisions.

We performed additional procedures on the site with the most significant increase in provision. Specifically relating to the judgement over the estimated allocation of total remediation costs, we made enquiries of the Group's internal legal counsel and obtained analysis directly from external legal counsel. With the assistance of our internal environmental specialists, we used this additional information to determine independently a range of potential outcomes and allocations of remediation costs at the site, and used this to assess management's estimate.

We challenged the methodology that management has adopted for calculating the discount rate with the support of our internal valuation specialists. In addition, we independently calculated an appropriate discount rate range and used this to assess management's rate.

Key observations

Our testing confirmed that the relevant controls over the compilation of forecast cash flows and the determination of the discount rate were operating effectively.

We found the total cost assumptions associated with all of the tested sites to be reasonable, including the US Superfund sites. In respect of the US Superfund sites we are satisfied that management's estimate of the proportion of costs expected to be allocated to the Group are within our independently calculated range.

We consider the decrease in real discount rates from 1% to 0.5% applied in the UK and US to be reasonable based on the movement in gilts and treasury yields.

We noted that the assumptions and judgments that are required to formulate the provisions mean that the range of possible outcomes is broad. In respect of the Superfund site with the most significant increase in provision, as a consequence of the developments in the year, the level of uncertainty regarding the Group's share of final costs has reduced. However, there continues to be a risk of further increases and we note that the remediation at the other two Superfund sites is less advanced and accordingly at risk of future increases.

We are satisfied with the Group's disclosures of environmental provisions in light of the underlying assumptions and accounting judgments made.

5.4. Classification of exceptional items

Key audit matter description

Account balance: Operating costs (included in the exceptional items and remeasurements column). Refer to notes 1E and 5 to the financial statements and the Audit Committee's discussion on pages 76 – 78.

The Consolidated Income Statement separately identifies exceptional items and certain remeasurements (the 'middle column'). This results in focus being placed on what management refer to as 'business performance' or 'adjusted profit'.

Adjusted profit is a critical measure for stakeholders and is one of the principal measures which the Board uses to review the performance of the Group's segments. In addition, underlying profit, which is derived from adjusted profit, is another widely used measure and is used in determining aspects of executive remuneration. Accordingly, the classification of items in the middle column is important for users of the financial statements. Consistency in the identification and presentation of these items is also important to ensure comparability of year-on-year reporting in the Annual Report and Accounts.

There is judgement in the classification and accuracy of the amounts determined to be exceptional in accordance the Group's exceptional items framework and any amounts so classified impact the adjusted profit of the Group.

In the current year management classified the following items as exceptional charges in the middle column:

- Environmental charges of £402 million – Relating to the re-evaluation of estimates of total remediation costs and cost sharing allocations borne by the Group for the three US Superfund sites, as well as the impact of the change in the real discount rate applied to the estimated undiscounted cash flows for all environmental provisions; and
- Deferred tax arising on the reversal of the previously enacted reduction in the UK corporation tax rate of £192 million.

The key judgements related to the calculation of the environmental charges have been discussed in the 'environmental provisions' key audit matter.

5.4. Classification of exceptional items continued

How the scope of our audit responded to the key audit matter	We have tested the controls over the classification and accuracy of the amounts presented as exceptional items in the middle column. We have obtained the Group's exceptional items framework and assessed the reasonableness of the framework for identifying items to be classified as exceptional. We assessed whether the classification of each of the items classified as exceptional complies with the approved framework and ESMA guidance and is reasonable. In making this assessment we also considered the consistency of application of the framework year on year. We substantiated the nature and quantum of significant individual items by examining appropriate evidence. We also considered other items which were not identified as exceptional in the context of management's exceptional items framework as part of our challenge of management's conclusions thereon, such as the provision for bad and doubtful debts in the US which was increased in the current year on account of the impact of COVID-19 and the related cessation of certain collection activities and disconnection of customers for non-payments.
Key observations	Our testing confirmed that the relevant controls over the classification and accuracy of the amounts presented as exceptional items in the middle column were found to be operating effectively. We determined that the amounts disclosed as exceptional were so classified in accordance with the Audit Committee approved exceptional items framework and that the framework has been applied consistently with prior years. Specifically, the classification of material increases in environmental provisions at the three Superfund sites and the impact on deferred tax balances of a change in tax rates have been classified as exceptional in prior years. We concur that the additional US bad debt charge should not be exceptional as it would represent just part of an amount calculated in accordance with IFRS.

5.5. Net pension obligations

Key audit matter description	**Account balance: Pensions and other post-retirement benefit obligations. Refer to notes 1E, 25 and 35 to the financial statements and the Audit Committee's discussion on pages 76 – 78.** Substantially all of the Group's employees are members of one of a number of pension schemes in either the UK or US. These pension schemes include both defined benefit and defined contribution schemes. Healthcare and life insurance benefits are also provided to eligible retired US employees. There are significant assumptions used in the valuations of the defined benefit obligations, which as at 31 March 2020 represent a liability of £24.6 billion (2019: £24.9 billion), and valuations of unquoted pension assets ('unquoted assets'), which as at 31 March 2020 make up £11.4 billion (2019: £8.4 billion) out of scheme assets of £23.7 billion (2019: £24.8 billion). The critical judgements relating to the pension obligations include inflation assumptions, discount rates, mortality assumptions and future salary changes applied to active members. The setting of these assumptions is complex and changes to them can have a material impact on the value of pension obligations. Management uses external actuaries to assist in determining these assumptions. Accordingly, we have identified certain of these assumptions to be 'higher' audit risks. Unlike the fair value of other assets that are readily observable and therefore more easily independently corroborated, the valuation of unquoted pension assets classified is inherently subjective. As such there is significant judgement in determining the fair value of these assets including the selection of the valuation methodology and other critical assumptions. The COVID-19 pandemic has resulted in the valuation of certain property assets being subject to increased uncertainty. In addition the valuation of certain unquoted investments including those held in private equity portfolios are subject to an unusually high level of uncertainty due to the most recent valuations on them being performed prior to the significant economic impacts of the COVID-19 pandemic. For these investments, management engaged external experts to assess the economic impact of COVID-19 on the asset valuations as at year end, including property specialists who assessed the value of the property portfolio held within pension assets. Accordingly, we have identified this as an area of 'higher' audit risk. In the UK, the Group entered into two buy-in policies in the year. The Section A policy was entered into in August 2019, with the Section B policy completing in November 2019. The transactions involve the transfer of certain pension assets in the form of gilts and cash, valued at £2.8 billion and £1.6 billion respectively, in return for bulk annuity policies, with the intention of mitigating longevity risk. The transactions represent part of the Group's long term de-risking strategy, of a similar nature to the longevity swap entered into in 2018. Under a buy-in transaction the ultimate obligation to pay the members remains with the scheme and is hence retained within the Group's pension obligations; the bulk annuity is considered a qualifying insurance policy and is recognised at the valuation of the obligation it covers as an asset to the scheme. At the time of the transactions, the member obligations to which the policies relate were valued at £2.4 billion for Section A and £1.3 billion for Section B resulting in the recognition of actuarial losses of £700 million being recognised in Other Comprehensive Income, as disclosed in note 25 to the financial statements.
How the scope of our audit responded to the key audit matter	We tested the controls over the valuation of unquoted pension assets and over the critical assumptions used in determining the valuation of the pension obligations. We engaged internal actuarial experts to assist in testing the discount rates used in calculating the pension obligations. We independently calculated appropriate discount rates and compared these to management's rates. Our actuarial experts also assisted us in benchmarking and challenging the other assumptions used by management in determining the value of pension obligations particularly focusing on inflation, salary growth and mortality rates; this included comparing the inputs and assumptions used in determining the valuation of the Group's schemes to those used in comparable pension plans and/or our internal benchmarks. Additionally, we considered the competence, capability and objectivity of the independent actuaries engaged by the Group to perform valuations of the relevant schemes and where applicable, of unquoted assets. We engaged internal specialists to challenge management's valuation of certain unquoted scheme assets. Our work included assessing the reasonableness of the valuation methodologies applied, reviewing publically available information on these assets, comparing the valuations to internal benchmarks and confirmation of inputs used by management to determine the asset values. Further, our actuarial experts assisted us with the assessment of management's assumptions and valuation methodology related to the buy-ins and we consulted with technical experts as to the correct accounting treatment.
Key observations	Our testing confirmed that the relevant controls over the valuation of unquoted pension assets and over the critical assumptions used in determining the valuation of the pension obligations operated effectively. We judge the discount rates and other key actuarial assumptions used by management to be within our internally developed reasonable range or consistent with our internally developed assumptions.

Independent auditor's report
to the members of National Grid plc continued

5. Key audit matters continued

5.5. Net pension obligations continued

Key observations continued	We note that the recognition of the actuarial loss on the buy-in transactions, representing the difference between the price paid and the value of the obligations covered by the buy-in policies is appropriately recognised in OCI as it is treated as a change in the fair value of plan assets. We assessed the appropriateness of the related disclosures in note 25 to the financial statements and consider them to be reasonable. We consider management's valuations of the unquoted investments to be reasonable and the disclosures in note 1E to the financial statements regarding the estimation uncertainty and in note 35 to the financial statements regarding the sensitivity of the pension assets balance to the valuation of unquoted assets to be appropriate.

5.6. Treasury derivative transactions

Key audit matter description	**Account balances: Derivative financial assets and derivative financial liabilities. Refer to notes 17 and 32 to the financial statements.** The Group mitigates the exposure to interest rate and foreign exchange rate risks with risk management activities including the use of derivatives such as cross-currency and interest rate swaps. The Group designates derivatives in hedge relationships where they judge this to meet the requirements of IFRS 9. Due to the technical nature of this assessment, we have identified it as a 'higher' audit risk. At 31 March 2020 the Group had derivative financial assets of £1,342 million (31 March 2019: £1,153 million) and derivative financial liabilities of £1,334 million (31 March 2019: £1,183 million). The valuation of the derivative portfolio requires management to make certain assumptions and judgements in particular around the valuation methodologies adopted and the discount rate to be applied to forecast cash flows. The portfolio also includes 'level 3' derivative financial liabilities of £245 million (31 March 2019: £216 million) for which unobservable inputs that are significant to the fair value measurement must be used in the valuation models. This results in management having to make estimates in relation to unobservable inputs, which increase the complexity and level of estimation uncertainty, and there is judgement involved in determining the methodology used to fair value these derivatives. Accordingly, we have identified this as an area of 'higher' audit risk.
How the scope of our audit responded to the key audit matter	We have tested the controls over the recording and valuation of derivative financial instruments. This has included testing of the review controls performed by management over the valuations and its challenge of the estimates made. In conjunction with our treasury specialists we have tested a sample of the valuation models used by management, including a challenge of the assumptions therein, to confirm the appropriateness of the valuation methodology adopted and the assumptions applied. We have obtained third party confirmations to test the completeness and accuracy of the information held within the Group's treasury management system. We have assessed the appropriateness of the hedge documentation, eligibility of designations and hedge effectiveness testing performed by management and tested the disclosures within the financial statements. We assessed whether the representation of items in the cash flow statement to reflect the change in accounting policy have been appropriately disclosed.
Key observations	Our testing confirmed that the relevant controls over the recording and valuation of derivative financial instruments were effective. We conclude that the valuation of derivatives and the Group's use of hedge accounting is appropriate. We are satisfied that the disclosures in respect of the cash flow statement accounting policy change, and the amounts represented in the prior year to reflect the updated policy, are appropriate.

5.7. IT user access controls

Key audit matter description	**IT systems fulfil a critical role in the Group's financial reporting and accordingly IT user access control deficiencies potentially impact all account balances. Refer additionally to the Audit Committee's discussion of significant issues on pages 76 – 78.** In the past two financial years (ended on 31 March 2019 and 31 March 2018), we identified deficiencies relating to segregation of duties, control over privileged access and user access management both within the Group and the Group's IT service organisations (together 'access deficiencies'). The deficiencies identified increased the risk that individuals within the Group and at service organisations had inappropriate access during the period. Management continued executing on their remediation programme commenced during the year ended 31 March 2018 in order to strengthen the IT control framework, and substantially completed the programme. The existence of deficiencies during the year results in an increased risk that data and reports from the affected systems are not reliable. The level of risk ascribed to our work in this area is dependent on the nature and complexity of the controls themselves and the balances within the financial statements the controls address.
How the scope of our audit responded to the key audit matter	In responding to the access deficiencies for in scope IT systems and the associated IT infrastructure, we have determined the impact that inappropriate levels of access throughout the year could feasibly have had on the affected systems and account balances including assessing the likelihood of inappropriate user access impacting the financial statements. Further, we tested controls implemented by management to identify instances of the use of inappropriate access, as well as mitigating controls included within management's remediation programme. Where no such controls existed, we extended the scope of our audit such that we have not placed reliance on controls for information produced or held in the impacted systems.
Key observations	A number of the deficiencies identified as unremediated in the prior year were remediated by year-end. We do not consider the remaining deficiencies to be significant and we found the mitigating controls implemented by management operated effectively. Due to the fact that the newly remediated controls did not operate for the entire year, we conducted a largely substantive audit in the areas impacted by the access deficiencies. We continued to rely on controls in certain areas where the IT systems were not impacted by the access deficiencies.

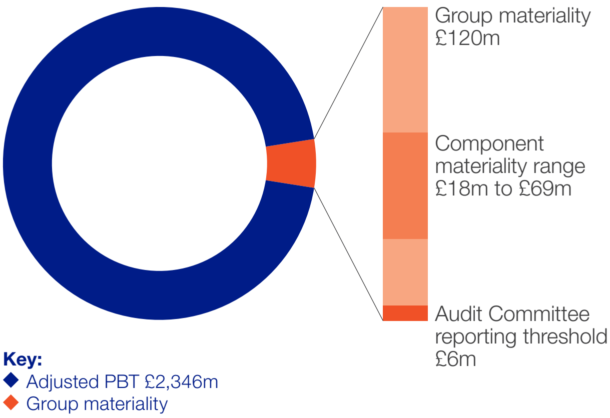
6. Our application of materiality

6.1. Materiality

We define materiality as the magnitude of misstatement in the financial statements that makes it probable that the economic decisions of a reasonably knowledgeable person would be changed or influenced. We use materiality both in planning the scope of our audit work and in evaluating the results of our work.

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

	Group financial statements	Parent company financial statements
Materiality	£120 million (2019: £124 million).	£100 million (2019: £100 million).
Basis for determining materiality	Our determined materiality represents 5.1% of adjusted profit before tax and 6.8% of statutory profit before tax. Adjusted profit before tax is profit before tax, exceptional items and remeasurements as disclosed in the consolidated income statement. Prior year materiality was determined on a similar basis.	1.2% of net assets.
Rationale for the benchmark applied	We consider adjusted profit before tax to be an important benchmark of the performance of the Group. We consider it appropriate to adjust for exceptional items and remeasurements as these items are volatile and not reflective of the underlying performance of the Group. We conducted an assessment of which line items we understand to be the most important to investors and analysts by reviewing analyst reports and National Grid's communications to shareholders and lenders, as well as the communications of peer companies. This assessment resulted in us considering the financial statement line items above. Profit before tax is the benchmark ordinarily considered by us when auditing listed entities. It provides comparability against other companies across all sectors, but has limitations when auditing companies whose earnings are impacted by items which can be volatile from one period to the next, and therefore may not be representative of the volume of transactions and the overall size of the business in a given year, or where the impact of volatility may result in the recognition of material income or charges in a particular year. Whilst not an IFRS measure, adjusted profit is one of the key metrics communicated by management in National Grid's results announcements. It excludes some of the volatility arising from changes in fair values of financial assets and liabilities as well as "exceptional items" and this was the key measure applied in the prior year.	As the Company is non-trading, operates primarily as a holding company for the Group's trading entities, and is not profit orientated, we believe the net asset position is the most appropriate benchmark to use.



6.2. Performance materiality

We set performance materiality at a level lower than materiality to reduce the probability that, in aggregate, uncorrected and undetected misstatements exceed the materiality for the financial statements as a whole. Group performance materiality was set at £92.0 million for the 2020 audit (2019: £86.8 million), or 77% of Group materiality (2019: 70%). In determining to increase performance materiality, we considered the following factors:

- our cumulative experience from prior year audits;
- the level of corrected and uncorrected misstatements identified;
- our risk assessment, including our understanding of the entity and its environment; and
- our assessment of the Group's overall control environment.

Independent auditor's report
to the members of National Grid plc continued

6. Our application of materiality continued

6.3. Error reporting threshold

We agreed with the Audit Committee that we would report to the Committee all audit differences in excess of £6.0 million (2019: £6.2 million), as well as differences below that threshold which, in our view, warranted reporting on qualitative grounds. We also report to the Audit Committee on disclosure matters that we identified when assessing the overall presentation of the financial statements.

7. An overview of the scope of our audit

The following significant components of the Group were identified in our audit planning: UK Electricity Transmission, UK Gas Transmission and US Regulated. Each of these components was subjected to a full-scope audit for Group reporting purposes, completed to the individual component materiality level discussed above.

As each of the financially significant components maintains separate financial records we have engaged component auditors from the Deloitte member firms in the US or the UK to perform procedures at these components on our behalf. This approach allows us to engage local auditors who have appropriate knowledge of local regulations to perform this audit work. We issued detailed instructions to the component auditors and directed and supervised their work through a number of visits to the component auditors during the planning and performance stages of our audit alongside frequent remote communication and review of their work. In response to the COVID-19 pandemic which limited our ability to make component visits after the year end, frequent calls were held between the Group and component teams and remote access to relevant documents was provided.

Our oversight of component auditors focused on the planning of their audit work and key judgements made. In particular, our supervision and direction focused on the work performed in relation to key audit matters including internal controls (including general IT controls), environmental provisions, pensions, treasury derivative transactions and the classification of exceptional items. As part of our monitoring of component auditors we have also attended key local audit meetings.

Additionally our audit planning identified the following non-significant components where we consider there to be a reasonable possibility of material misstatement in specific items within the financial statements: UK Property, the Isle of Grain LNG terminal and the Metering business. Accordingly, we have directed component auditors to perform specific audit procedures in relation to material account balances and analytical procedures on the respective income statements and statements of financial position for these components. The work on these components is carried out by the same component audit team as for the UK Electricity Transmission and UK Gas Transmission components.

In addition to the work performed at a component level the Group audit team also performed audit procedures on the parent company financial statements, including but not limited to corporate activities such as treasury and pensions as well as on the consolidated financial statements themselves, including entity-level controls, litigation provisions, the consolidation, financial statement disclosures and risk assessment work on components not included elsewhere in the scope of our audit. The Group audit team also led the work in connection with the impact of climate change on the useful lives of the Group's gas assets and co-ordinated certain procedures performed on key areas, such as environmental provisions, where audit work is performed by both the Group and component audit teams as well as analytical reviews on out-of-scope components.

Revenue (%)

Gross assets (%)

Gross liabilities (%)

8. Other information

The directors are responsible for the other information. The other information comprises the information included in the Annual Report, other than the financial statements and our auditor's report thereon.

Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated.

If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether there is a material misstatement in the financial statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact.

In this context, matters that we are specifically required to report to you as uncorrected material misstatements of the other information include where we conclude that:

- **Fair, balanced and understandable** – the statement given by the directors that they consider the Annual Report and financial statements taken as a whole is fair, balanced and understandable and provides the information necessary for shareholders to assess the Group's position and performance, business model and strategy, is materially inconsistent with our knowledge obtained in the audit; or
- **Audit Committee reporting** – the section describing the work of the Audit Committee does not appropriately address matters communicated by us to the Audit Committee; or
- **Directors' statement of compliance with the UK Corporate Governance Code** – the parts of the directors' statement required under the Listing Rules relating to the Company's compliance with the UK Corporate Governance Code containing provisions specified for review by the auditor in accordance with Listing Rule 9.8.10R(2) do not properly disclose a departure from a relevant provision of the UK Corporate Governance Code.

We have nothing to report in respect of these matters.

9. Responsibilities of directors

As explained more fully in the directors' responsibilities statement, the directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the directors determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

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

10. Auditor's responsibilities for the audit of the financial statements

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

Details of the extent to which the audit was considered capable of detecting irregularities, including fraud and non-compliance with laws and regulations are set out below.

A further description of our responsibilities for the audit of the financial statements is located on the FRC's website at: www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditor's report.

11. Extent to which the audit was considered capable of detecting irregularities, including fraud

We identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and then design and perform audit procedures responsive to those risks, including obtaining audit evidence that is sufficient and appropriate to provide a basis for our opinion.

11.1. Identifying and assessing potential risks related to irregularities

In identifying and assessing risks of material misstatement in respect of irregularities, including fraud and non-compliance with laws and regulations, we considered the following:

- the nature of the industry and sector, control environment and business performance including the design of the Group's remuneration policies, key drivers for directors' remuneration, bonus levels and performance targets;
- results of our enquiries of management, internal audit and the Audit Committee about their own identification and assessment of the risks of irregularities;
- any matters we identified having obtained and reviewed the Group's documentation of their policies and procedures relating to:
  - identifying, evaluating and complying with laws and regulations and whether they were aware of any instances of non-compliance;
  - detecting and responding to the risks of fraud and whether they have knowledge of any actual, suspected or alleged fraud;
  - the internal controls established to mitigate risks of fraud or non-compliance with laws and regulations;
- the matters discussed among the audit engagement team including significant component audit teams and involving relevant internal specialists, including tax, pensions, IT, and treasury specialists regarding how and where fraud might occur in the financial statements and any potential indicators of fraud. The engagement team includes audit partners and staff who have extensive experience of working with companies in the same sectors as National Grid operates, and this experience was relevant to the discussion about where fraud risks may arise. The discussion was also carried out across the engagement team specific to the potential fraud implications of COVID-19 in relation to added financial pressures as well as in relation to increases in remote working.

In common with all audits under ISAs (UK), we are also required to identify management override as a significant risk and to perform specific procedures to respond to that risk.

We also obtained an understanding of the legal and regulatory frameworks that the Group operates in, focusing on provisions of those laws and regulations that had a direct effect on the determination of material amounts and disclosures in the financial statements. The key laws and regulations we considered in this context included the UK Companies Act 2006, the UK Listing Rules, pensions and tax legislation, US Securities Exchange Act 1934 and relevant SEC regulations, as well as laws and regulations prevailing in each country in which we identified a full scope component. In addition, compliance with terms of the Group's operating licence and environmental regulations were fundamental to the Group's operations.

In addition, we considered provisions of other laws and regulations that do not have a direct effect on the financial statements but compliance with which may be fundamental to the Group's ability to operate or to avoid a material penalty. These included the Group's operating licences and environmental regulations.

11.2. Audit response to risks identified

As a result of performing the above, we did not identify any key audit matters related to the potential risk of fraud or non-compliance with laws and regulations.

Our procedures to respond to risks identified included the following:

- reviewing the financial statement disclosures and testing to supporting documentation to assess compliance with provisions of relevant laws and regulations described as having a direct effect on the financial statements;
- enquiring of management, the Audit Committee and in-house legal counsel concerning actual and potential litigation and claims;
- performing analytical procedures to identify any unusual or unexpected relationships that may indicate risks of material misstatement due to fraud;
- reading minutes of meetings of those charged with governance, reviewing internal audit reports and reviewing correspondence with relevant regulatory authorities;
- in addressing the risk of fraud through management override of controls, testing the appropriateness of journal entries and other adjustments; assessing whether the judgements made in making accounting estimates are indicative of a potential bias; and evaluating the business rationale of any significant transactions that are unusual or outside the normal course of business.

We also communicated relevant identified laws and regulations and potential fraud risks to all engagement team members including internal specialists and significant component audit teams, and remained alert to any indications of fraud or non-compliance with laws and regulations throughout the audit.

Independent auditor's report
to the members of National Grid plc continued

Report on other legal and regulatory requirements

12. Opinions on other matters prescribed by the Companies Act 2006

In our opinion the part of the directors' remuneration report to be audited has been properly prepared in accordance with the Companies Act 2006.

In our opinion, based on the work undertaken in the course of the audit:

- the information given in the strategic report and the directors' report for the financial year for which the financial statements are prepared is consistent with the financial statements; and
- the strategic report and the directors' report have been prepared in accordance with applicable legal requirements.

In the light of the knowledge and understanding of the Group and the parent company and their environment obtained in the course of the audit, we have not identified any material misstatements in the strategic report or the directors' report.

13. Matters on which we are required to report by exception

13.1. Adequacy of explanations received and accounting records

Under the Companies Act 2006 we are required to report to you if, in our opinion:

- we have not received all the information and explanations we require for our audit; or
- adequate accounting records have not been kept by the parent company, or returns adequate for our audit have not been received from branches not visited by us; or
- the parent company financial statements are not in agreement with the accounting records and returns.

We have nothing to report in respect of these matters.

13.2. Directors' remuneration

Under the Companies Act 2006 we are also required to report if in our opinion certain disclosures of directors' remuneration have not been made or the part of the directors' remuneration report to be audited is not in agreement with the accounting records and returns.

We have nothing to report in respect of these matters.

14. Other matters

14.1. Auditor tenure

We became independent and commenced our audit transition on 1 January 2017. Following the recommendation of the audit committee, we were appointed by the Shareholders at the Annual General Meeting on 31 July 2017 to audit the financial statements for the year ending 31 March 2018 and subsequent financial periods.

The period of total uninterrupted engagement including previous renewals and reappointments of the firm is three years, covering the years ending 31 March 2018 to 31 March 2020.

14.2. Consistency of the audit report with the additional report to the Audit Committee

Our audit opinion is consistent with the additional report to the Audit Committee we are required to provide in accordance with ISAs (UK).

15. Use of our report

This report is made solely to the company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the company and the company's members as a body, for our audit work, for this report, or for the opinions we have formed.

Douglas King FCA (Senior statutory auditor)
For and on behalf of Deloitte LLP
Statutory Auditor
London, United Kingdom
17 June 2020

Consolidated income statement
for the years ended 31 March

2020	Notes	Before exceptional items and remeasurements £m	Exceptional items and remeasurements (see note 5) £m	Total £m
Continuing operations				
Revenue	2(a),3	**14,540**	**–**	**14,540**
Provision for bad and doubtful debts	4	**(234)**	**–**	**(234)**
Other operating costs	4,5	**(10,999)**	**(527)**	**(11,526)**
Operating profit/(loss)	2(b)	**3,307**	**(527)**	**2,780**
Finance income	5,6	**70**	**(16)**	**54**
Finance costs	5,6	**(1,119)**	**(48)**	**(1,167)**
Share of post-tax results of joint ventures and associates	5,16	**88**	**(1)**	**87**
Profit/(loss) before tax	2(b),5	**2,346**	**(592)**	**1,754**
Tax	5,7	**(433)**	**(47)**	**(480)**
Profit/(loss) after tax from continuing operations	5	**1,913**	**(639)**	**1,274**
Profit/(loss) after tax from discontinued operations	10	**5**	**(14)**	**(9)**
Total profit/(loss) for the year (continuing and discontinued)		**1,918**	**(653)**	**1,265**
Attributable to:				
Equity shareholders of the parent		**1,917**	**(653)**	**1,264**
Non-controlling interests from continuing operations		**1**	**–**	**1**
Earnings per share (pence)				
Basic earnings per share (continuing)	8			**36.8**
Diluted earnings per share (continuing)	8			**36.6**
Basic earnings per share (continuing and discontinued)	8			**36.5**
Diluted earnings per share (continuing and discontinued)	8			**36.3**

2019	Notes	Before exceptional items and remeasurements £m	Exceptional items and remeasurements (see note 5) £m	Total £m
Continuing operations				
Revenue	2(a),3	14,933	–	14,933
Provision for bad and doubtful debts	4	(181)	–	(181)
Other operating costs	4,5	(11,310)	(572)	(11,882)
Operating profit/(loss)	2(b)	3,442	(572)	2,870
Finance income	5,6	73	15	88
Finance costs	5,6	(1,066)	(91)	(1,157)
Share of post-tax results of joint ventures and associates	10,16	40	–	40
Profit/(loss) before tax	2(b),5	2,489	(648)	1,841
Tax	5,7	(488)	149	(339)
Profit/(loss) after tax from continuing operations	5	2,001	(499)	1,502
Profit/(loss) after tax from discontinued operations	10	57	(45)	12
Total profit/(loss) for the year (continuing and discontinued)		2,058	(544)	1,514
Attributable to:				
Equity shareholders of the parent		2,055	(544)	1,511
Non-controlling interests from continuing operations		3	–	3
Earnings per share (pence)				
Basic earnings per share (continuing)	8			44.3
Diluted earnings per share (continuing)	8			44.1
Basic earnings per share (continuing and discontinued)	8			44.6
Diluted earnings per share (continuing and discontinued)	8			44.4

Consolidated income statement
for the years ended 31 March continued

2018	Notes	Before exceptional items and remeasurements £m	Exceptional items and remeasurements (see note 5) £m	Total £m
Continuing operations				
Revenue	2(a)	15,250	–	15,250
Provision for bad and doubtful debts	4	(36)	–	(36)
Other operating costs	4,5	(11,757)	36	(11,721)
Operating profit	2(b)	3,457	36	3,493
Finance income	6	127	–	127
Finance costs	5,6	(1,128)	119	(1,009)
Share of post-tax results of joint ventures and associates	10	44	5	49
Profit before tax	2(b),5	2,500	160	2,660
Tax	5,7	(584)	1,473	889
Profit after tax from continuing operations	5	1,916	1,633	3,549
Profit/(loss) after tax from discontinued operations	10	145	(143)	2
Total profit for the year (continuing and discontinued)		2,061	1,490	3,551
Attributable to:				
Equity shareholders of the parent		2,060	1,490	3,550
Non-controlling interests from continuing operations		1	–	1
Earnings per share (pence)				
Basic earnings per share (continuing)	8			102.5
Diluted earnings per share (continuing)	8			102.1
Basic earnings per share (continuing and discontinued)	8			102.6
Diluted earnings per share (continuing and discontinued)	8			102.1

Consolidated statement of comprehensive income
for the years ended 31 March

	Notes	2020 £m	2019 £m	2018 £m
Profit after tax from continuing operations		**1,274**	1,502	3,549
Other comprehensive income from continuing operations				
Items from continuing operations that will never be reclassified to profit or loss:				
Remeasurement (losses)/gains on pension assets and post-retirement benefit obligations	25	**(724)**	68	1,313
Net losses on equity instruments designated at fair value through other comprehensive income		**(9)**	–	–
Net (losses)/gains on financial liability designated at fair value through profit and loss attributable to changes in own credit risk		**(3)**	7	–
Net losses in respect of cash flow hedging of capital expenditure		**(17)**	(13)	–
Tax on items that will never be reclassified to profit or loss	7	**212**	(15)	(530)
Total items from continuing operations that will never be reclassified to profit or loss		**(541)**	47	783
Items from continuing operations that may be reclassified subsequently to profit or loss:				
Exchange adjustments		**551**	347	(505)
Net (losses)/gains in respect of cash flow hedges		**(128)**	(40)	16
Net losses in respect of cost of hedging		**(78)**	(66)	–
Net losses on available-for-sale investments		**–**	–	(30)
Transferred to profit or loss on sale of available-for-sale investments		**–**	–	(73)
Net (losses)/gains on investment in debt instruments measured at fair value through other comprehensive income		**(15)**	2	–
Share of other comprehensive (losses)/income of associates, net of tax		**(5)**	1	–
Tax on items that may be reclassified subsequently to profit or loss	7	**35**	12	33
Total items from continuing operations that may be reclassified subsequently to profit or loss		**360**	256	(559)
Other comprehensive (loss)/income for the year, net of tax from continuing operations		**(181)**	303	224
Other comprehensive income for the year, net of tax from discontinued operations[1]	10	**6**	36	147
Other comprehensive (loss)/income for the year, net of tax		**(175)**	339	371
Total comprehensive income for the year from continuing operations		**1,093**	1,805	3,773
Total comprehensive (loss)/income for the year from discontinued operations	10	**(3)**	48	149
Total comprehensive income for the year		**1,090**	1,853	3,922
Attributable to:				
Equity shareholders of the parent				
From continuing operations		**1,091**	1,801	3,773
From discontinued operations		**(3)**	48	149
		1,088	1,849	3,922
Non-controlling interests				
From continuing operations		**2**	4	–

1. The other comprehensive income from discontinued operations relates to the items of other comprehensive income of Cadent (investment through Quadgas HoldCo Limited). Refer to note 10 for details.

Consolidated statement of changes in equity
for the years ended 31 March

	Share capital £m	Share premium account £m	Retained earnings £m	Other equity reserves[1] £m	Total shareholders' equity £m	Non-controlling interests £m	Total equity £m
At 31 March 2017	449	1,324	22,582	(3,987)	20,368	16	20,384
Profit for the year	–	–	3,550	–	3,550	1	3,551
Other comprehensive income/(loss) for the year	–	–	925	(553)	372	(1)	371
Total comprehensive income/(loss) for the year	–	–	4,475	(553)	3,922	–	3,922
Equity dividends	–	–	(4,487)	–	(4,487)	–	(4,487)
Scrip dividend-related share issue[2]	3	(3)	–	–	–	–	–
Purchase of treasury shares	–	–	(1,017)	–	(1,017)	–	(1,017)
Issue of treasury shares	–	–	33	–	33	–	33
Purchase of own shares	–	–	(5)	–	(5)	–	(5)
Share-based payments	–	–	16	–	16	–	16
Tax on share-based payments	–	–	2	–	2	–	2
At 31 March 2018 (as previously reported)	452	1,321	21,599	(4,540)	18,832	16	18,848
Impact of transition to IFRS 9 and IFRS 15	–	–	(268)	72	(196)	–	(196)
At 1 April 2018 (as restated)	452	1,321	21,331	(4,468)	18,636	16	18,652
Profit for the year	–	–	1,511	–	1,511	3	1,514
Other comprehensive income for the year	–	–	89	249	338	1	339
Total comprehensive income for the year	–	–	1,600	249	1,849	4	1,853
Equity dividends	–	–	(1,160)	–	(1,160)	–	(1,160)
Scrip dividend-related share issue[2]	6	(7)	–	–	(1)	–	(1)
Issue of treasury shares	–	–	18	–	18	–	18
Purchase of own shares	–	–	(2)	–	(2)	–	(2)
Share-based payments	–	–	27	–	27	–	27
Cash flow hedges transferred to the statement of financial position, net of tax	–	–	–	(18)	(18)	–	(18)
At 1 April 2019	458	1,314	21,814	(4,237)	19,349	20	19,369
Profit for the year	–	–	1,264	–	1,264	1	1,265
Other comprehensive (loss)/income for the year	–	–	(509)	333	(176)	1	(175)
Total comprehensive income for the year	–	–	755	333	1,088	2	1,090
Equity dividends	–	–	(892)	–	(892)	–	(892)
Scrip dividend-related share issue[2]	12	(13)	–	–	(1)	–	(1)
Issue of treasury shares	–	–	17	–	17	–	17
Purchase of own shares	–	–	(6)	–	(6)	–	(6)
Share-based payments	–	–	19	–	19	–	19
Tax on share-based payments	–	–	3	–	3	–	3
Cash flow hedges transferred to the statement of financial position, net of tax	–	–	–	(15)	(15)	–	(15)
At 31 March 2020	**470**	**1,301**	**21,710**	**(3,919)**	**19,562**	**22**	**19,584**

1. For further details of other equity reserves, see note 28.
2. Included within the share premium account are costs associated with scrip dividends.

Consolidated statement of financial position
as at 31 March

	Notes	2020 £m	2019 £m
Non-current assets			
Goodwill	11	**6,233**	5,869
Other intangible assets	12	**1,295**	1,084
Property, plant and equipment	13	**48,770**	43,913
Other non-current assets	14	**354**	264
Pension assets	25	**1,849**	1,567
Financial and other investments	15	**543**	667
Investments in joint ventures and associates	16	**995**	608
Derivative financial assets	17	**1,249**	1,045
Total non-current assets		**61,288**	55,017
Current assets			
Inventories and current intangible assets	18	**549**	370
Trade and other receivables	19	**2,986**	3,153
Current tax assets		**102**	126
Financial and other investments	15	**1,998**	1,981
Derivative financial assets	17	**93**	108
Cash and cash equivalents	20	**73**	252
Assets held for sale	10	**–**	1,956
Total current assets		**5,801**	7,946
Total assets		**67,089**	62,963
Current liabilities			
Borrowings	21	**(4,072)**	(4,472)
Derivative financial liabilities	17	**(380)**	(350)
Trade and other payables	22	**(3,602)**	(3,769)
Contract liabilities	23	**(76)**	(61)
Current tax liabilities		**(86)**	(161)
Provisions	26	**(348)**	(316)
Total current liabilities		**(8,564)**	(9,129)
Non-current liabilities			
Borrowings	21	**(26,722)**	(24,258)
Derivative financial liabilities	17	**(954)**	(833)
Other non-current liabilities	24	**(891)**	(808)
Contract liabilities	23	**(1,082)**	(933)
Deferred tax liabilities	7	**(4,184)**	(3,965)
Pensions and other post-retirement benefit obligations	25	**(2,802)**	(1,785)
Provisions	26	**(2,306)**	(1,883)
Total non-current liabilities		**(38,941)**	(34,465)
Total liabilities		**(47,505)**	(43,594)
Net assets		**19,584**	19,369
Equity			
Share capital	27	**470**	458
Share premium account		**1,301**	1,314
Retained earnings		**21,710**	21,814
Other equity reserves	28	**(3,919)**	(4,237)
Total shareholders' equity		**19,562**	19,349
Non-controlling interests		**22**	20
Total equity		**19,584**	19,369

The consolidated financial statements set out on pages 121 to 208 were approved by the Board of Directors on 17 June 2020 and were signed on its behalf by:

Sir Peter Gershon Chairman
Andy Agg Chief Financial Officer

National Grid plc
Registered number: 4031152

Consolidated cash flow statement
for the years ended 31 March

	Notes	**2020 £m**	2019 £m	2018 £m
Cash flows from operating activities				
Total operating profit from continuing operations	2(b)	**2,780**	2,870	3,493
Adjustments for:				
Exceptional items and remeasurements	5	**527**	572	(36)
Depreciation, amortisation and impairment		**1,640**	1,588	1,530
Share-based payments		**19**	27	16
Changes in working capital		**269**	40	118
Changes in provisions		**(169)**	(110)	(206)
Changes in pensions and other post-retirement benefit obligations		**(92)**	(123)	(239)
Cash flows relating to exceptional items		**(60)**	(400)	26
Cash generated from operations – continuing operations		**4,914**	4,464	4,702
Tax (paid)/recovered		**(199)**	(75)	8
Net cash inflow from operating activities – continuing operations		**4,715**	4,389	4,710
Net cash used in operating activities – discontinued operations	10	**(97)**	(71)	(207)
Cash flows from investing activities				
Acquisition of financial investments		**(108)**	(89)	(2)
Acquisition of Geronimo and Emerald	38	**(139)**	–	–
Investments in joint ventures and associates		**(82)**	(143)	(129)
Loans to joint ventures and associates		**–**	(31)	(68)
Disposal of financial investments		**63**	18	134
Disposal of 61% interest in UK Gas Distribution		**–**	–	(20)
Disposal of interests in Quadgas HoldCo Limited	10	**1,965**	–	–
Purchases of intangible assets		**(317)**	(306)	(173)
Purchases of property, plant and equipment		**(4,583)**	(3,635)	(3,738)
Disposals of property, plant and equipment		**68**	38	10
Dividends received from joint ventures and associates		**75**	68	69
Interest received		**73**	68	30
Net movements in short-term financial investments		**7**	822	5,953
Net movements in derivatives[1]		**(223)**	(412)	330
Net cash flow (used in)/from investing activities – continuing operations		**(3,201)**	(3,602)	2,396
Net cash flow used in investing activities – discontinued operations	10	**6**	156	171
Cash flows from financing activities				
Purchase of treasury shares		**–**	–	(1,017)
Proceeds from issue of treasury shares		**16**	17	33
Purchase of own shares		**(6)**	(2)	(5)
Proceeds received from loans	29(c)	**4,218**	2,932	1,941
Repayment of loans	29(c)	**(3,253)**	(1,969)	(2,156)
Payments of lease liabilities	29(c)	**(121)**	(70)	(71)
Net movements in short-term borrowings	29(c)	**(424)**	179	(764)
Net movements in derivatives[1]	29(c)	**(187)**	35	(267)
Interest paid	29(c)	**(957)**	(914)	(853)
Dividends paid to shareholders		**(892)**	(1,160)	(4,487)
Net cash flow used in financing activities – continuing operations		**(1,606)**	(952)	(7,646)
Net cash flow (used in)/from financing activities – discontinued operations	10	**–**	–	(231)
Net decrease in cash and cash equivalents	29(a)	**(183)**	(80)	(807)
Exchange movements		**4**	3	(3)
Cash and cash equivalents at start of year		**252**	329	1,139
Cash and cash equivalents at end of year	20	**73**	252	329

1. Certain derivative balances have been represented for all periods presented to reflect a reclassification from financing activities to investing activities to reflect a change in accounting policy (see note 1 for details).

Notes to the consolidated financial statements
– analysis of items in the primary statements

1. Basis of preparation and recent accounting developments

Accounting policies describe our approach to recognising and measuring transactions and balances in the year. The accounting policies applicable across the financial statements are shown below, whereas accounting policies that are specific to a component of the financial statements have been incorporated into the relevant note.

This section also shows areas of judgement and key sources of estimation uncertainty in these financial statements. In addition, we have summarised new International Accounting Standards Board (IASB) and EU endorsed accounting standards, amendments and interpretations and whether these are effective for this year end or in later years, explaining how significant changes are expected to affect our reported results.

National Grid's principal activities involve the transmission and distribution of electricity and gas in Great Britain and northeastern US. The Company is a public limited liability company incorporated and domiciled in England and Wales, with its registered office at 1–3 Strand, London WC2N 5EH.

The Company, National Grid plc, which is the ultimate parent of the Group, has its primary listing on the London Stock Exchange and is also quoted on the New York Stock Exchange.

These consolidated financial statements were approved for issue by the Board on 17 June 2020.

These consolidated financial statements have been prepared in accordance with International Accounting Standards (IAS) and International Financial Reporting Standards (IFRS) and related interpretations as issued by the IASB and IFRS as adopted by the EU. They are prepared on the basis of all IFRS accounting standards and interpretations that are mandatory for periods ended 31 March 2020 and in accordance with the Companies Act 2006 applicable to companies reporting under IFRS and Article 4 of the EU IAS Regulation. The comparative financial information has also been prepared on this basis.

The consolidated financial statements have been prepared on a historical cost basis, except for the recording of pension assets and liabilities, the revaluation of derivative financial instruments and certain commodity contracts and certain financial assets and liabilities measured at fair value.

These consolidated financial statements are presented in pounds sterling, which is also the functional currency of the Company.

The notes to the financial statements have been prepared on a continuing basis unless otherwise stated.

Our income statement and segmental analysis separately identify financial results before and after exceptional items and remeasurements. We continue to use a columnar presentation as we consider it improves the clarity of the presentation, and is consistent with the way that financial performance is measured by management and reported to the Board and Executive Committee, and assists users of the financial statements to understand the results. The inclusion of total profit for the period from continuing operations before exceptional items and remeasurements forms part of the incentive target set annually for remunerating certain Executive Directors and accordingly we believe it is important for users of the financial statements to understand how this compares to our results on a statutory basis and period on period.

A. Going concern
As at the date of approving these financial statements, the impact of COVID-19 on the Group's operations is continually being assessed and subject to rapid change. The Directors have assessed the principal risks discussed on pages 24 – 25, including by modelling both a base case and a reasonable worst case scenario. The reasonable worst-case scenario covers the cash flow impact associated with an extended lockdown for a period of 12 months across both the UK and US. The main cash flow impacts identified in the reasonable worst-case scenario are:

- a significant reduction in cash collections over an extended 12-month period driven by lower customer demand and increased bad debt in our US businesses;
- additional working capital required to fund payment term extensions and charge deferrals in the UK electricity market, intended to help customers and end-user consumers;
- one-off increases in other costs such as cleaning, safety equipment and IT; offset by
  - a reduction in non-essential capital expenditure across the Group driven by increased absenteeism, supply chain issues and difficulty in accessing sites; and
  - a reduction in discretionary spend across all areas (e.g. recruitment, travel and consultancy spend).

As part of their analysis, the Board also considered the following potential levers at their discretion to improve the position identified by the reasonable worst-case scenario in the event that the debt capital markets are not accessible:

- further significant changes in the phasing of the Group's capital programme with elements of non-essential works and programmes delayed beyond June 2021;
- a number of further reductions in operating expenditure across the Group primarily related to workforce cost reductions in both the UK and the US; and
- the payment of dividends to shareholders.

Having considered the reasonable worst-scenario and further levers at the Board's discretion, the Group continues to have headroom against the Group's committed facilities identified in note 33 to the financial statements.

In addition to the above, the ability to raise new financing was separately included in the analysis and the Directors noted the £0.9 billion debt issuances completed in April 2020 (disclosed in note 21 to the financial statements) as evidence of the Group's ability to continue to have access to the debt capital markets if needed. Other factors considered by the Board as part of their Going Concern assessment included the potential impact of Brexit trade talks, the Group's various ongoing rate case determinations in the UK and US alongside inherent uncertainties in cash flow forecasts (such as the impact of storms in our US business).

Based on the above, the Directors have concluded the Group is well placed to manage its financing and other business risks satisfactorily, and have a reasonable expectation that the Group will have adequate resources to continue in operation for at least 12 months from the signing date of these consolidated financial statements. They therefore consider it appropriate to adopt the going concern basis of accounting in preparing the financial statements.

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

1. Basis of preparation and recent accounting developments continued

B. Basis of consolidation
The consolidated financial statements incorporate the results, assets and liabilities of the Company and its subsidiaries, together with a share of the results, assets and liabilities of joint operations.

A subsidiary is defined as an entity controlled by the Group. Control is achieved where the Group is exposed to, or has the rights to, variable returns from its involvement with the entity and has the power to affect those returns through its power over the entity.

The Group accounts for joint ventures and associates using the equity method of accounting, where the investment is carried at cost plus post-acquisition changes in the share of net assets of the joint venture or associate, less any provision for impairment. Losses in excess of the consolidated interest in joint ventures and associates are not recognised, except where the Company or its subsidiaries have made a commitment to make good those losses.

Where necessary, adjustments are made to bring the accounting policies used in the individual financial statements of the Company, subsidiaries, joint operations, joint ventures and associates into line with those used by the Group in its consolidated financial statements under IFRS. Intercompany transactions are eliminated.

The results of subsidiaries, joint operations, joint ventures and associates acquired or disposed of during the year are included in the consolidated income statement from the effective date of acquisition or up to the effective date of disposal, as appropriate.

Acquisitions are accounted for using the acquisition method, where the purchase price is allocated to the identifiable assets acquired and liabilities assumed on a fair value basis and the remainder recognised as goodwill.

C. Treatment of interests in Quadgas HoldCo Limited (Quadgas) – discontinued operations and held for sale
At the end of June 2019, we completed the disposal of our retained 39% interest in the UK Gas Distribution business (held through Quadgas) that was classified as held for sale. We have treated the results and cash flows of Quadgas as a discontinued operation in the consolidated income statement and consolidated cash flow statement. Refer to note 10 for further details.

D. Foreign currencies
Transactions in currencies other than the functional currency of the Company or subsidiary concerned are recorded at the rates of exchange prevailing on the dates of the transactions. At each reporting date, monetary assets and liabilities that are denominated in foreign currencies are retranslated at closing exchange rates. Non-monetary assets are not retranslated unless they are carried at fair value.

Gains and losses arising on the retranslation of monetary assets and liabilities are included in the income statement, except where the application of hedge accounting requires inclusion in other comprehensive income (see note 32(e)).

On consolidation, the assets and liabilities of operations that have a functional currency different from the Company's functional currency of pounds sterling, principally our US operations that have a functional currency of US dollars, are translated at exchange rates prevailing at the reporting date. Income and expense items are translated at the average exchange rates for the period where these do not differ materially from rates at the date of the transaction. Exchange differences arising are recognised in other comprehensive income and transferred to the consolidated translation reserve within other equity reserves (see note 28).

E. Areas of judgement and key sources of estimation uncertainty
The preparation of financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosures of contingent assets and liabilities, and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from these estimates. Information about such judgements and estimations is in the notes to the financial statements, and the key areas are summarised below.

Areas of judgement that have the most significant effect on the amounts recognised in the financial statements are as follows:
- categorisation of certain items as exceptional items or remeasurements and the definition of adjusted earnings (see notes 5 and 8). In applying the Group's exceptional items framework, we have considered a number of key matters, as detailed in note 5;
- the judgement that notwithstanding legislation enacted and targets established during the year ended 31 March 2020 committing the UK, New York State and Massachusetts to achieving net zero greenhouse gas emissions by 2050, these do not trigger a reassessment of the remaining useful economic lives of our gas network assets (see estimate below and note 13); and
- following the legal separation of the Electricity System Operator on 1 April 2019, we concluded that the Electricity System Operator acts as an agent in respect of certain Transmission Network Use of Service revenues, principally those collected on behalf of the Scottish and Offshore transmission operators, as detailed in note 3.

Key sources of estimation uncertainty that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are as follows:
- the valuation of liabilities for pensions and other post-retirement benefits (see note 25); and
- the cash flows applied in determining the environmental provisions, in particular relating to three US Superfund sites (see note 26).

In light of the current ongoing impact of the COVID-19 pandemic, valuations of certain assets and liabilities are necessarily more subjective. In particular, two further areas of estimation uncertainty impacting the Group's position as at 31 March 2020 have been identified:

- the valuation of certain pension assets, in particular unquoted equities, properties and diversified alternatives, in light of the volatile economic markets (see note 25); and
- the recoverability of customer receivables, particularly in relation to US retail customers, in light of the suspension of debt collection activities and customer termination activities (see note 19).

In addition, we also highlight the estimates made regarding the useful economic lives of our gas network assets due to the length over which they are being depreciated, the potential for new and evolving technologies over that period, and the range of potential pathways for meeting net zero targets (see note 13 for details and sensitivity analysis).

In order to illustrate the impact that changes in assumptions for the valuation of pension assets and liabilities and cash flows for environmental provisions could have on our results and financial position, we have included sensitivity analyses in note 35. Information on what we believe a reasonably possible range of outcomes to be on recoverability of customer receivables are included in note 19.

1. Basis of preparation and recent accounting developments continued

F. Accounting policy choices

IFRS provides certain options available within accounting standards. Choices we have made, and continue to make, include the following:

- Presentational formats: we use the nature of expense method for our income statement and aggregate our statement of financial position to net assets and total equity. In the income statement, we present subtotals of total operating profit, profit before tax and profit after tax from continuing operations, together with additional subtotals excluding exceptional items and remeasurements as a result of the three columnar presentation described earlier. Exceptional items and remeasurements are presented in a separate column on the face of the income statement.
- Financial instruments: we normally opt to apply hedge accounting in most circumstances where this is permitted (see note 32(e)).
- Cash flow statement: Following a review in the year, we have changed our accounting policy in relation to the presentation of derivatives in the cash flow statement, which has resulted in £412 million of cash outflows for 2019 and £330 million of cash inflows from 2018 to be presented as investing activities rather than financing activities. The reclassified cash flows are in relation to derivatives associated with our net investment hedges, and given they are designated in a hedge relationship, the Group has decided to present them together with the underlying hedged item rather than as part of our overall financing activities.

G. New IFRS accounting standards and interpretations effective for the year ended 31 March 2020

The Group adopted IFRS 16 'Leases' with effect from 1 April 2019. We have applied the modified retrospective approach permitted in the standard whereby prior year comparatives have not been restated on adoption. Instead, any cumulative transition adjustments are reflected through reserves. Refer to note 37 for full details of the impact and transition adjustments arising on adoption.

The UK's Financial Conduct Authority announced that LIBOR will cease to exist by the end of 2021, and will be replaced by alternative reference rates. In September 2019, the IASB amended IFRS 9 and IFRS 7 by issuing Interest Rate Benchmark Reform, which provides exceptions to specific hedge accounting requirements to ensure that hedging relationships are not considered to be modified as a result of the change in the reference rate. The amendments were endorsed in January 2020 for adoption in the EU. The Group early-adopted these changes to IFRS 9 and IFRS 7 with effect from 1 April 2019. There were no transition adjustments on adoption. Refer to note 32(e) for further details of the impact in the current period.

The Group has also adopted the following amendments to standards, which have had no material impact on the Group's results or financial statement disclosure:

- IFRIC 23 'Uncertainty over Income Tax Treatments';
- Amendments to IAS 28 'Investments in Associates – Long-term Interests in Associates and Joint Ventures';
- Annual Improvements to IFRS Standards 2015–2017 Cycle; and
- Amendments to IAS 19 'Employee Benefits'.

H. New IFRS accounting standards and interpretations not yet adopted

The following new accounting standards and amendments to existing standards have been issued but are not yet effective or have not yet been endorsed by the EU:

- IFRS 17 'Insurance Contracts';
- Amendments to IFRS 3 'Business Combinations';
- Amendments to the References to the Conceptual Framework;
- Amendments to IAS 1 and IAS 8: Definition of material; and
- Amendments to IAS 1 'Presentation of Financial Statements'.

Effective dates remain subject to the EU endorsement process.

The Group is currently assessing the impact of the above standards, but they are not expected to have a material impact. The Group has not adopted any other standard, amendment or interpretation that has been issued but is not yet effective.

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

2. Segmental analysis

This note sets out the financial performance for the year split into the different parts of the business (operating segments). The performance of these operating segments is monitored and managed on a day-to-day basis. Revenue and the results of the business are analysed by operating segment, based on the information the Board of Directors uses internally for the purposes of evaluating the performance of each operating segment and determining resource allocation between them. The Board is National Grid's chief operating decision maker (as defined by IFRS 8 'Operating Segments') and assesses the profitability of operations principally on the basis of operating profit before exceptional items and remeasurements (see note 5). As a matter of course, the Board also considers profitability by segment, excluding the effect of timing. However, the measure of profit disclosed in this note is operating profit before exceptional items and remeasurements as this is the measure that is most consistent with the IFRS results reported within these financial statements.

The results of our three principal businesses are reported to the Board of Directors and are treated as reportable operating segments. The following table describes the main activities for each reportable operating segment:

UK Electricity Transmission	The high-voltage electricity transmission networks in England and Wales and independent Great Britain system operator.
UK Gas Transmission	The high-pressure gas transmission networks in Great Britain and system operator in Great Britain.
US Regulated	Gas distribution networks, electricity distribution networks and high-voltage electricity transmission networks in New York and New England and electricity generation facilities in New York.

The UK Electricity Transmission segment also includes the independent Electricity System Operator (ESO). Although there is a separate governance structure (including a separate Executive Committee), the Board receives financial information on an aggregated UK Electricity Transmission basis, which includes the results of the ESO, and accordingly the ESO is included within the reportable segment.

National Grid Ventures (NGV) is our only other operating segment. It does not currently meet the thresholds set out in IFRS 8 to be identified as a separate reportable segment and therefore its results are not required to be separately presented. Instead, NGV's results are reported alongside the results of all other operating businesses on an aggregated basis as "NGV and Other", with certain additional disclosure included in footnotes.

NGV represents our key strategic growth area outside our regulated core business in competitive markets across the US and the UK. The business comprises all commercial operations in metering, LNG at the Isle of Grain in the UK, electricity interconnectors and our new investments in Geronimo Energy LLC (Geronimo) and Emerald Energy Venture LLC (Emerald). Geronimo is a developer of wind and solar generation based in Minneapolis in the US. The acquisition is National Grid's first ownership stake in wind generation and an expansion of our activities in solar generation.

Other activities that do not form part of any of the segments in the above table or NGV primarily relate to our UK property business together with insurance and corporate activities in the UK and US and the Group's investments in technology and innovation companies through National Grid Partners.

The segmental information is presented in relation to continuing operations only and therefore does not include the profits and losses relating to our interest in Quadgas for any period presented (see note 10).

(a) Revenue
Revenue primarily represents the sales value derived from the generation, transmission and distribution of energy, together with the sales value derived from the provision of other services to customers. Refer to note 3 for further details.

Sales between operating segments are priced considering the regulatory and legal requirements to which the businesses are subject. The analysis of revenue by geographical area is on the basis of destination. There are no material sales between the UK and US geographical areas.

	2020			2019			2018		
	Total sales £m	**Sales between segments £m**	**Sales to third parties £m**	Total sales £m	Sales between segments £m	Sales to third parties £m	Total sales £m	Sales between segments £m	Sales to third parties £m
Operating segments – continuing operations:									
UK Electricity Transmission	**3,702**	**(8)**	**3,694**	3,351	(20)	3,331	4,154	(28)	4,126
UK Gas Transmission	**927**	**(16)**	**911**	896	(12)	884	1,091	(9)	1,082
US Regulated	**9,205**	**–**	**9,205**	9,846	–	9,846	9,272	–	9,272
NGV and Other[1]	**736**	**(6)**	**730**	876	(4)	872	776	(6)	770
Total revenue from continuing operations	**14,570**	**(30)**	**14,540**	14,969	(36)	14,933	15,293	(43)	15,250
Split by geographical areas – continuing operations:									
UK			**5,282**			5,045			5,938
US			**9,258**			9,888			9,312
			14,540			14,933			15,250

1. Included within NGV and Other is £608 million (2019: £597 million; 2018: £593 million) of revenue relating to NGV.

2. Segmental analysis continued

(b) Operating profit

A reconciliation of the operating segments' measure of profit to profit before tax from continuing operations is provided below. Further details of the exceptional items and remeasurements are provided in note 5.

	Before exceptional items and remeasurements			After exceptional items and remeasurements		
	2020 £m	2019 £m	2018 £m	**2020 £m**	2019 £m	2018 £m
Operating segments – continuing operations:						
UK Electricity Transmission	**1,320**	1,015	1,041	**1,316**	778	1,041
UK Gas Transmission	**348**	303	487	**347**	267	487
US Regulated	**1,397**	1,724	1,698	**880**	1,425	1,734
NGV and Other[1,2]	**242**	400	231	**237**	400	231
Total operating profit from continuing operations	**3,307**	3,442	3,457	**2,780**	2,870	3,493
Split by geographical area – continuing operations:						
UK	**1,925**	1,695	1,840	**1,915**	1,422	1,840
US	**1,382**	1,747	1,617	**865**	1,448	1,653
	3,307	3,442	3,457	**2,780**	2,870	3,493

Below we reconcile total operating profit from continuing operations to profit before tax from continuing operations. Total operating exceptional items and remeasurements of £527 million charge (2019: £572 million charge; 2018: £36 million gain) are detailed in note 5. This is comprised of a £4 million charge (2019: £237 million charge; 2018: £nil) attributable to UK Electricity Transmission; £1 million charge (2019: £36 million charge; 2018: £nil) to UK Gas Transmission; £517 million charge (2019: £299 million charge; 2018: £36 million gain) to US Regulated; and £5 million charge (2019: £nil; 2018: £nil) to NGV and Other.

Reconciliation to profit before tax:						
Operating profit from continuing operations	**3,307**	3,442	3,457	**2,780**	2,870	3,493
Finance income	**70**	73	127	**54**	88	127
Finance costs	**(1,119)**	(1,066)	(1,128)	**(1,167)**	(1,157)	(1,009)
Share of post-tax results of joint ventures and associates	**88**	40	44	**87**	40	49
Profit before tax from continuing operations	**2,346**	2,489	2,500	**1,754**	1,841	2,660

1. Included within NGV and Other is £269 million (2019: £263 million; 2018: £234 million) of operating profit before exceptional items and remeasurements and £268 million of operating profit after exceptional items and remeasurements (2019: £263 million; 2018: £234 million), relating to NGV.
2. In 2019, NGV and Other included gains of £95 million in relation to cash received in respect of two legal settlements.

(c) Capital expenditure

Capital expenditure represents additions to property, plant and equipment and non-current intangibles but excludes additional investments in and loans to joint ventures and associates. In 2020, we transferred certain software assets and properties which are held outside the US rate base and operate for the benefit of our US Regulated businesses, that were previously included within the NGV and Other segment, to the US Regulated segment. See footnote 2.

	Net book value of property, plant and equipment and other intangible assets			Capital expenditure			Depreciation, amortisation and impairment		
	2020 £m	2019 £m	2018 £m	**2020 £m**	2019 £m	2018 £m	**2020 £m**	2019 £m	2018 £m
Operating segments:									
UK Electricity Transmission	**13,788**	13,288	13,028	**1,043**	925	999	**(469)**	(628)	(475)
UK Gas Transmission	**4,513**	4,412	4,280	**249**	308	310	**(171)**	(181)	(194)
US Regulated[2]	**29,623**	24,542	20,953	**3,228**	2,650	2,424	**(855)**	(700)	(635)
NGV and Other[1,2]	**2,141**	2,755	2,491	**559**	438	341	**(145)**	(226)	(226)
Total from continuing operations	**50,065**	44,997	40,752	**5,079**	4,321	4,074	**(1,640)**	(1,735)	(1,530)
Split by geographical area – continuing operations:									
UK	**20,427**	19,343	18,772	**1,847**	1,584	1,527	**(784)**	(931)	(804)
US	**29,638**	25,654	21,980	**3,232**	2,737	2,547	**(856)**	(804)	(726)
	50,065	44,997	40,752	**5,079**	4,321	4,074	**(1,640)**	(1,735)	(1,530)
Asset type:									
Property, plant and equipment	**48,770**	43,913	39,853	**4,727**	4,015	3,901	**(1,464)**	(1,560)	(1,392)
Non-current intangible assets	**1,295**	1,084	899	**352**	306	173	**(176)**	(175)	(138)
Total from continuing operations	**50,065**	44,997	40,752	**5,079**	4,321	4,074	**(1,640)**	(1,735)	(1,530)

1. Included within NGV and Other are assets with a net book value of £2,080 million (2019: £1,635 million; 2018: £1,454 million), capital expenditure of £550 million (2019: £317 million; 2018: £186 million) and depreciation, amortisation and impairment of £124 million (2019: £114 million; 2018: £143 million) relating to NGV.
2. In 2020, US Regulated includes certain software assets and properties in the US which are outside the US rate base and operate for the benefit of our US regulated businesses. These assets were included within NGV and Other in 2019 and 2018. The assets had a net book value of £1,062 million in 2019 and £998 million in 2018, capital expenditure of £87 million in 2019 and £161 million in 2018 and depreciation, amortisation and impairment of £102 million in 2019 and £80 million in 2018.

Total non-current assets other than financial instruments and pension assets located in the UK and US were £31,780 million and £25,867 million respectively as at 31 March 2020 (31 March 2019: UK £30,072 million, US £21,787 million; 31 March 2018: UK £20,816 million, US £27,663 million).

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

3. Revenue

Revenue arises in the course of ordinary activities and principally comprises:
- transmission services;
- distribution services; and
- generation services.

Transmission services, distribution services and certain other services (excluding rental income but including metering) fall within the scope of IFRS 15 ‘Revenue from Contracts with Customers’, whereas generation services (which solely relate to the contract with the Long Island Power Authority (LIPA) in the US) are accounted for under the leasing standard as rental income, also presented within revenue. Revenue is measured based on the consideration specified in a contract with a customer and excludes amounts collected on behalf of third parties and value added tax. The Group recognises revenue when it transfers control over a product or service to a customer.

IFRS 15 was adopted in the prior year and applied prospectively from 1 April 2018. Therefore, the analysis below is only provided for the current period and the immediate comparative period. Below, we include a description of principal activities, by reportable segment, from which the Group generates its revenue. For more detailed information about our segments, see note 2.

(a) UK Electricity Transmission
The UK Electricity Transmission segment principally generates revenue by providing electricity transmission services (both as transmission owner in England and Wales and system operator in Great Britain). Our business operates as a monopoly regulated by Ofgem, which has established price control mechanisms that set the amount of annual allowed returns our business can earn (along with the Scottish and Offshore transmission operators amongst others). The IFRS revenues we record are principally a function of volumes and price. Price is determined prior to our financial year-end with reference to the regulated allowed returns and estimated annual volumes. Where revenue received or receivable exceeds the maximum amount permitted by regulatory agreement, adjustments will be made to future prices to reflect this over-recovery. No liability is recognised, as such an adjustment to future prices relates to the provision of future services. Similarly, no asset is recognised where a regulatory agreement permits adjustments to be made to future prices in respect of an under-recovery. As part of our regulatory agreements we are entitled to recover certain costs directly from customers (pass-through costs). These amounts are included in the overall calculation of allowed revenue as stipulated by regulatory agreements.

The System Operator earns revenue for balancing supply and demand of electricity on the transmission system, where it acts as principal. Revenue is recognised as the service is provided. The System Operator also collects revenues on behalf of transmission operators, principally NGET and the Scottish and Offshore transmission operators, from users who connect to or use the transmission system. However, these amounts are paid to the transmission operators before the System Operator has collected payment from the users (electricity suppliers) and therefore the System Operator does hold some exposure to credit losses with electricity suppliers. The System Operator must set the charges paid by electricity suppliers by reference to the price control mechanism described above. That mechanism does not grant the System Operator with discretion to deviate from that mechanism. The transmission operators own and maintain the electricity network and receive direct feedback from electricity suppliers on the quality of the network they provide. There is a judgement about whether the System Operator acts as a principal or agent in respect of the transmission network revenues collected on behalf of the Scottish and Offshore transmission operators (as set out in note 1). We have concluded that it acts as an agent in respect of these transmission revenues and therefore records the attributable revenue net of operating costs.

The transmission of high-voltage electricity encompasses the following principal services:

- the supply of high-voltage electricity (including both transmission and system operator charges); and
- construction work (principally for connections).

For the supply of high-voltage electricity, revenue is recognised based on capacity and volumes. Our performance obligation is satisfied over time as our customers make use of our network. We bill monthly in arrears and our payment terms are up to 60 days.

For construction work relating to connections, customers can either pay over the useful life of the connection or upfront. Revenue is recognised over time, as we provide access to our network, and where the customer pays upfront, revenues are deferred and released over the life of the connection.

For other construction where there is no consideration for any future services, for example diversions (being the re-routing of network assets at our customers’ request), revenues are recognised as the construction work is completed.

(b) UK Gas Transmission
The UK Gas Transmission segment of the Group principally generates revenue by providing gas transmission services to our customers (both as transmission owner and as system operator) in Great Britain. Similar to our UK Electricity Transmission business, our business operates as a monopoly regulated by Ofgem. The price control mechanism in place that determines our annual allowances is also similar, as is the way in which revenue is recorded.

The transmission of gas encompasses the following principal services:

- the supply of high-pressure gas (including both transmission and system operator charges); and
- construction work (principally for connections).

For the supply of high-pressure gas, revenue is recognised based on capacity and volumes. Our performance obligation is satisfied over time as our customers make use of our network, and we bill monthly in arrears with payment terms of up to 45 days.

For construction work relating to connections, customers pay for the connection upfront. Revenue is recognised over time, as we provide access to our network. Where revenues are received upfront, they are deferred and released over the life of the connection.

For other construction where there is no consideration for any future services (such as diversions), revenues are recognised when the construction work is completed.

3. Revenue continued

(c) US Regulated

The US Regulated segment of the Group principally generates revenue by providing gas and electricity distribution services in New York and New England, high voltage electricity transmission services in New York and New England, and electricity generation in New York.

Distribution services

Provision of gas and electricity distribution services in New York and New England. This comprises the following principal services:

- Gas and electricity distribution: revenue is recognised based on usage by customers (over time) and billed monthly. Payment terms are 30 days; and
- Connections: revenue is recognised over time, as we provide access to our network. Where payments are made upfront, they are deferred over the life of the asset.

Transmission services

Provision of electricity transmission services to customers and operation of electricity transmission facilities. Our principal services are:

- Electricity transmission: revenue is recognised based on usage by customers (over time) and billed monthly. Payment terms are 30 days; and
- Connections: revenue is recognised over time, as we provide access to our network. Where payments are made upfront, they are deferred over the life of the asset.

Electricity generation

Provision of energy services and supply capacity to produce energy for the use of customers of the Long Island Power Authority (LIPA) through a power supply agreement. This falls within the scope of the leasing standard, where we act as lessor with rental income being recorded as other income, which forms part of total revenue.

(d) NGV and Other

NGV and Other includes electricity interconnectors, LNG at the Isle of Grain, Geronimo, metering, sales from our UK property business, rental income and insurance.

The Group recognises revenue from transmission services through interconnectors and LNG at the Isle of Grain by means of customers' use of capacity and volumes. Revenue is recognised over time and is billed monthly. Payment terms are up to 30 days.

Other revenue in the scope of IFRS 15 principally includes revenues from our UK metering business and sales of renewables projects from Geronimo to Emerald (see note 38). Revenue is recognised as it is earned. In the case of the UK metering business, revenue is billed monthly and payment terms are up to 30 days.

Other revenue, recognised in accordance with standards other than IFRS 15, includes property sales by our UK commercial property business (including sales to our St William joint venture) and rental income. Property sales are recorded at a point in time (when the sale is legally completed) and rental income is recorded over time.

(e) Disaggregation of revenue

In the following tables, revenue is disaggregated by primary geographical market and major service lines. The table reconciles disaggregated revenue with the Group's reportable segments (see note 2).

Revenue for the year ended 31 March 2020	UK Electricity Transmission £m	UK Gas Transmission £m	US Regulated £m	NGV and Other £m	Total £m
Revenue under IFRS 15					
Transmission	1,992	649	425	309	3,375
Distribution	–	–	8,319	–	8,319
System Operator	1,610	214	–	–	1,824
Other	69	15	12	296	392
Total IFRS 15 revenue	3,671	878	8,756	605	13,910
Other revenue					
Generation	–	–	369	–	369
Other	23	33	80	125	261
Total other revenue	23	33	449	125	630
Total revenue from continuing operations	3,694	911	9,205	730	14,540

Geographical split for the year ended 31 March 2020	UK Electricity Transmission £m	UK Gas Transmission £m	US Regulated £m	NGV and Other £m	Total £m
Revenue under IFRS 15					
UK	3,671	878	–	567	5,116
US	–	–	8,756	38	8,794
Total IFRS 15 revenue	3,671	878	8,756	605	13,910
Other revenue					
UK	23	33	–	110	166
US	–	–	449	15	464
Total other revenue	23	33	449	125	630
Total revenue from continuing operations	3,694	911	9,205	730	14,540

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

3. Revenue continued
(e) Disaggregation of revenue continued

Revenue for the year ended 31 March 2019	UK Electricity Transmission £m	UK Gas Transmission £m	US Regulated £m	NGV and Other £m	Total £m
Revenue under IFRS 15					
Transmission	1,909	661	370	313	3,253
Distribution	–	–	8,941	–	8,941
System Operator	1,416	172	–	–	1,588
Other	–	–	–	284	284
Total IFRS 15 revenue	3,325	833	9,311	597	14,066
Other revenue					
Generation	–	–	367	–	367
Other	6	51	168	275	500
Total other revenue	6	51	535	275	867
Total revenue from continuing operations	3,331	884	9,846	872	14,933

Geographical split for the year ended 31 March 2019	UK Electricity Transmission £m	UK Gas Transmission £m	US Regulated £m	NGV and Other £m	Total £m
Revenue under IFRS 15					
UK	3,325	833	–	585	4,743
US	–	–	9,311	12	9,323
Total IFRS 15 revenue	3,325	833	9,311	597	14,066
Other revenue					
UK	6	51	–	245	302
US	–	–	535	30	565
Total other revenue	6	51	535	275	867
Total revenue from continuing operations	3,331	884	9,846	872	14,933

Revenue to be recognised in future periods, presented as contract liabilities of £1,158 million (2019: £994 million) (see note 23), relates to contributions in aid of construction. Revenue is recognised over the life of the asset. The asset lives for connections in UK Electricity Transmission, UK Gas Transmission, NGV and US Regulated are 40 years, 36 years (to 2055), 15 years and up to 51 years respectively. The weighted average amortisation period is 18 years.

Future revenues in relation to unfulfilled performance obligations not yet received in cash amount to £3.1 billion (2019: £3.5 billion). £1.5 billion (2019: £1.6 billion) relates to connection contracts in UK Electricity Transmission which will be recognised as revenue over 29 years and £1.5 billion (2019: £1.8 billion) relates to revenues to be earned under Grain LNG contracts until 2029. The remaining amount will be recognised as revenue over 5 years.

The amount of revenue recognised for the year ended 31 March 2020 from performance obligations satisfied (or partially satisfied) in previous periods, mainly due to the changes in the estimate of the stage of completion, is £nil (2019: £nil).

4. Operating costs

Below we have presented separately certain items included in our operating costs from continuing operations. These include a breakdown of payroll costs (including disclosure of amounts paid to key management personnel) and fees paid to our auditors.

	Before exceptional items and remeasurements			Exceptional items and remeasurements			Total		
	2020 £m	2019 £m	2018 £m	**2020 £m**	2019 £m	2018 £m	**2020 £m**	2019 £m	2018 £m
Depreciation, amortisation and impairment	**1,640**	1,588	1,530	**–**	147	–	**1,640**	1,735	1,530
Payroll costs	**1,684**	1,703	1,648	**–**	149	–	**1,684**	1,852	1,648
Provision for bad and doubtful debts	**234**	181	36	**–**	–	–	**234**	181	36
Purchases of electricity	**1,318**	1,504	1,299	**85**	(50)	(14)	**1,403**	1,454	1,285
Purchases of gas	**1,276**	1,644	1,539	**40**	(2)	4	**1,316**	1,642	1,543
Property and other taxes	**1,191**	1,108	1,057	**–**	–	–	**1,191**	1,108	1,057
Balancing Services Incentive Scheme	**1,317**	1,196	1,012	**–**	–	–	**1,317**	1,196	1,012
Payments to other UK network owners[1]	**–**	–	1,043	**–**	–	–	**–**	–	1,043
Other	**2,573**	2,567	2,629	**402**	328	(26)	**2,975**	2,895	2,603
	11,233	11,491	11,793	**527**	572	(36)	**11,760**	12,063	11,757
Operating costs include:									
Inventory consumed							**328**	415	367
Research and development expenditure							**14**	19	13

1. Under IFRS 15, with effect from 1 April 2018, revenue and associated payments to other UK network owners are presented on a net basis.

(a) Payroll costs

	2020 £m	2019 £m	2018 £m
Wages and salaries[1]	**2,188**	2,084	1,998
Social security costs	**168**	156	157
Defined contribution scheme costs	**75**	72	65
Defined benefit pension costs	**135**	232	156
Share-based payments	**19**	27	16
Severance costs (excluding pension costs)	**1**	76	7
	2,586	2,647	2,399
Less: payroll costs capitalised	**(902)**	(795)	(751)
Total payroll costs	**1,684**	1,852	1,648

1. Included within wages and salaries are US other post-retirement benefit costs of £45 million (2019: £48 million; 2018: £46 million). For further information refer to note 25.

(b) Number of employees

	31 March 2020	**Monthly average 2020**	31 March 2019	Monthly average 2019	31 March 2018	Monthly average 2018
UK	**6,321**	**6,151**	5,962	6,227	6,517	6,431
US	**16,748**	**16,679**	16,614	16,669	16,506	16,274
Total number of employees	**23,069**	**22,830**	22,576	22,896	23,023	22,705

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

4. Operating costs continued
(c) Key management compensation

	2020 £m	2019 £m	2018 £m
Short-term employee benefits	7	7	8
Compensation for loss of office	1	–	–
Post-employment benefits	1	1	1
Share-based payments	3	3	3
Total key management compensation	**12**	11	12

Key management compensation relates to the Board, including the Executive Directors and Non-executive Directors for the years presented.

(d) Directors' emoluments
Details of Executive Directors' emoluments are contained in the Remuneration Report on page 96 and those of Non-executive Directors on page 101.

(e) Auditors' remuneration
Auditors' remuneration is presented below in accordance with the requirements of the Companies Act 2006 and the principal accountant fees and services disclosure requirements of Item 16C of Form 20-F:

	2020 £m	2019 £m	2018 £m
Audit fees payable to the parent Company's auditors and their associates in respect of:			
Audit of the parent Company's individual and consolidated financial statements[1]	1.9	1.6	2.7
The auditing of accounts of any associate of the Company[2]	8.7	8.5	9.3
Other services supplied[3]	6.3	5.2	3.9
	16.9	15.3	15.9
Total other services[4]			
Tax fees:			
Tax compliance services	–	–	0.3
Tax advisory services	–	–	–
All other fees:			
Other assurance services[5]	0.6	1.1	0.7
Services relating to corporate finance transactions not covered above	–	–	–
Other non-audit services not covered above[6]	0.5	2.2	0.9
	1.1	3.3	1.9
Total auditors' remuneration	**18.0**	18.6	17.8

1. Audit fees in each year represent fees for the audit of the Company's financial statements and regulatory reporting for the years ended 31 March 2020, 2019 and 2018.
2. The 2019 comparative has been updated following finalisation of the 2019 audit fee with the Audit Committee.
3. Other services supplied represent fees payable for services in relation to other statutory filings or engagements that are required to be carried out by the auditors. In particular, this includes fees for reports under section 404 of the US Public Company Accounting Reform and Investor Protection Act of 2002 (Sarbanes-Oxley), audit reports on regulatory returns and the review of interim financial statements for the six-month periods ended 30 September 2019, 2018 and 2017 respectively.
4. There were no audit related fees as described in Item 16C(b) of Form 20-F.
5. Principally amounts relating to assurance services provided in relation to comfort letters for debt issuances.
6. In 2020, non-audit services include auction monitor work on Contracts for Difference, IT project assurance and a review of controls over our data on New York customers. In 2019 and 2018, non-audit services primarily related to the UK Property business in respect of the evaluation of possible options for the use of property assets.

The Audit Committee considers and makes recommendations to the Board, to be put to shareholders for approval at each AGM, in relation to the appointment, re-appointment, removal and oversight of the Company's independent auditors. The Committee also considers and approves the audit fees on behalf of the Board in accordance with the Competition and Market Authority Audit Order 2014. The auditors' remuneration is then put to shareholders at each AGM. Details of our policies and procedures in relation to non-audit services to be provided by the independent auditors are set out on page 81 of the Corporate Governance Report.

Certain services are prohibited from being performed by the external auditors under the Sarbanes-Oxley Act. Of the above services, none were prohibited.

5. Exceptional items and remeasurements

To monitor our financial performance, we use a profit measure that excludes certain income and expenses. We call that measure 'business performance' or 'adjusted profit'. Business performance (which excludes exceptional items and remeasurements as defined below) is used by management to monitor financial performance as it is considered that it aids the comparability of our reported financial performance from year to year. We exclude items from business performance because, if included, these items could distort understanding of our performance for the year and the comparability between periods. This note analyses these items, which are included in our results for the year but are excluded from business performance.

Exceptional items and remeasurements from continuing operations

	2020 £m	2019 £m	2018 £m
Included within operating profit			
Exceptional items:			
Environmental charges	**(402)**	–	–
Cost efficiency and restructuring programmes	**–**	(204)	–
Massachusetts Gas labour dispute	**–**	(283)	–
Impairment of nuclear connection development costs	**–**	(137)	–
Final settlement of LIPA MSA Transition	**–**	–	26
	(402)	(624)	26
Remeasurements – commodity contract derivatives	**(125)**	52	10
	(527)	(572)	36
Included within finance income and costs			
Remeasurements:			
Net gains/(losses) on financing derivatives	**1**	(40)	119
Net (losses)/gains on financial assets at fair value through profit and loss	**(16)**	15	–
Net losses on financial liabilities at fair value through profit and loss	**(49)**	(51)	–
	(64)	(76)	119
Included within share of post-tax results of joint ventures and associates			
Exceptional items:			
Deferred tax arising on the reduction in US corporation tax rate	**–**	–	5
Remeasurements:			
Net losses on financial instruments	**(1)**	–	–
Total included within profit before tax	**(592)**	(648)	160
Included within tax			
Exceptional items – credits/(debits) arising on items not included in profit before tax:			
Deferred tax arising on the reduction in the US corporation tax rate	**–**	–	1,510
Deferred tax arising on the reversal of the reduction in UK corporation tax rate	**(192)**	–	–
Tax on exceptional items	**103**	144	(9)
Tax on remeasurements	**42**	5	(28)
	(47)	149	1,473
Total exceptional items and remeasurements after tax	**(639)**	(499)	1,633
Analysis of total exceptional items and remeasurements after tax			
Exceptional items after tax	**(491)**	(480)	1,532
Remeasurements after tax	**(148)**	(19)	101
Total exceptional items and remeasurements after tax	**(639)**	(499)	1,633

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

5. Exceptional items and remeasurements continued

Exceptional items

Management uses an exceptional items framework that has been discussed and approved by the Audit Committee. This follows a three-step process which considers the nature of the event, the financial materiality involved and any particular facts and circumstances. In considering the nature of the event, management focuses on whether the event is within the Group's control and how frequently such an event typically occurs. In determining the facts and circumstances, management considers factors such as ensuring consistent treatment between favourable and unfavourable transactions, the precedent for similar items, the number of periods over which costs will be spread or gains earned, and the commercial context for the particular transaction.

Items of income or expense that are considered by management for designation as exceptional items include significant restructurings, write-downs or impairments of non-current assets, significant changes in environmental or decommissioning provisions, integration of acquired businesses, gains or losses on disposals of businesses or investments and significant debt redemption costs as a consequence of transactions such as significant disposals or issues of equity, and the related tax, as well as deferred tax arising on changes to corporation tax rates.

Costs arising from restructuring programmes include redundancy costs. Redundancy costs are charged to the consolidated income statement in the year in which a commitment is made to incur the costs and the main features of the restructuring plan have been announced to affected employees.

Set out below are details of the transactions against which we have considered the application of our exceptional items framework in each of the years for which results are presented.

2020

We concluded that the increase in costs associated with the changes in our environmental provisions (£402 million) and the additional deferred tax charge reflecting the impact of the remeasurement of the Group's deferred tax liabilities as a result of a change in the substantively enacted UK corporation tax rate (£192 million) meet the criteria to be classified as exceptional.

A further £10 million of COVID-19 related costs incurred in the year have similarly not been classified as exceptional in view of the quantum involved and all costs associated with the settlement reached with the State of New York in respect of the Downstate New York Gas Moratorium have also been treated as part of adjusted profit.

Environmental charges: In the US, the most significant component of our £1.9 billion environmental provision relates to several Superfund sites, and arose from former manufacturing gas plant facilities, formerly owned or operated by the Group or its predecessor companies.

The sites are subject to both State and Federal law in the US. Under Federal and State Superfund laws, potential liability for the historical contamination may be imposed on responsible parties jointly and severally, without regard to fault, even if the activities were lawful when they occurred. The provisions and the Group's share of estimated costs are re-evaluated at each reporting period. As a result of notices issued by governmental authorities and newly developed cost estimates prepared by third-party engineers, we have re-evaluated our estimates of total costs and cost sharing allocations borne by the Company, and accordingly have increased our provision by £326 million. Under the terms of our rate plans, we are entitled to recovery of environmental clean-up costs from rate payers, but under IFRS no asset can be recognised for this recovery.

Also included in the total environmental charge is the £76 million impact of the change in the real discount rate applied to the environmental provisions across the Group, of which £66 million relates to the US and £10 million to the UK. Given the substantial and sustained change in gilts and corporate bond yields, we concluded it was appropriate to reduce the real discount rate from 1% to 0.5%. The weighted average remaining duration of our cash flows is now around 10 years.

2019

In assessing certain items of income and expenditure against our exceptional items framework, we concluded that the costs associated with the Massachusetts Gas labour dispute (£283 million), our cost efficiency and restructuring programme (£204 million) and impairments relating to two nuclear connection cancellations (£137 million) should be treated as exceptional (as described further below).

We also considered whether the £95 million income from two legal settlements received in the period should be classified as exceptional. However, we concluded it was appropriate to recognise the income in earnings before exceptional items (within NGV and Other), in line with the treatment of the original costs.

Cost efficiency and restructuring programmes: Our UK and US businesses incurred restructuring charges as we reviewed organisational structures, operational activities and relevant roles and responsibilities to ensure we are able to operate more efficiently and to continue to drive outperformance for customers and shareholders. The cash outflow for the year was £93 million.

Massachusetts Gas labour dispute: Between June 2018 and January 2019, National Grid implemented a workforce contingency plan across its Massachusetts Gas business following the expiration of contracts for the 1,250 members of the existing workforce. The net incremental cost of the experienced contractors working alongside supervisors and workers from other areas of the business was £283 million, reflecting the financial performance of the US regulated business had the workforce contingency plan not been implemented. The total cash outflow related to the labour dispute was £320 million for the year.

Impairment of nuclear connection development costs: In 2018, Toshiba announced the cancellation of its NuGen project to build a new nuclear power station at Moorside in Cumbria, and NuGen terminated its connection agreement with UK Electricity Transmission. In February 2019, Hitachi terminated its connection agreements in respect of its Horizon projects at Wylfa and Oldbury. As there was no realistic prospect of these schemes continuing in their present form, we concluded that it was appropriate to impair the assets we had been developing for over 10 years. After deducting cash inflows relating to termination fees received of £13 million, the net impairment charge was £137 million.

2018

Final settlement of LIPA MSA transition: During the year, the Group reached an agreement with LIPA on an amount in final settlement of receivables and payables that arose following the cessation of the Management Services Agreement with LIPA in December 2013. The settlement resulted in a gain of £26 million, which was recorded as exceptional, consistent with the treatment of gains and losses on the original transaction.

5. Exceptional items and remeasurements continued

Remeasurements

Remeasurements comprise unrealised gains or losses recorded in the consolidated income statement arising from changes in the fair value of certain of our financial assets and liabilities accounted for at fair value through profit and loss (FVTPL). These assets and liabilities include commodity contract derivatives and financing derivatives to the extent that hedge accounting is not achieved or is not effective.

The unrealised gains or losses reported in profit and loss on certain additional assets and liabilities now treated at FVTPL are also classified within remeasurements. These relate to financial assets (which fail the 'solely payments of principal and interest test' under IFRS 9), the money market fund investments used by Group Treasury for cash management purposes and certain financial liabilities which we elected to designate at FVTPL. In all cases, these fair values increase or decrease because of changes in foreign exchange, commodity or other financial indices over which we have no control.

We report unrealised gains or losses relating to certain discrete classes of financial assets accounted for at FVTPL within business performance. These comprise our portfolio of investments made by National Grid Partners, our investment in Sunrun Neptune 2016 LLC and the contingent consideration arising on the acquisition of Geronimo (all within NGV and Other). The performance of these assets (including changes in fair value) are included in our assessment of business performance for the relevant business units.

Remeasurements excluded from business performance are made up of the following categories:

i. Net gains/(losses) on commodity contract derivatives represent mark-to-market movements on certain physical and financial commodity contract obligations in the US. These contracts primarily relate to the forward purchase of energy for supply to customers, or to the economic hedging thereof, that are required to be measured at fair value and that do not qualify for hedge accounting. Under the existing rate plans in the US, commodity costs are recoverable from customers although the timing of recovery may differ from the pattern of costs incurred;

ii. Net gains/(losses) on financing derivative financial instruments comprise gains and losses arising on derivative financial instruments reported in the consolidated income statement in relation to risk management of interest rate and foreign exchange exposures. These exclude gains and losses for which hedge accounting has been effective, and have been recognised directly in the consolidated statement of other comprehensive income or are offset by adjustments to the carrying value of debt (see notes 17 and 32);

iii. Net gains/(losses) on financial assets measured at FVTPL comprise gains and losses on the investment funds held by our insurance captives which are categorised as FVTPL (see note 15);

iv. Net gains/(losses) on financial liabilities measured at FVTPL comprises the change in the fair value (excluding changes due to own credit risk) of a financial liability that was designated at FVTPL on transition to IFRS 9 to reduce a measurement mismatch (see note 21); and

v. Unrealised net gains/(losses) on derivatives and other financial instruments within our joint ventures and associates.

Items included within tax

2020

The Finance Act 2016, which was enacted on 15 September 2016, reduced the main UK corporation tax rate to 17% with effect from 1 April 2020. Deferred tax balances were calculated at this rate for the years ended 31 March 2017 to 2019. On 17 March 2020, the UK Government utilised the Provisional Collection of Taxes Act 1968 to substantively enact a reversal of the reduction in the main UK corporation tax rate to 17% with effect from 1 April 2020, resulting in the rate remaining at 19%. Deferred taxes at the reporting date have been measured using enacted tax rates and reflected in these financial statements, resulting in a £192 million deferred tax charge, principally due to the remeasurement of deferred tax liabilities. The treatment of this charge as exceptional is consistent with the treatment for the year ended 31 March 2017 when the original reduction in the tax rate was substantively enacted, resulting in the recognition of an exceptional tax credit of £94 million.

2018

The Tax Cuts and Jobs Act (Tax Reform), which was enacted on 22 December 2017, reduced the US corporate tax rate from 35% to 21% with effect from 1 January 2018. Deferred taxes at the reporting date have been measured using these enacted tax rates. This resulted in a one-off deferred tax credit in the year ended 31 March 2018. However, as described in note 11, we expect the overall impact of Tax Reform to be economically neutral for the Group.

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

6. Finance income and costs

This note details the interest income generated by our financial assets and interest expense incurred on our financial liabilities, primarily our financing portfolio (including our financing derivatives). It also includes the net interest on our pensions and other post-retirement assets. In reporting business performance, we adjust net financing costs to exclude any net gains or losses on financial instruments included in remeasurements (see note 5). In addition, where debt redemptions relate to exceptional transactions they are typically treated as exceptional.

The Group adopted IFRS 9 with effect from 1 April 2018. The comparatives for 2018 were not required to be restated and were accounted for in accordance with IAS 39. Following the adoption of IFRS 9, finance income and costs remeasurements include unrealised gains and losses on certain assets and liabilities now treated at FVTPL. The interest income, dividends and interest expense on these items are included in finance income and finance costs before remeasurements, respectively.

	Notes	**2020 £m**	2019 £m	2018 £m
Finance income				
Interest income on financial instruments:				
Bank deposits and other financial assets		**48**	54	54
Dividends received on equities held at fair value through other comprehensive income		**2**	2	–
Gains on disposal of available-for-sale investments		**–**	–	73
Other income		**20**	17	–
		70	73	127
Finance costs				
Net interest on pensions and other post-retirement benefit obligations	25	**(23)**	(22)	(65)
Interest expense on financial liabilities held at amortised cost:				
Bank loans and overdrafts		**(73)**	(72)	(87)
Other borrowings[1]		**(997)**	(970)	(1,030)
Interest expense on financial liabilities held at fair value through profit and loss		**(22)**	(20)	–
Derivatives		**(39)**	(43)	12
Unwinding of discount on provisions	26	**(77)**	(74)	(75)
Other interest		**(10)**	–	(11)
Less: interest capitalised[2]		**122**	135	128
		(1,119)	(1,066)	(1,128)
Remeasurements – Finance income				
Net (losses)/gains on financial assets held at fair value through profit and loss		**(16)**	15	–
		(16)	15	–
Remeasurements – Finance costs				
Net losses on financial liabilities held at fair value through profit and loss		**(49)**	(51)	–
Net (losses)/gains on financing derivatives[3]:				
Derivatives designated as hedges for hedge accounting		**(13)**	(37)	49
Derivatives not designated as hedges for hedge accounting		**14**	(3)	70
		(48)	(91)	119
Total remeasurements – Finance income and costs		**(64)**	(76)	119
Finance income		**54**	88	127
Finance costs		**(1,167)**	(1,157)	(1,009)
Net finance costs from continuing operations		**(1,113)**	(1,069)	(882)

1. Includes interest expense on lease liabilities (see note 13 for details).
2. Interest on funding attributable to assets in the course of construction in the current year was capitalised at a rate of 3.6% (2019: 3.9%; 2018: 4.1%). In the UK, capitalised interest qualifies for a current year tax deduction with tax relief claimed of £15 million (2019: £19 million; 2018: £20 million). In the US, capitalised interest is added to the cost of plant and qualifies for tax depreciation allowances.
3. Includes a net foreign exchange gain on financing activities of £66 million (2019: £264 million gain; 2018: £314 million loss) offset by foreign exchange losses and gains on financing derivatives measured at fair value.

7. Tax

Tax is payable in the territories where we operate, mainly the UK and the US. This note gives further details of the total tax charge and tax liabilities, including current and deferred tax. The current tax charge is the tax payable on this year's taxable profits. Deferred tax is an accounting adjustment to provide for tax that is expected to arise in the future due to differences in the accounting and tax bases.

The tax charge for the period is recognised in the income statement, the statement of comprehensive income or directly in equity, according to the accounting treatment of the related transaction. The tax charge comprises both current and deferred tax.

Current tax assets and liabilities are measured at the amounts expected to be recovered from or paid to the tax authorities. The tax rates and tax laws used to compute the amounts are those that have been enacted or substantively enacted by the reporting date.

The Group operates internationally in territories with different and complex tax codes. Management exercises judgement in relation to the level of provision required for uncertain tax outcomes. There are a number of tax positions not yet agreed with the tax authorities where different interpretations of legislation could lead to a range of outcomes. Judgements are made for each position having regard to particular circumstances and advice obtained.

Deferred tax is provided for using the balance sheet liability method, and is recognised on temporary differences between the carrying amount of assets and liabilities in the financial statements and the corresponding tax bases.

Deferred tax liabilities are generally recognised on all taxable temporary differences, and deferred tax assets are recognised to the extent that it is probable that taxable profits will be available against which deductible temporary differences can be utilised. However, deferred tax assets and liabilities are not recognised if the temporary differences arise from the initial recognition of goodwill or from the initial recognition of other assets and liabilities in a transaction (other than a business combination) that affects neither the accounting nor the taxable profit or loss.

Deferred tax liabilities are recognised on taxable temporary differences arising on investments in subsidiaries and joint arrangements except where the Company is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred tax is calculated at the tax rates that are expected to apply in the period when the liability is settled or the asset is realised, based on the tax rates and tax laws that have been enacted or substantively enacted by the reporting date.

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the deferred tax asset to be recovered. Unrecognised deferred tax assets are reassessed at each reporting date and are recognised to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities and when they relate to income taxes levied by the same tax authority and the Company and its subsidiaries intend to settle their current tax assets and liabilities on a net basis.

Tax charged/(credited) to the consolidated income statement – continuing operations

	2020 £m	2019 £m	2018 £m
Tax before exceptional items and remeasurements	**433**	488	584
Exceptional tax on items not included in profit before tax (see note 5)	**192**	–	(1,510)
Tax on other exceptional items and remeasurements	**(145)**	(149)	37
Total tax reported within exceptional items and remeasurements	**47**	(149)	(1,473)
Total tax charge/(credit) from continuing operations	**480**	339	(889)

Tax as a percentage of profit before tax

	2020 %	2019 %	2018 %
Before exceptional items and remeasurements – continuing operations	**18.5**	19.6	23.4
After exceptional items and remeasurements – continuing operations	**27.4**	18.4	(33.4)

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

7. Tax continued

The tax charge/(credit) for the year can be analysed as follows:

	2020 £m	2019 £m	2018 £m
Current tax:			
UK corporation tax at 19% (2019: 19%; 2018: 19%)	**179**	132	200
UK corporation tax adjustment in respect of prior years	**(4)**	(12)	(18)
	175	120	182
Overseas corporation tax	**(2)**	8	15
Overseas corporation tax adjustment in respect of prior years	**(41)**	(40)	(4)
	(43)	(32)	11
Total current tax from continuing operations	**132**	88	193
Deferred tax:			
UK deferred tax	**269**	27	65
UK deferred tax adjustment in respect of prior years	**6**	2	(2)
	275	29	63
Overseas deferred tax	**64**	208	(1,155)
Overseas deferred tax adjustment in respect of prior years	**9**	14	10
	73	222	(1,145)
Total deferred tax from continuing operations	**348**	251	(1,082)
Total tax charge/(credit) from continuing operations	**480**	339	(889)

Tax charged/(credited) to the consolidated statement of comprehensive income and equity

	2020 £m	2019 £m	2018 £m
Current tax:			
Available-for-sale investments	**–**	–	(11)
Cash flow hedges, cost of hedging and own credit reserve	**–**	3	–
Share-based payments	**–**	–	(3)
Deferred tax:			
Available-for-sale investments	**–**	–	(18)
Investments at fair value through other comprehensive income	**(1)**	–	–
Cash flow hedges, cost of hedging and own credit reserve	**(40)**	(12)	(4)
Remeasurements of pension assets and post-retirement benefit obligations[1]	**(206)**	12	530
Share-based payments	**(3)**	–	1
	(250)	3	495
Total tax recognised in the statements of comprehensive income from continuing operations	**(247)**	3	497
Total tax relating to share-based payments recognised directly in equity from continuing operations	**(3)**	–	(2)
	(250)	3	495

1. Remeasurements of gains on pension assets and post-retirement benefit obligations for the year ended 31 March 2018 includes a deferred tax charge of £281 million arising on the reduction in the US corporation tax rate.

7. Tax continued

The tax charge/(credit) for the year after exceptional items and remeasurements, for the continuing business, is higher (2019: lower tax charge; 2018: lower tax charge) than the standard rate of corporation tax in the UK of 19% (2019: 19%; 2018: 19%):

	Before exceptional items and remeasurements 2020 £m	After exceptional items and remeasurements 2020 £m	Before exceptional items and remeasurements 2019 £m	After exceptional items and remeasurements 2019 £m	Before exceptional items and remeasurements 2018 £m	After exceptional items and remeasurements 2018 £m
Profit before tax from continuing operations						
Before exceptional items and remeasurements	**2,346**	**2,346**	2,489	2,489	2,500	2,500
Exceptional items and remeasurements	**–**	**(592)**	–	(648)	–	160
Profit before tax from continuing operations	**2,346**	**1,754**	2,489	1,841	2,500	2,660
Profit before tax from continuing operations multiplied by UK corporation tax rate of 19% (2019: 19%; 2018: 19%)	**446**	**334**	473	350	475	506
Effect of:						
Adjustments in respect of prior years[1]	**(30)**	**(30)**	(36)	(36)	(22)	(14)
Expenses not deductible for tax purposes	**26**	**29**	22	28	20	21
Non-taxable income[2]	**(18)**	**(18)**	(36)	(36)	(16)	(26)
Adjustment in respect of foreign tax rates	**53**	**18**	78	56	153	157
Deferred tax impact of change in UK tax rate	**–**	**192**	(3)	(3)	(7)	(7)
Deferred tax impact of change in US tax rate due to Tax Reform	**–**	**–**	–	–	–	(1,510)
Adjustment in respect of post-tax profits of joint ventures and associates included within profit before tax	**(17)**	**(17)**	(8)	(8)	(8)	(9)
Other[3]	**(27)**	**(28)**	(2)	(12)	(11)	(7)
Total tax charge/(credit) from continuing operations	**433**	**480**	488	339	584	(889)

	%	%	%	%	%	%
Effective tax rate – continuing operations	**18.5**	**27.4**	19.6	18.4	23.4	(33.4)

1. Prior year adjustment is primarily due to agreement of prior period tax returns.
2. Includes gains on chargeable disposals which are offset by previously unrecognised capital losses.
3. Other primarily comprises a recognition of deferred tax on previously unrecognised capital losses and claims for land remediation relief.

Factors that may affect future tax charges

On 17 March 2020, the UK government utilised the Provisional Collection of Taxes Act 1968 to substantively enact a reversal of the reduction in the main UK corporation tax rate to 17% with effect from 1 April 2020. The main UK corporation tax rate therefore remains at 19%. Deferred tax balances have been calculated at this rate.

We will continue to monitor the developments driven by Brexit, the OECD's Base Erosion and Profit Shifting (BEPS) project and European Commission initiatives including fiscal aid investigations. At this time, we do not expect this to have any material impact on our future tax charges. Governments across the world including the UK and the US have introduced various stimulus/reliefs for businesses to cope with the impact of the COVID-19 pandemic. We will monitor as the details become available for any that may materially impact our future tax charges.

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

7. Tax continued

Tax included within the statement of financial position

The following are the major deferred tax assets and liabilities recognised, and the movements thereon, during the current and prior reporting periods:

	Accelerated tax depreciation £m	Share-based payments £m	Pensions and other post-retirement benefits £m	Financial instruments £m	Other net temporary differences[1] £m	Total £m
Deferred tax liabilities/(assets)						
At 31 March 2018 (as previously reported)	4,874	(9)	(203)	21	(1,047)	3,636
Impact of transition to IFRS 9 and IFRS 15	19	–	–	(5)	(93)	(79)
At 1 April 2018 (as restated)	4,893	(9)	(203)	16	(1,140)	3,557
Exchange adjustments and other[2]	275	–	(31)	(3)	(76)	165
(Credited)/charged to income statement	309	–	52	6	(124)	243
Charged/(credited) to other comprehensive income and equity	–	–	12	(12)	–	–
At 1 April 2019	5,477	(9)	(170)	7	(1,340)	3,965
Exchange adjustments and other[2]	210	(30)	(28)	(3)	(27)	122
(Credited)/charged to income statement	613	(7)	44	(13)	(287)	350
Charged/(credited) to other comprehensive income and equity	–	(2)	(206)	(46)	1	(253)
At 31 March 2020	**6,300**	**(48)**	**(360)**	**(55)**	**(1,653)**	**4,184**

1. The deferred tax asset of £1,653 million as at 31 March 2020 (2019: £1,340 million) in respect of other net temporary differences primarily relates to net operating losses of £547 million (2019: £423 million) and US environmental provisions of £529 million (2019: £409 million).
2. Exchange adjustments and other comprises foreign exchange arising on translation of the US dollar deferred tax balances. It also includes reclassification of £29 million from other temporary differences to share-based payments.

Deferred tax assets and liabilities are only offset where there is a legally enforceable right of offset and there is an intention to settle the balances net. The deferred tax balances (after offset) for statement of financial position purposes consist solely of deferred tax liabilities of £4,184 million (2019: £3,965 million). This balance is after offset of a deferred tax asset of £547 million (2019: £423 million) which has been recognised in respect of net operating losses (£535 million) and capital losses (£12 million).

Deferred tax assets in respect of some capital losses as well as trading losses and non-trade deficits have not been recognised as their future recovery is uncertain or not currently anticipated. The deferred tax asset not recognised relating to capital losses has increased due to remeasurement of opening deferred tax asset as a result of change in substantively enacted UK corporation tax rate from 17% to 19%. Hence the total deferred tax assets not recognised are as follows:

	2020 £m	2019 £m
Capital losses	**1,626**	1,470
Non-trade deficits	**1**	4
Trading losses	**6**	5

The capital losses arose in the UK on disposal of certain businesses or assets. They are available to carry forward indefinitely but can only be offset against future capital gains. The UK non-trade deficits arose prior to 1 April 2017 and therefore can only be offset against future non-trade profits.

At 31 March 2020 and 31 March 2019, there were no recognised deferred tax liabilities for taxes that would be payable on the unremitted earnings of the Group’s subsidiaries or its associates as there are no significant corporation tax consequences of the Group’s UK, US or overseas subsidiaries or associates paying dividends to their parent companies. There are also no significant income tax consequences for the Group from the payment of dividends by the Group to its shareholders.

8. Earnings per share (EPS)

EPS is the amount of post-tax profit attributable to each ordinary share. Basic EPS is calculated on profit for the year attributable to equity shareholders divided by the weighted average number of shares in issue during the year. Diluted EPS shows what the impact would be if all outstanding share options were exercised and treated as ordinary shares at year end. The weighted average number of shares is increased by additional shares issued as scrip dividends and reduced by shares repurchased by the Company during the year. The earnings per share calculations are based on profit after tax attributable to equity shareholders of the Company which excludes non-controlling interests.

Adjusted earnings and EPS, which exclude exceptional items and remeasurements, are provided to reflect the business performance sub-totals used by the Company. We have included reconciliations from this additional EPS measure to earnings for both basic and diluted EPS to provide additional detail for these items. For further details of exceptional items and remeasurements, see note 5.

Following the sale of the UK Gas Distribution business on 31 March 2017, National Grid plc returned £3,171 million of proceeds to shareholders through a special dividend, paid on 2 June 2017. In order to maintain the comparability of the Company's share price before and after the special dividend, this was preceded by a share consolidation undertaken on 22 May 2017, replacing every 12 existing ordinary shares with 11 new ordinary shares. The weighted average number of ordinary shares outstanding for the year ended 31 March 2018 includes the effect of both the share consolidation and the special dividend from the date that the special dividend was paid. The associated share buyback programme which began on 2 June 2017 completed in March 2018. Purchased shares are held as treasury shares.

(a) Basic EPS

	Earnings 2020 £m	**EPS 2020 pence**	Earnings 2019 £m	EPS 2019 pence	Earnings 2018 £m	EPS 2018 pence
Adjusted earnings from continuing operations	**1,912**	**55.2**	1,998	59.0	1,915	55.3
Exceptional items and remeasurements after tax from continuing operations	**(639)**	**(18.4)**	(499)	(14.7)	1,633	47.2
Earnings from continuing operations	**1,273**	**36.8**	1,499	44.3	3,548	102.5
Adjusted earnings from discontinued operations	**5**	**0.2**	57	1.7	145	4.2
Exceptional items and remeasurements after tax from discontinued operations	**(14)**	**(0.5)**	(45)	(1.4)	(143)	(4.1)
Earnings from discontinued operations	**(9)**	**(0.3)**	12	0.3	2	0.1
Total adjusted earnings	**1,917**	**55.4**	2,055	60.7	2,060	59.5
Total exceptional items and remeasurements after tax (including discontinued operations)	**(653)**	**(18.9)**	(544)	(16.1)	1,490	43.1
Total earnings	**1,264**	**36.5**	1,511	44.6	3,550	102.6

	2020 millions	2019 millions	2018 millions
Weighted average number of ordinary shares – basic	**3,461**	3,386	3,461

(b) Diluted EPS

	Earnings 2020 £m	**EPS 2020 pence**	Earnings 2019 £m	EPS 2019 pence	Earnings 2018 £m	EPS 2018 pence
Adjusted earnings from continuing operations	**1,912**	**55.0**	1,998	58.8	1,915	55.1
Exceptional items and remeasurements after tax from continuing operations	**(639)**	**(18.4)**	(499)	(14.7)	1,633	47.0
Earnings from continuing operations	**1,273**	**36.6**	1,499	44.1	3,548	102.1
Adjusted earnings from discontinued operations	**5**	**0.1**	57	1.7	145	4.2
Exceptional items and remeasurements after tax from discontinued operations	**(14)**	**(0.4)**	(45)	(1.4)	(143)	(4.2)
Earnings from discontinued operations	**(9)**	**(0.3)**	12	0.3	2	–
Total adjusted earnings	**1,917**	**55.1**	2,055	60.5	2,060	59.3
Total exceptional items and remeasurements after tax (including discontinued operations)	**(653)**	**(18.8)**	(544)	(16.1)	1,490	42.8
Total earnings	**1,264**	**36.3**	1,511	44.4	3,550	102.1

	2020 millions	2019 millions	2018 millions
Weighted average number of ordinary shares – diluted	**3,478**	3,401	3,476

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

8. Earnings per share (EPS) continued
(c) Reconciliation of basic to diluted average number of shares

	2020 millions	2019 millions	2018 millions
Weighted average number of ordinary shares – basic	3,461	3,386	3,461
Effect of dilutive potential ordinary shares – employee share plans	17	15	15
Weighted average number of ordinary shares – diluted	3,478	3,401	3,476

9. Dividends
Interim dividends are recognised when they become payable to the Company's shareholders. Final dividends are recognised when they are approved by shareholders.

	2020			2019			2018		
	Pence per share	Cash dividend paid £m	Scrip dividend £m	Pence per share	Cash dividend paid £m	Scrip dividend £m	Pence per share	Cash dividend paid £m	Scrip dividend £m
Interim dividend in respect of the current year	16.57	335	241	16.08	450	94	15.49	346	176
Special dividend	–	–	–	–	–	–	84.375	3,171	–
Final dividend in respect of the prior year	31.26	557	517	30.44	710	319	29.10	970	33
	47.83	892	758	46.52	1,160	413	128.965	4,487	209

The Directors are proposing a final dividend for the year ended 31 March 2020 of 32.0p per share that will absorb approximately £1,123 million of shareholders' equity (assuming all amounts are settled in cash). It will be paid on 19 August 2020 to shareholders who are on the register of members at 3 July 2020 (subject to shareholders' approval at the AGM). A scrip dividend will be offered as an alternative.

Following completion of the sale of the majority interest in UK Gas Distribution, the Company paid a special dividend on 2 June 2017 of 84.375p per existing ordinary share ($5.4224 per existing American Depositary Share). This returned £3,171 million to shareholders. No scrip dividend was offered as an alternative.

10. Discontinued operations and assets held for sale

The results and cash flows of significant assets or businesses sold during the year are shown separately from our continuing operations, and presented within discontinued operations in the income statement and cash flow statement. Assets and businesses are classified as held for sale when their carrying amounts are recovered through sale rather than through continuing use. They only meet the held for sale condition when the assets are ready for immediate sale in their present condition, management is committed to the sale and it is highly probable that the sale will complete within one year. Depreciation ceases on assets and businesses when they are classified as held for sale and the assets and businesses are impaired if the proceeds less sale costs fall short of the carrying value.

In June 2019, the Group sold its remaining 39% interest in Cadent (held through its holding in Quadgas HoldCo Limited (Quadgas)). This interest had been classified as held for sale from 30 June 2018 until the date of disposal, as detailed in the Annual Report and Accounts for the year ended 31 March 2019.

The aggregate carrying value of our investment in Quadgas at the disposal date was £1,956 million. This was comprised of the carrying value of the Group's equity interest in Quadgas of £1,494 million, a shareholder loan to Quadgas of £352 million and a derivative financial asset with a fair value of £110 million. The total sales proceeds were £1,965 million. The gain on disposal was £9 million.

10. Discontinued operations and assets held for sale continued

We considered the disposal of our 39% investment in Quadgas as the final stage of the plan to dispose of our interest in the UK Gas Distribution business first announced in 2015, and accordingly treated the results and cash flows arising from Quadgas as a discontinued operation on the basis that the sale formed the final part of a 'single coordinated plan' to dispose of UK Gas Distribution. As a consequence, we have classified the various elements of income, expense and cash flows within discontinued operations as set out below. Once the assets are treated as 'held for sale', equity accounting ceases for our investment in our associate. We therefore ceased to record our share of profits from 30 June 2018.

The summary income statement for discontinued operations is as follows:

	2020 £m	2019 £m	2018 £m
Revenue	**–**	–	–
Operating costs[1]	**(23)**	(1)	(41)
Operating loss	**(23)**	(1)	(41)
Net finance income	**6**	23	137
Share of post-tax results of joint ventures and associates[2]	**–**	(5)	(89)
(Loss)/profit before tax from discontinued operations	**(17)**	17	7
Tax from discontinued operations	**(1)**	(5)	(5)
(Loss)/profit after tax from discontinued operations	**(18)**	12	2
Gain on disposal	**9**	–	–
Total (loss)/profit after tax from discontinued operations[3]	**(9)**	12	2

1. Operating costs for the year ended 31 March 2020 relate to final transaction costs and other expenses in relation to Quadgas. Operating costs of £41 million for the year ended 31 March 2018 related to amounts in respect of the disposal of the UK Gas Distribution business, primarily relating to the completion accounts settlement in November 2017.
2. For the year ended 31 March 2019, the amount presented is the net of £43 million impairment charge against the investment in Quadgas (see note 16) and £38 million share of Quadgas post-tax profits recognised prior to classification as held for sale.
3. Of the total profit after tax from discontinued operations, the £23 million of operating expenses and the £9 million gain on disposal are treated as exceptional. For the year ended 31 March 2019, the £43 million impairment charge against the investment in Quadgas, net operating costs of £1 million and the tax thereon are classified as exceptional items.

The summary statement of comprehensive income for discontinued operations is as follows:

	2020 £m	2019 £m	2018 £m
(Loss)/profit after tax from discontinued operations	**(9)**	12	2
Other comprehensive income			
Items that will never be reclassified to profit or loss:			
Share of other comprehensive income of associate, net of tax	**–**	36	142
Total items from discontinued operations that will never be reclassified to profit or loss	**–**	36	142
Items that may be reclassified subsequently to profit or loss:			
Net gains in respect of cash flow hedges	**6**	–	–
Share of other comprehensive income of associate, net of tax	**–**	–	5
Total items from discontinued operations that may be reclassified subsequently to profit or loss	**6**	–	5
Other comprehensive income for the year, net of tax from discontinued operations	**6**	36	147
Total comprehensive (loss)/income for the year from discontinued operations	**(3)**	48	149

The summary cash flows for discontinued operations are as follows:

Cash flows used in operating activities of £97 million (2019: £71 million; 2018: £207 million) primarily related to cash outflows in respect of voluntary contributions totalling £66 million paid to the Warm Homes Fund, the utilisation of provisions and the payment of the final transaction fees incurred in the period. The utilisation of provisions in 2018 mainly related to payments of professional fees in respect of the disposal of the UK Gas Distribution business.

Cash inflows from investing activities of £6 million (2019: £156 million; 2018: £171 million) were comprised of dividends received and interest received on the shareholder loan.

There were no cash flows for financing activities in 2020 or 2019. In 2018, net cash flows used in financing activities were £231 million for the settlement of RPI swaps relating to the final stages of the Group-wide liability management programme executed as part of sale process of the UK Gas Distribution business.

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

11. Goodwill

Goodwill represents the excess of what we paid to acquire businesses over the fair value of their net assets at the acquisition date. We assess whether goodwill is recoverable each year by performing an impairment review.

Goodwill is recognised as an asset and is not amortised, but is tested for impairment annually or more frequently if events or changes in circumstances indicate a potential impairment. Any impairment is recognised immediately in the income statement and is not subsequently reversed.

Goodwill and fair value adjustments arising on the acquisition of a foreign entity are treated as assets and liabilities of the foreign entity and translated at the closing exchange rate.

Goodwill is allocated to cash-generating units and this allocation is made to those cash-generating units that are expected to benefit from the business combination in which the goodwill arose.

Impairment is recognised where there is a difference between the carrying value of the cash-generating unit and the estimated recoverable amount of the cash-generating unit to which that goodwill has been allocated. Any impairment loss is first allocated to the carrying value of the goodwill and then to the other assets within the cash-generating unit. Recoverable amount is defined as the higher of fair value less costs to sell and estimated value-in-use at the date the impairment review is undertaken.

Value-in-use represents the present value of expected future cash flows, discounted using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted.

Impairments are recognised in the income statement and are disclosed separately.

	Total £m
Net book value at 1 April 2018	5,444
Exchange adjustments	425
Net book value at 31 March 2019	5,869
Additions	81
Exchange adjustments	283
Net book value at 31 March 2020	**6,233**

Additions in the period relate to the goodwill recognised on the acquisition of Geronimo. Refer to note 38 for details.

There is no significant accumulated impairment charge as at 31 March 2020 or 31 March 2019.

The amounts disclosed above as at 31 March 2020 relate to the following cash-generating units: New York £3,544 million (2019: £3,382 million); Massachusetts £1,325 million (2019: £1,264 million); Rhode Island £493 million (2019: £470 million); Federal £790 million (2019: £753 million); and Geronimo £81 million (2019: £nil).

Goodwill is reviewed annually for impairment and the recoverability of goodwill has been assessed by comparing the carrying amount of our operations described above (our cash-generating units) with the expected recoverable amount on a value-in-use basis. In each assessment, the value-in-use has been calculated based on five-year plan projections that incorporate our best estimates of future cash flows, customer rates, costs (including changes in commodity prices), future prices and growth. Such projections reflect our current regulatory rate plans taking into account regulatory arrangements to allow for future rate plan filings and recovery of investment. Our plans have proved to be reliable guides in the past and the Directors believe the estimates are appropriate.

The future economic growth rate used to extrapolate projections beyond five years is 2.1% (2019: 2.2%). The growth rate has been determined having regard to data on projected growth in US real gross domestic product (GDP). Based on the position of our business in the underlying US economy, it is appropriate for the terminal growth rate to be based upon the overall growth in real GDP and, given the nature of our operations, to extend over a long period of time. Cash flow projections have been discounted to reflect the time value of money, using a post-tax discount rate of 4.5% (2019: 5.3%). The equivalent pre-tax discount rate is 4.5% (2019: 5.3%) as tax is assumed to be a pass-through cost to our customers, recoverable under our rate plans. The discount rate represents the estimated weighted average cost of capital of these operations.

In reaching this conclusion, the Directors considered the manner in which Tax Reform has impacted the Group and its future cash flows. In our US business, we are subject to federal and state taxes; however, our regulatory arrangements require us to pass this cost back to our customers. The reduction in the corporation tax rate in 2018 from 35% to 21% is being reflected through lower bills to customers, reducing our revenues (and tax costs) in future periods. For the purposes of the goodwill impairment exercise, we have reflected the lower billing levels through lower revenue forecasts as well as lower tax charges.

Historically, as a result of tax losses arising from claiming accelerated depreciation allowances, we have not paid substantial amounts of tax in the US. Accordingly, for IFRS purposes, we have recognised significant deferred tax liabilities in respect of these accelerated allowances. In accounting terms, Tax Reform triggered the remeasurement of our deferred tax liabilities from 35% to 21% for the year ended 31 March 2018. However, the impact for our US business is that the amounts we have previously received from customers assuming a 35% federal tax rate instead of a 21% federal tax rate must now be returned to customers over a period of up to 50 years. Offsetting this change is the additional income we earn, since the rate base grows faster. (Our rate base is net of deferred tax liabilities, which, as a result of Tax Reform, is now smaller.) In overall terms, the outcome is economically neutral.

In assessing the carrying value of goodwill, we have sensitised our forecasts to factor in a reduction in revenues and lower tax costs into our cash flow forecasts, but we have not reflected the impact of additional rate base growth on future earnings. While it is possible that a key assumption in the calculation could change, the Directors believe that no reasonably foreseeable change would result in an impairment of goodwill, in view of the long-term nature of the key assumptions and the margin by which the estimated value-in-use exceeds the carrying amount. This remains the case even after taking into account the short-term effects of COVID-19, the most significant of which is an increase in bad debt charges in the short-term.

12. Other intangible assets

Other intangible assets include software which is written down (amortised) over the period we expect to receive a benefit from the asset.

Identifiable intangible assets are recorded at cost less accumulated amortisation and any provision for impairment. Other intangible assets are tested for impairment only if there is an indication that the carrying value of the assets may have been impaired. Impairments of assets are calculated as the difference between the carrying value of the asset and the recoverable amount, if lower. Where such an asset does not generate cash flows that are independent from other assets, the recoverable amount of the cash-generating unit to which that asset belongs is estimated. Impairments are recognised in the consolidated income statement and are disclosed separately. Any assets which suffered impairment in a previous period are reviewed for possible reversal of the impairment at each reporting date.

Internally generated intangible assets, such as software, are recognised only if: i) an asset is created that can be identified; ii) it is probable that the asset created will generate future economic benefits; and iii) the development cost of the asset can be measured reliably. Where no internally generated intangible asset can be recognised, development expenditure is recorded as an expense in the period in which it is incurred.

Other intangible assets are amortised on a straight-line basis over their estimated useful economic lives. Amortisation periods for intangible assets are:

	Years
Software	1 to 10

	Software £m
Cost at 1 April 2018	1,797
Exchange adjustments	70
Additions	306
Disposals	(15)
Reclassifications[1]	10
Cost at 31 March 2019	2,168
Exchange adjustments	63
Additions	352
Disposals	–
Reclassifications[1]	–
Cost at 31 March 2020	2,583
Accumulated amortisation at 1 April 2018	(898)
Exchange adjustments	(26)
Amortisation charge for the year	(175)
Accumulated amortisation of disposals	15
Accumulated amortisation at 31 March 2019	(1,084)
Exchange adjustments	(28)
Amortisation charge for the year	(176)
Accumulated amortisation of disposals	–
Accumulated amortisation at 31 March 2020	(1,288)
Net book value at 31 March 2020[2]	**1,295**
Net book value at 31 March 2019	1,084

1. Reclassifications includes amounts transferred from property, plant and equipment (see note 13).
2. Included in software is £69 million (2019: £116 million) relating to the US Enterprise Resource Planning system, which still has a remaining amortisation period of three years.

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

13. Property, plant and equipment

The following note shows the physical assets controlled by us. The cost of these assets primarily represents the amount initially paid for them. This includes both their purchase price and the construction and other costs associated with getting them ready for operation. A depreciation expense is charged to the income statement to reflect annual wear and tear and the reduced value of the asset over time. Depreciation is calculated by estimating the number of years we expect the asset to be used (useful economic life or UEL) and charging the cost of the asset to the income statement equally over this period.

We operate an energy networks business and therefore have a significant physical asset base. We continue to invest in our networks to maintain reliability, create new customer connections and ensure our networks are flexible and resilient. Our business plan envisages these additional investments will be funded through a mixture of cash generated from operations and the issue of new debt.

Property, plant and equipment is recorded at cost, less accumulated depreciation and any impairment losses. Cost includes the purchase price of the asset; any payroll and finance costs incurred which are directly attributable to the construction of property, plant and equipment; and the cost of any associated asset retirement obligations.

Property, plant and equipment includes assets in which the Group's interest comprises legally protected statutory or contractual rights of use. Additions represent the purchase or construction of new assets, including capital expenditure for safety and environmental assets, and extensions to, enhancements to, or replacement of, existing assets. All costs associated with projects or activities which have not been fully commissioned at the period end are classified within assets in the course of construction. No depreciation is provided on freehold land or assets in the course of construction.

Other items of property, plant and equipment are depreciated, on a straight-line basis, at rates estimated to write off their book values over their estimated useful economic lives. In assessing estimated useful economic lives, consideration is given to any contractual arrangements and operational requirements relating to particular assets. The assessments of estimated useful economic lives and residual values of assets are performed annually.

Unless otherwise determined by operational requirements, the depreciation periods for the principal categories of property, plant and equipment are, in general, as shown in the table below split between the UK and US, along with the weighted average remaining UEL for each class of property, plant and equipment (which is calculated by applying the annual depreciation charge per class of asset by the net book value of that class of asset).

	Years		
	UK	US	Weighted average remaining UEL
Freehold and leasehold buildings	up to 60	up to 100	26
Plant and machinery:			
Electricity transmission plant and wires	10 to 100	45 to 80	40
Electricity distribution plant	n/a	35 to 85	37
Electricity generation plant	15 to 40	20 to 93	21
Interconnector plant and other	5 to 60	8 to 50	23
Gas plant – mains, services and regulating equipment	10 to 65	47 to 95	49
Gas plant – storage	5 to 40	12 to 65	13
Gas plant – meters	7 to 30	14 to 65	18
Motor vehicles and office equipment	up to 10	up to 26	5

Gas asset lives

The role that gas networks play in the pathway to achieving the greenhouse gas emissions reductions targets set in the jurisdictions in which we operate is currently uncertain. However, we believe the gas assets which we own and operate today will continue to have a crucial role in maintaining security, reliability and affordability of energy beyond 2050, although the scale and purpose for which the networks will be used is dependent on technological developments and policy choices of governments and regulators.

- In the UK, the gas mains, services and regulating assets relating to the National Transmission System (NTS) were subject to a detailed review in January 2019. The most material components of these are our pipeline assets, which are due to be fully depreciated by 2070, with other assets being depreciated over various periods between now and then. That review was undertaken prior to the UK enacting legislation committing to net zero by 2050, but considered scenarios which included an extension of the emissions reduction targets (80% emissions reduction target at the time of the report). The review concluded that the most likely outcome was for the NTS network assets to remain in use beyond 2050, including in those scenarios where the greenhouse gas emissions of gas networks were largely eliminated.

  We do not believe developments since January 2019 would change the conclusions of this review.
- With respect to our US gas distribution assets, asset lives are assessed as part of detailed depreciation studies completed as part of each separate rate proceeding. Depreciation studies consider the physical condition of assets and the expected operational life of an asset. We believe these assessments are our best estimate of the UEL of our gas network assets in the US.
- The weighted average remaining UEL for our US gas distribution fixed asset base is circa 50 years, however a sizeable proportion of our assets are assumed to have UELs which extend beyond 2080. We continue to believe the lives identified by rate proceedings are the best estimate of the assets' UELs, although we continue to keep this assumption under review as we learn more about possible future pathways towards net zero. Whilst the targets, goals and ambitions have now been formalised in legislation in the states in which we operate, there is widespread recognition that work needs to be done to define the possible future decarbonisation pathways.
- Asset depreciation lives feed directly into our regulatory recovery mechanisms, such that any shortening of asset recovery periods as agreed with regulators should be recoverable through future rates, subject to agreement, over future periods, as part of wider considerations around ensuring the continuing affordability of gas in our service territories.

13. Property, plant and equipment continued

Given the uncertainty described relating to the UELs of our gas assets, below we provide a sensitivity on the depreciation charge for our UK and US regulated segments were a shorter UEL presumed:

	Increase in depreciation expense	
	UK regulated £m	US regulated £m
UELs limited to 2050	37	151
UELs limited to 2060	13	66
UELs limited to 2070	–	26

Note that this sensitivity calculation excludes any assumptions regarding residual value for our asset base and the effect shortening asset depreciation lives would expect to have on our regulatory recovery mechanisms.

Items within property, plant and equipment are tested for impairment only if there is some indication that the carrying value of the assets may have been impaired. Impairments of assets are calculated as the difference between the carrying value of the asset and the recoverable amount, if lower. Where such an asset does not generate cash flows that are independent from other assets, the recoverable amount of the cash-generating unit to which that asset belongs is estimated. Impairments are recognised in the income statement and if immaterial are included within the depreciation charge for the year.

	Land and buildings £m	Plant and machinery £m	Assets in the course of construction[1] £m	Motor vehicles and office equipment £m	Total £m
Cost at 1 April 2018	2,930	49,374	4,273	857	57,434
Exchange adjustments	114	2,001	70	47	2,232
Additions	34	391	3,533	57	4,015
Disposals	(35)	(357)	(159)	(44)	(595)
Reclassifications[2]	295	2,974	(3,292)	13	(10)
Cost at 1 April 2019 (as previously reported)	3,338	54,383	4,425	930	63,076
Right-of-use assets recognised on transition to IFRS 16[3]	381	67	–	20	468
Cost at 1 April 2019 (as restated)	3,719	54,450	4,425	950	63,544
Exchange adjustments	98	1,511	53	33	1,695
Additions	130	464	4,029	104	4,727
Disposals	(79)	(486)	(9)	(65)	(639)
Reclassifications[2,4]	29	4,303	(4,433)	14	(87)
Cost at 31 March 2020	3,897	60,242	4,065	1,036	69,240
Accumulated depreciation at 1 April 2018	(674)	(16,398)	–	(509)	(17,581)
Exchange adjustments	(19)	(501)	–	(25)	(545)
Depreciation charge for the year	(93)	(1,229)	(150)	(101)	(1,573)
Disposals	7	335	150	44	536
Reclassifications[2]	1	(1)	–	–	–
Accumulated depreciation at 1 April 2019	(778)	(17,794)	–	(591)	(19,163)
Exchange adjustments	(16)	(372)	–	(20)	(408)
Depreciation charge for the year	(92)	(1,252)	–	(120)	(1,464)
Disposals	36	464	–	58	558
Reclassifications[2]	3	(7)	–	11	7
Accumulated depreciation at 31 March 2020	(847)	(18,961)	–	(662)	(20,470)
Net book value at 31 March 2020	**3,050**	**41,281**	**4,065**	**374**	**48,770**
Net book value at 31 March 2019	2,560	36,589	4,425	339	43,913

1. In 2019, included within disposals are UK nuclear connections development costs of £150 million (before £13 million of termination income) which were written off. See note 5 for further details.
2. Represents amounts transferred between categories, (to)/from other intangible assets (see note 12), reclassifications from inventories and reclassifications between cost and accumulated depreciation.
3. £468 million of additional right-of-use assets were recognised on transition to IFRS 16 on 1 April 2019. See note 37 for details.
4. Comprises an £87 million reduction in gross cost of assets in the course of construction in our UK Electricity Transmission business for costs previously capitalised and accrued as due to a supplier that are no longer payable.

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

13. Property, plant and equipment continued

Right-of-use assets

The Group leases various properties, land, equipment and cars. With effect from 1 April 2019, new lease arrangements entered into are recognised as a right-of-use asset and a corresponding liability at the date at which the leased asset is available for use by the Group (see note 37). The right-of-use asset and associated lease liability arising from a lease are initially measured at the present value of the lease payments expected over the lease term, plus any other costs. The discount rate applied is the rate implicit in the lease or, if that is not available, then the incremental rate of borrowing for a similar term and similar security. The lease term takes account of exercising any extension options that are at our option if we are reasonably certain to exercise the option and any lease termination options unless we are reasonably certain not to exercise the option. Each lease payment is allocated between the liability and finance cost. The finance cost is charged to the income statement over the lease period using the effective interest rate method. The right-of-use asset is depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis. For short-term leases (lease term of 12 months or less) and leases of low-value assets (such as computers), the Group continues to recognise a lease expense on a straight-line basis.

Included within the net book value of property, plant and equipment at 31 March 2020 are right-of-use assets, split as follows:

	Land and buildings £m	Plant and machinery £m	Assets in the course of construction £m	Motor vehicles and office equipment £m	Total £m
Net book value at 31 March 2020	364	95	–	225	684
Additions	10	1	–	73	84
Depreciation charge for the year ended 31 March 2020	(29)	(16)	–	(72)	(117)

The following balances have been included in the income statement for the year ended 31 March 2020 in respect of right-of-use assets:

	Total £m
Included within net finance income and costs:	
Interest expense on lease liabilities	(26)
Included within revenue:	
Lease income	35
Included within operating expenses:	
Expenses relating to low-value leases	(12)

The associated lease liabilities are disclosed in note 21.

The total of future minimum sub lease payments expected to be received under non-cancellable sub leases is £94 million (2019: £86 million).

	2020 £m	2019 £m
Information in relation to property, plant and equipment		
Capitalised interest included within cost	**2,118**	1,995
Contributions to cost of property, plant and equipment included within:		
Trade and other payables	**84**	87
Non-current liabilities	**428**	372
Contract liabilities – current	**76**	61
Contract liabilities – non-current	**1,082**	933

14. Other non-current assets

Other non-current assets include assets that do not fall into any other non-current asset category (such as goodwill or property, plant and equipment) where the benefit to be received from the asset is not due to be received until after 31 March 2021.

	2020 £m	2019 £m
Other receivables	**35**	28
Non-current tax assets	**65**	56
Prepayments	**19**	7
Accrued income[1]	**235**	173
	354	264

1. Includes accrued income in relation to property sales to the St William joint venture.

15. Financial and other investments

The Group holds a range of financial and other investments. These investments include short-term money funds, quoted investments in equities or bonds of other companies, long-term loans to our joint ventures, investments in our venture capital portfolio (National Grid Partners), bank deposits with a maturity of greater than three months, and cash balances that cannot be readily used in operations, principally collateral pledged against derivative holdings.

The Group has reported four categories of financial investments, and the classification for each investment is dependent on its contractual cash flows and the business model it is held under and recognised on trade date.

Debt instruments that have contractual cash flows that are solely payments of principal and interest, and which are held within a business model whose objective is to collect contractual cash flows, are held at amortised cost. This category includes our long-term loans to joint ventures as well as receivables in relation to deposits and collateral.

Debt investments that have contractual cash flows that are solely payments of principal and interest, and which are held within a business model whose objective is both to collect the contractual cash flows and to sell the debt instruments, are measured at fair value through other comprehensive income. On disposal, any realised gains or losses are recycled to the income statement in investment income (see note 6). Other investments include insurance contracts, measured at fair value, and held to back the present value of unfunded obligations in note 25.

The Group has elected to measure equity instruments at fair value through other comprehensive income that are shares held as part of a portfolio of financial instruments which back some long-term employee liabilities. They are not held for trading and so recognising gains and losses on these investments in profit and loss would not be representative of performance in the year. On disposal, any realised gains and losses are transferred to retained profits (see note 28).

Other financial investments are subsequently measured at fair value through profit and loss. This primarily comprises our money market funds, insurance company fund investments and corporate venture capital investments held by National Grid Partners.

Financial and other investments are initially recognised on trade date. Subsequent to initial recognition, the fair values of financial assets that are quoted in active markets are based on bid prices. When independent prices are not available, fair values are determined using valuation techniques used by the relevant markets. The techniques use observable market data to the extent available.

	2020 £m	2019 £m
Non-current		
Debt and other investments at fair value through other comprehensive income	**352**	343
Equity investments at fair value through other comprehensive income	**83**	93
Investments at fair value through profit and loss	**108**	62
Loans to joint ventures[1]	**–**	169
	543	667
Current		
Investments at fair value through profit and loss	**1,278**	1,311
Financial assets at amortised cost	**720**	670
	1,998	1,981
	2,541	2,648
Financial and other investments include the following:		
Investments in short-term money funds[2]	**978**	969
Insurance company fund investments[3]	**300**	342
Equities[4]	**83**	93
Bonds[4]	**132**	122
Cash surrender value of life insurance policies[4]	**220**	221
Loans to joint ventures	**–**	169
National Grid Partners and other investments[5]	**108**	62
Restricted balances:		
Collateral[6]	**685**	637
Other	**35**	33
	2,541	2,648

1. As at 31 March 2019, this related to a loan to a joint venture, which was measured at amortised cost.
2. Includes £1 million (2019: £6 million) held as insurance company fund investments and £26 million (2019: £22 million) US non-qualified plan investments, and therefore restricted.
3. Includes restricted amounts of £300 million (2019: £342 million) held as insurance company fund investments.
4. Includes restricted amounts of £435 million (2019: £436 million) relating to US non-qualified plan investments.
5. This includes a series of small unquoted equity investments held by National Grid Partners of £97 million (2019: £51 million).
6. Refers to collateral placed with counterparties with whom we have entered into a credit support annex to the ISDA (International Swaps and Derivatives Association) Master Agreement.

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

15. Financial and other investments continued

Fair value through profit and loss and fair value through other comprehensive income investments are recorded at fair value. The carrying value of current financial assets at amortised cost approximates their fair values, primarily due to short-dated maturities. The carrying value of the non-current loans to joint ventures approximates their fair values as at 31 March 2019. The exposure to credit risk at the reporting date is the fair value of the financial investments. For further information on our credit risk, refer to note 32(a).

For the purposes of impairment assessment, the investments in bonds are considered to be low risk as they are managed with an investment remit to hold investment grade securities; life insurance policies are held with regulated insurance companies; and deposits, collateral receivable and other financial assets at amortised cost are investment grade. All financial assets held at fair value through other comprehensive income or amortised cost are therefore considered to have low credit risk and have a loss allowance equal to 12-month expected credit losses.

In determining the expected credit losses for these assets, some or all of the following information has been considered: credit ratings, the financial position of counterparties, the future prospects of the relevant industries and general economic forecasts.

No fair value through other comprehensive income or amortised cost financial assets have had modified cash flows during the period. There has been no change in the estimation techniques or significant assumptions made during the year in assessing the loss allowance for these financial assets. There were no significant movements in the gross carrying value of financial assets during the year that contribute to changes in the loss allowance. No collateral is held in respect of any of the financial investments in the above table. No balances are more than 30 days past due, and no balances were written off during the year.

16. Investments in joint ventures and associates

Investments in joint ventures and associates represent businesses we do not control but over which we exercise joint control or significant influence. They are accounted for using the equity method. A joint venture is an arrangement established to engage in economic activity, which the Group jointly controls with other parties and has rights to the net assets of the arrangement. An associate is an entity which is neither a subsidiary nor a joint venture, but over which the Group has significant influence.

	2020			2019		
	Associates £m	**Joint ventures £m**	**Total £m**	Associates £m	Joint ventures £m	Total £m
Share of net assets at 1 April	**291**	**317**	**608**	1,807	361	2,168
Exchange adjustments	**20**	**12**	**32**	17	(6)	11
Additions	**16**	**156**	**172**	58	85	143
Capitalisation of shareholder loan to Nemo Link Limited	**–**	**176**	**176**	–	–	–
Impairment charge against investment in Quadgas	**–**	**–**	**–**	(43)	–	(43)
Transfer of interest in Quadgas to assets held for sale	**–**	**–**	**–**	(1,625)	–	(1,625)
Share of post-tax results for the year	**40**	**47**	**87**	67	11	78
Share of other comprehensive income of associates, net of tax	**1**	**–**	**1**	37	–	37
Dividends received	**(41)**	**(34)**	**(75)**	(38)	(30)	(68)
Other movements[1]	**14**	**(20)**	**(6)**	11	(104)	(93)
Share of net assets at 31 March	**341**	**654**	**995**	291	317	608

1. Other movements on joint ventures relate to reducing the carrying value of the investment in St William Homes LLP to reflect deferred income we expect to recognise over the next 10 years.

A list of joint ventures and associates including the name and proportion of ownership is provided in note 34. Transactions with and outstanding balances with joint ventures and associates are shown in note 31. The joint ventures and associates have no significant contingent liabilities to which the Group is exposed, and the Group has no significant contingent liabilities in relation to its interests in the joint ventures and associates. The Group has capital commitments of £240 million (2019: £18 million) in relation to joint ventures.

16. Investments in joint ventures and associates continued

At 31 March 2020, the Group had three material joint ventures, being its 50% equity stakes in BritNed and Nemo Link Limited (Nemo) and its 51% stake in Emerald Energy Venture LLC (Emerald). The Group has one material associate, being its 26.25% investment in Millennium Pipeline Company LLC. BritNed is a joint venture with the Dutch transmission system operator, TenneT, and operates the subsea electricity link between Great Britain and the Netherlands, commissioned in 2011. Nemo is a joint venture with the Belgian transmission operator, Elia, and is a subsea electricity interconnector between the UK and Belgium, which became operational on 31 January 2019. BritNed and Nemo have reporting periods ending on 31 December with monthly management reporting information provided to National Grid. Emerald is a joint venture with Washington State Investment Board and builds and operates wind and solar assets. Emerald was acquired on 11 July 2019. Millennium Pipeline Company LLC is an associate that owns a natural gas pipeline from southern New York to the Lower Hudson Valley. Summarised financial information as at 31 March, together with the carrying amount of the investments, is as follows:

	BritNed Development Limited		**Millennium Pipeline Company LLC**		**Nemo Link Limited**		**Emerald Energy Venture LLC**
	2020 £m	2019 £m	**2020 £m**	2019 £m	**2020 £m**	2019 £m	**2020 £m**
Statement of financial position							
Non-current assets	**399**	370	**971**	937	**582**	537	**435**
Cash and cash equivalents	**54**	59	**33**	35	**26**	47	**66**
All other current assets	**4**	2	**26**	22	**5**	3	**6**
Non-current liabilities	**(45)**	(11)	**(315)**	(326)	**(29)**	2	**(232)**
Current liabilities	**(16)**	(28)	**(43)**	(84)	**(10)**	(375)	**(2)**
Net assets	**396**	392	**672**	584	**574**	214	**273**
Group's ownership interest in joint venture/associate	**198**	196	**176**	153	**287**	107	**139**
Group adjustment: elimination of profits on sales to joint venture	**–**	–	**–**	–	**–**	–	**(10)**
Carrying amount of the Group's investment	**198**	196	**176**	153	**287**	107	**129**

	BritNed Development Limited		**Millennium Pipeline Company LLC**		**Nemo Link Limited**		**Emerald Energy Venture LLC**
	2020 £m	2019 £m	**2020 £m**	2019 £m	**2020 £m**	2019 £m	**2020 £m**
Income statement							
Revenue	**80**	87	**206**	166	**45**	12	**19**
Depreciation and amortisation	**(14)**	(13)	**(46)**	(34)	**(23)**	(4)	**(7)**
Other costs	**(10)**	(10)	**(20)**	(24)	**(8)**	(4)	**(10)**
Operating profit	**56**	64	**140**	108	**14**	4	**2**
Net interest expense	**–**	–	**(22)**	(11)	**–**	–	**(3)**
Profit before tax	**56**	64	**118**	97	**14**	4	**(1)**
Income tax expense	**(10)**	(10)	**–**	–	**(2)**	–	**–**
Profit for the year	**46**	54	**118**	97	**12**	4	**(1)**
Group's share of profit/(loss)	**23**	27	**31**	25	**6**	2	**(1)**
Group adjustment: Tax charge	**–**	–	**(9)**	–	**–**	–	**–**
Group's share of post-tax results for the year	**23**	27	**22**	25	**6**	2	**(1)**

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

17. Derivative financial instruments

Derivatives are financial instruments that derive their value from the price of an underlying item such as interest rates, foreign exchange rates, credit spreads, commodities, equities or other indices. In accordance with policies approved by the Board, derivatives are transacted generally to manage exposures to fluctuations in interest rates, foreign exchange rates and commodity prices. Our derivatives balances comprise two broad categories:

- financing derivatives managing our exposure to interest rates and foreign exchange rates. Specifically, we use these derivatives to manage our financing portfolio, holdings in foreign operations and contractual operational cash flows; and
- commodity contract derivatives managing our US customers' exposure to price and supply risks. Some forward contracts for the purchase of commodities meet the definition of derivatives and are included here. We also enter into derivative financial instruments linked to commodity prices, including index futures, options and swaps. These are used to manage market price volatility.

Derivatives are initially recognised at fair value and subsequently remeasured to fair value at each reporting date. Changes in fair values are recorded in the period they arise, in either the consolidated income statement or other comprehensive income as required by IFRS 9. Where the gains or losses recorded in the income statement arise from changes in the fair value of derivatives to the extent that hedge accounting is not applied or is not fully effective, these are recorded as remeasurements, detailed in notes 5 and 6. Where the fair value of a derivative is positive it is carried as a derivative asset, and where negative as a derivative liability.

We calculate the fair value of derivative financial instruments by taking the present value of future cash flows, primarily incorporating market observable inputs. The various inputs include foreign exchange spot and forward rates, yield curves of the respective currencies, currency basis spreads between the respective currencies, interest rate and inflation curves, the forward rate curves of underlying commodities, and for those positions that are not fully cash collateralised the credit quality of the counterparties.

Certain clauses embedded in non-derivative financial instruments or other contracts are presented as derivatives because they impact the risk profile of their host contracts and they are deemed to have risks or rewards not closely related to those host contracts.

Further information on how derivatives are valued and used for risk management purposes is presented in note 32.

Information on commodity contracts and other commitments not meeting the definition of derivatives is presented in note 30.

The fair values of derivatives by category are as follows:

	2020			2019		
	Assets £m	**Liabilities £m**	**Total £m**	Assets £m	Liabilities £m	Total £m
Financing derivatives	**1,267**	**(1,134)**	**133**	1,052	(1,084)	(32)
Commodity contract derivatives	**75**	**(200)**	**(125)**	101	(99)	2
	1,342	**(1,334)**	**8**	1,153	(1,183)	(30)

(a) Financing derivatives
The fair values of financing derivatives by type are as follows:

	2020			2019		
	Assets £m	**Liabilities £m**	**Total £m**	Assets £m	Liabilities £m	Total £m
Interest rate swaps	**556**	**(337)**	**219**	539	(384)	155
Cross-currency interest rate swaps	**643**	**(514)**	**129**	470	(443)	27
Foreign exchange forward contracts[1]	**58**	**(39)**	**19**	41	(41)	–
Inflation-linked swaps	**–**	**(234)**	**(234)**	–	(214)	(214)
Equity options	**10**	**(10)**	**–**	2	(2)	–
	1,267	**(1,134)**	**133**	1,052	(1,084)	(32)

1. Included within the foreign exchange forward contracts balance is £(3) million (2019: £32 million) of derivatives in relation to hedging of capital expenditure.

17. Derivative financial instruments continued

(a) Financing derivatives continued

The maturity profile of financing derivatives is as follows:

	2020 Assets £m	2020 Liabilities £m	2020 Total £m	2019 Assets £m	2019 Liabilities £m	2019 Total £m
Current						
Less than 1 year	**62**	**(254)**	**(192)**	56	(282)	(226)
	62	**(254)**	**(192)**	56	(282)	(226)
Non-current						
In 1 to 2 years	**480**	**(51)**	**429**	19	(193)	(174)
In 2 to 3 years	**13**	**(5)**	**8**	416	(1)	415
In 3 to 4 years	**20**	**(28)**	**(8)**	11	–	11
In 4 to 5 years	**31**	**(109)**	**(78)**	20	(14)	6
More than 5 years	**661**	**(687)**	**(26)**	530	(594)	(64)
	1,205	**(880)**	**325**	996	(802)	194
	1,267	**(1,134)**	**133**	1,052	(1,084)	(32)

The notional contract[1] amounts of financing derivatives by type are as follows:

	2020 £m	2019 £m
Interest rate swaps	**(3,101)**	(6,299)
Cross-currency interest rate swaps	**(8,097)**	(6,700)
Foreign exchange forward contracts	**(3,284)**	(2,937)
Inflation-linked swaps	**(500)**	(500)
Equity options	**(800)**	(800)
	(15,782)	(17,236)

1. The notional contract amounts of derivatives indicate the gross nominal value of transactions outstanding at the reporting date.

(b) Commodity contract derivatives

The fair values of commodity contract derivatives by type are as follows:

	2020 Assets £m	2020 Liabilities £m	2020 Total £m	2019 Assets £m	2019 Liabilities £m	2019 Total £m
Commodity purchase contracts accounted for as derivative contracts						
Forward purchases of gas	**64**	**(108)**	**(44)**	66	(78)	(12)
Derivative financial instruments linked to commodity prices						
Electricity swaps	**4**	**(83)**	**(79)**	29	(19)	10
Gas swaps	**7**	**(8)**	**(1)**	5	(1)	4
Gas options	**–**	**(1)**	**(1)**	1	(1)	–
	75	**(200)**	**(125)**	101	(99)	2

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

17. Derivative financial instruments continued

(b) Commodity contract derivatives continued

The maturity profile of commodity contract derivatives is as follows:

	2020			2019		
	Assets £m	Liabilities £m	Total £m	Assets £m	Liabilities £m	Total £m
Current						
Less than one year	31	(126)	(95)	52	(68)	(16)
	31	(126)	(95)	52	(68)	(16)
Non-current						
In 1 to 2 years	8	(35)	(27)	14	(9)	5
In 2 to 3 years	9	(24)	(15)	9	(8)	1
In 3 to 4 years	8	(12)	(4)	6	(4)	2
In 4 to 5 years	7	(1)	6	6	(4)	2
More than 5 years	12	(2)	10	14	(6)	8
	44	(74)	(30)	49	(31)	18
	75	(200)	(125)	101	(99)	2

The notional quantities of commodity contract derivatives by type are as follows:

	2020	2019
Forward purchases of gas[1]	102m Dth	52m Dth
Electricity swaps	12,836 GWh	12,848 GWh
Electricity options	0 GWh	10,444 GWh
Gas swaps	89m Dth	87m Dth
Gas options	26m Dth	34m Dth

1. Forward gas purchases have terms up to four years (2019: two years). The contractual obligations under these contracts are £128 million (2019: £108 million).

18. Inventories and current intangible assets

Inventories represent assets that we intend to use in order to generate revenue in the short term, either by selling the asset itself (for example, fuel stocks) or by using it to fulfil a service to a customer or to maintain our network (consumables).

Inventories are stated at the lower of weighted average cost and net realisable value. Where applicable, cost comprises direct materials and direct labour costs as well as those overheads that have been incurred in bringing the inventories to their present location and condition.

Emission allowances, principally relating to the emissions of carbon dioxide in the UK and sulphur and nitrous oxides in the US, are recorded as intangible assets within current assets, and they are initially recorded at cost and subsequently at the lower of cost and net realisable value. A liability is recorded in respect of the obligation to deliver emission allowances, and emission charges are recognised in the income statement in the period in which emissions are made.

	2020 £m	2019 £m
Fuel stocks	151	99
Raw materials and consumables	265	184
Current intangible assets – emission allowances	133	87
	549	370

There is a provision for obsolescence of £21 million against inventories as at 31 March 2020 (2019: £20 million).

19. Trade and other receivables

Trade and other receivables are amounts which are due from our customers for services we have provided.

Trade and other receivables are initially recognised at fair value and subsequently measured at amortised cost, less any appropriate allowances for estimated irrecoverable amounts.

	2020 £m	2019 £m
Trade receivables	1,551	1,899
Accrued income	869	883
Prepayments	408	237
Other receivables	158	134
	2,986	3,153

Trade receivables are non-interest-bearing and generally have a 30 to 90 days term. Due to their short maturities, the fair value of trade and other receivables approximates their carrying value. The maximum exposure of trade receivables to credit risk is the gross carrying amount of £2,063 million (2019: £2,293 million).

Provision for impairment of receivables
A provision for credit losses is recognised at an amount equal to the expected credit losses that will arise over the lifetime of the trade receivables and accrued income.

	2020 £m	2019 £m
At 1 April	394	309
Exchange adjustments	20	24
Charge for the year, net of recoveries	234	181
Uncollectible amounts written off	(136)	(120)
At 31 March	512	394

The trade receivables balance, accrued income balance and provisions balance split by geography is as follows:

	As at 31 March 2020			As at 31 March 2019		
	UK £m	US £m	Total £m	UK £m	US £m	Total £m
Trade receivables	227	1,836	2,063	313	1,980	2,293
Accrued income	461	408	869	445	438	883
Provision for impairment of trade receivables	(40)	(472)	(512)	(40)	(354)	(394)

There are no retail customers in the UK businesses. A provision matrix is not used in the UK as an assessment of expected losses on individual debtors is performed, and the provision is not material.

In the US, £1,806 million (2019: £1,885 million) of the trade receivables and unbilled revenue balance is attributable to retail customers. For non-retail US customer receivables, a provision matrix is not used and expected losses are determined on individual debtors.

The provision for retail customer receivables in the US is calculated based on a series of provision matrices which are prepared by regulated entity and by customer type. The expected loss rates in each provision matrix are based on historical loss rates adjusted for current and forecasted economic conditions at the balance sheet date. The inclusion of forward-looking information in the provision matrix setting process under IFRS 9 resulted in loss rates that reflect expected future economic conditions and the recognition of an expected loss on all debtors even where no loss event has occurred.

In March 2020, the Group's US distribution businesses ceased certain customer cash collection activities in response to regulatory instructions and to changes in State, Federal and City level regulations and guidance, and actions to minimise risk to the Group's employees. The Group has also ceased customer termination activities as requested by relevant local authorities. In addition, we have considered the macroeconomic data including unemployment levels and our previous experience regarding debtor recoverability during and in the aftermath of the 2008/09 financial crisis (which impacted all of our service territories) and that following Superstorm Sandy in 2012 which impacted our downstate New York gas business specifically.

Based on our review of these factors, we concluded that a reasonable range for the additional provision recognised in light of the cessation of customer terminations and collections following the moratoriums introduced would lie between £81 million and £161 million ($100 million and $200 million). We concluded an additional charge of £117 million represented our best estimate based on the information available, primarily as this represented an impact twice as severe as Superstorm Sandy, adjusted to incorporate all service territories impacted.

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

19. Trade and other receivables continued

The average expected loss rates and gross balances for the retail customer receivables in our US operations are set out below:

	2020 %	2020 £m	2019 %	2019 £m
Unbilled revenue	**5**	**395**	–	420
0 – 30 days	**5**	**623**	3	736
30 – 60 days	**14**	**184**	12	194
60 – 90 days	**29**	**105**	20	89
3 – 6 months	**47**	**119**	30	109
6 – 12 months	**63**	**104**	39	99
Over 12 months	**79**	**276**	68	238
		1,806		1,885

The year-on-year movements in average expected loss rates are driven primarily as a result of the moratoriums on cash collection and termination activities outlined above.

US retail customer receivables are not collateralised. Trade receivables are written off when regulatory requirements are met. Write-off policies vary between jurisdictions as they are aligned with the local regulatory requirements, which differ between regulators. There were no significant amounts written off during the period that were still subject to enforcement action. Our internal definition of default is aligned with that of the individual regulators in each jurisdiction.

For further information on our wholesale and retail credit risk, refer to note 32(a).

20. Cash and cash equivalents

Cash and cash equivalents include cash balances, together with short-term investments with an original maturity of less than three months that are readily convertible to cash.

Net cash and cash equivalents reflected in the cash flow statement are net of bank overdrafts, which are reported in borrowings. The carrying amounts of cash and cash equivalents and bank overdrafts approximate their fair values.

Cash at bank earns interest at floating rates based on daily bank deposit rates. Short-term deposits are made for periods varying between one day and three months, depending on the immediate cash requirements, and earn interest at the respective short-term deposit rates.

Net cash and cash equivalents held in currencies other than sterling have been converted into sterling at year-end exchange rates. For further information on currency exposures, refer to note 32(c).

	2020 £m	2019 £m
Cash at bank	**73**	177
Short-term deposits	**–**	75
Cash and cash equivalents	**73**	252

21. Borrowings

We borrow money primarily in the form of bonds and bank loans. These are for a fixed term and may have fixed or floating interest rates or are linked to RPI. We use derivatives to manage risks associated with interest rates and foreign exchange.

Our price controls and rate plans lead us to fund our networks within a certain ratio of debt to equity and, as a result, we have issued a significant amount of debt. As we continue to invest in our networks, the value of debt is expected to increase over time. To maintain a strong balance sheet and to allow us to access capital markets at commercially acceptable interest rates, we balance the amount of debt we issue with the value of our assets, and we take account of certain other metrics used by credit rating agencies.

All borrowings are accounted for at amortised cost, with the exception of one liability measured at fair value through profit and loss, in order to eliminate a measurement mismatch.

Borrowings, which include interest-bearing, zero-coupon and inflation-linked debt, overdrafts and collateral payable, are initially recorded at fair value. This normally reflects the proceeds received (net of direct issue costs for liabilities measured at amortised cost). Subsequently, borrowings are stated either: i) at amortised cost; or ii) at fair value though profit and loss. Where a borrowing is held at amortised cost, any difference between the proceeds after direct issue costs and the redemption value is recognised over the term of the borrowing in the income statement using the effective interest method. For the liability held at fair value through profit and loss, interest is calculated using the effective interest method.

Where a borrowing or liability is held at fair value, changes in the fair value of the borrowing due to changes in the issuer's credit risk are recorded in the own credit reserve (see note 28). All other changes in the fair value of the liability are recognised in the income statement within remeasurements (see notes 5 and 6).

	2020 £m	2019 £m
Current		
Bank loans	**1,244**	641
Bonds	**1,446**	1,973
Commercial paper	**1,269**	1,792
Lease liabilities	**112**	65
Other loans	**1**	1
	4,072	4,472
Non-current		
Bank loans	**2,819**	2,599
Bonds[1]	**23,094**	21,278
Lease liabilities	**623**	205
Other loans	**186**	176
	26,722	24,258
Total borrowings	**30,794**	28,730

1. Includes a liability held at fair value through profit and loss of £741 million (2019: £667 million).

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

21. Borrowings continued
Total borrowings are repayable as follows:

	2020 £m	2019 £m
Less than 1 year	**4,072**	4,472
In 1 to 2 years	**2,212**	2,393
In 2 to 3 years	**1,664**	1,990
In 3 to 4 years	**757**	1,553
In 4 to 5 years	**2,122**	714
More than 5 years:		
By instalments	**870**	959
Other than by instalments	**19,097**	16,649
	30,794	28,730

The fair value of borrowings at 31 March 2020 was £34,174 million (2019: £32,252 million). Where market values were available, fair value of borrowings (Level 1) was £14,059 million (2019: £14,356 million). Where market values were not available, fair value of borrowings (Level 2) was £20,115 million (2019: £17,896 million), calculated by discounting cash flows at prevailing interest rates. The notional amount outstanding of the debt portfolio at 31 March 2020 was £30,422 million (2019: £28,417 million).

In April 2020, National Grid Electricity Transmission plc issued a £0.4 billion fixed interest rate bond from the NGET EMTN programme with a 20-year tenor and The Narragansett Electric Company issued a $0.6 billion (£0.5 billion) fixed interest rate bond with a 10-year tenor. Both issuances are part of the continued Group funding arrangements.

During the year, the assets of the Colonial Gas Company were merged with the Boston Gas Company, and have been ringfenced post-merger, and certain gas distribution assets of The Narragansett Electric Company are subject to liens and other charges and are provided as collateral over borrowings totalling £84 million at 31 March 2020 (2019: £81 million).

Collateral is placed with or received from any derivative counterparty where we have entered into a credit support annex to the ISDA Master Agreement once the current mark-to-market valuation of the trades between the parties exceeds an agreed threshold. Included in current bank loans is £785 million (2019: £558 million) in respect of cash received under collateral agreements. For further details of our borrowing facilities, refer to note 33. For further details of our bonds in issue, please refer to the debt investor section of our website. Unless included herein, the information on our website is unaudited.

Financial liability at fair value through profit and loss
The financial liability designated at fair value through profit and loss is analysed as follows:

i. the fair value of the liability was £741 million (2019: £667 million), which includes cumulative change in fair value attributable to changes in credit risk recognised in other comprehensive income, post tax of £10 million (2019: £13 million);
ii. the amount repayable at maturity in November 2021 is £759 million (2019: £724 million); and
iii. the difference between carrying amount and contractual amount at maturity is £18 million (2019: £57 million).

This liability has been reclassified in order to eliminate a measurement mismatch with derivatives which provide an economic hedge. The associated derivatives are collateralised and do not contain significant exposure to our own credit risk. The presentation of credit risk in other comprehensive income does not, therefore, create or enlarge an accounting mismatch in profit or loss.

The change in the fair value attributable to a change in credit risk is calculated as the difference between the total change in the fair value of the liability and the change in the value of the liability due to changes in market risk factors alone. The change in the fair value due to market risk factors was calculated using benchmark yield curves as at the end of the reporting period holding the credit risk margin constant. The fair value of the liability was calculated using observed market prices.

21. Borrowings continued

Lease liabilities

The Group adopted IFRS 16 on 1 April 2019, which resulted in the recognition of £474 million of additional lease liabilities. As we applied the modified retrospective approach to transition, comparatives were not restated. Refer to note 37 for details.

Lease liabilities are initially measured at the present value of the lease payments expected over the lease term. The discount rate applied is the rate implicit in the lease or if that is not available, then the incremental rate of borrowing for a similar term and similar security. The lease term takes account of exercising any extension options that are at our option if we are reasonably certain to exercise the option and any lease termination options unless we are reasonably certain not to exercise the option. Each lease payment is allocated between the liability and finance cost. The finance cost is charged to the income statement over the lease period using the effective interest rate method.

	2020 £m	2019 £m
Gross lease liabilities are repayable as follows:		
Less than 1 year	**132**	65
1 to 5 years	**361**	183
More than 5 years	**481**	62
	974	310
Less: finance charges allocated to future periods	**(239)**	(40)
	735	270
The present value of lease liabilities are as follows:		
Less than 1 year	**112**	65
1 to 5 years	**297**	156
More than 5 years	**326**	49
	735	270

22. Trade and other payables

Trade and other payables include amounts owed to suppliers, tax authorities and other parties which are due to be settled within 12 months. The total also includes deferred amounts, some of which represent monies received from customers but for which we have not yet delivered the associated service. These amounts are recognised as revenue when the service is provided.

Trade and other payables are initially recognised at fair value and subsequently measured at amortised cost. Contingent consideration is measured at fair value.

	2020 £m	2019 £m
Trade payables	**2,205**	2,404
Deferred payables	**137**	217
Customer contributions[1]	**84**	87
Social security and other taxes	**202**	159
Contingent consideration[2]	**30**	–
Other payables	**944**	902
	3,602	3,769

1. From government-related entities.
2. Contingent consideration relates to the acquisition of Geronimo (see note 38).

Due to their short maturities, the fair value of trade payables approximates their carrying value.

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

23. Contract liabilities

Contract liabilities primarily relate to the advance consideration received from customers for construction contracts, mainly in relation to connections, for which revenue is recognised over the life of the asset.

	2020 £m	2019 £m
Current	76	61
Non-current	1,082	933
	1,158	994

Significant changes in the contract liabilities balances during the period are as follows:

	2020 £m	2019 £m
As at 1 April	994	866
Exchange adjustments	39	29
Revenue recognised that was included in the contract liability balance at the beginning of the period	(60)	(51)
Increases due to cash received, excluding amounts recognised as revenue during the period	185	155
Changes due to amounts recognised as revenue	–	(5)
At 31 March	1,158	994

24. Other non-current liabilities

Other non-current liabilities include deferred income which will not be recognised as income until after 31 March 2021. It also includes payables that are not due until after that date.

Contingent consideration is measured at fair value. All other non-current liabilities are initially recognised at fair value and subsequently measured at amortised cost.

	2020 £m	2019 £m
Deferred income[1]	101	96
Customer contributions[2]	428	372
Contingent consideration[3]	44	–
Other payables	318	340
	891	808

1. Principally the deferral of profits relating to the sale of property, which we expect to recognise in future years.
2. From government-related entities.
3. Contingent consideration relates to the acquisition of Geronimo (see note 38).

There is no material difference between the fair value and the carrying value of other payables.

25. Pensions and other post-retirement benefits

All of our employees are eligible to participate in a pension plan. We have defined benefit (DB) and defined contribution (DC) pension plans in the UK and the US. In the US we also provide healthcare and life insurance benefits to eligible employees, post-retirement. The fair value of associated plan assets and present value of DB obligations are updated annually in accordance with IAS 19 (revised). We separately present our UK and US pension plans to show geographical split. Below we provide a more detailed analysis of the amounts recorded in the primary financial statements and the actuarial assumptions used to value the DB obligations.

National Grid's UK pension arrangements are held in separate Trustee administered funds. The arrangements are managed by Trustee companies with boards consisting of company- and member-appointed directors. In the US, the assets of the plans are held in trusts and administered by the Retirement Plans Committee comprised of appointed employees of the Company.

Defined contribution plans

These plans are designed to provide members with a pension pot for their retirement. The risks associated with these plans are assumed by the member.

Payments to these DC plans are charged as an expense as they fall due. There is no legal or constructive obligation on National Grid to pay additional contributions into a DC plan if the fund has insufficient assets to pay all employees' benefits relating to employee service in the current and prior periods.

The National Grid YouPlan

YouPlan is the qualifying UK pension plan that is used for automatic enrolment of new hires.

National Grid pays contributions into YouPlan to provide DC benefits on behalf of employees. National Grid provides a double match of member contributions, up to a maximum Company contribution of 12% of salary as well as the cost of administration and insured benefits.

Defined benefit plans

On retirement, members of DB plans receive benefits whose value is dependent on factors such as salary and length of pensionable service. National Grid's obligation in respect of DB pension plans is calculated separately for each DB plan by projecting the estimated amount of future benefit payments that employees have earned for their pensionable service in the current and prior periods. These future benefit payments are discounted to determine the present value of the liabilities. Current service cost and any unrecognised past service cost are recognised immediately. The discount rate used is the yield curve at the valuation date on high-quality corporate bonds.

Advice is taken from independent actuaries relating to the appropriateness of the key assumptions applied, including life expectancy, expected salary and pension increases, and inflation. Comparatively small changes in the assumptions used may have a significant effect on the amounts recognised in the consolidated income statement, the consolidated statement of other comprehensive income and the net liability recognised in the consolidated statement of financial position.

Remeasurements of pension assets and post-retirement benefit obligations are recognised in full in the period in which they occur in the consolidated statement of other comprehensive income.

The principal UK DB pensions plans are the National Grid UK Pension Scheme (NGUKPS) and the National Grid Electricity Group of the Electricity Supply Pension Scheme (NGEG of ESPS). In the US, we have four principal plans and various healthcare and life insurance plans.

The COVID-19 pandemic

The COVID-19 pandemic has had a global impact on economies, equity and bond markets. Market volatility during March has had an impact on the value of assets held by our DB and DC pension plans. Our UK DB plans have low-risk investment strategies with limited exposure to equities and other return seeking assets, whilst the US plans have a greater exposure to these asset classes.

UK Pensions plans

The arrangements are subject to independent actuarial funding valuations at least every three years, and following consultation and agreement with us, the qualified actuary certifies the employers' contributions, which, together with the specified contributions payable by the employees and proceeds from the plans' assets, are expected to be sufficient to fund the benefits payable.

The results of the most recent actuarial valuations are shown below. See page 167 for the assumptions used for IAS 19 (revised) purposes. The actuarial valuations for NGUKPS as at 31 March 2019 have recently been completed, while we expect the valuation for NGEG of ESPS to be finalised by 30 June 2020.

	Section A of NGUKPS	Section B of NGUKPS	NGEG of ESPS
Latest full actuarial valuation	31 March 2019	31 March 2019	31 March 2016
Actuary	Willis Towers Watson	Willis Towers Watson	Aon Hewitt
Market value of plan assets at latest valuation	£6,551 million	£5,765 million	£2,553 million
Actuarial value of benefits due to members	£6,502 million	£5,831 million	£3,053 million
Market value as percentage of benefits	101%	99%	84%
Funding surplus/(deficit)	£49 million	(£66 million)	(£500 million)
Funding surplus/(deficit) net of tax	£41 million	(£55 million)	(£415 million)

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

25. Pensions and other post-retirement benefits continued

National Grid UK Pension Scheme
NGUKPS consists of three sections, each legally and actuarially separate. Sections A and B are supported by companies within the Group, while Section C is supported by Cadent Gas Limited, now an unrelated third party. The plan closed to new hires on 1 April 2002.

Section A
Following the latest actuarial valuation at 31 March 2019, Section A remains in surplus, and so no deficit funding contributions are required. National Grid and the Trustees have agreed a schedule of contributions whereby the employers will continue to contribute 51.8% of pensionable salary, less member contributions, in respect of future benefit accrual.

As part of the sectionalisation of NGUKPS on 1 January 2017, a guarantee of £1 billion has been provided to Section A. This payment is contingent on insolvency or on failure to pay pension obligations to Section A and can be claimed against National Grid plc, National Grid Holdings One plc or Lattice Group Limited (up to £1 billion in total).

Section B
The latest full actuarial valuation at 31 March 2019 determined that Section B was in deficit. In addition to a £34 million payment already made in September 2019, National Grid and the Trustees agreed that an additional payment of approximately £32 million will be made by September 2020 to eliminate the funding deficit. In addition, the employers contribute 51.4% of pensionable salary, less member contributions, in respect of future benefit accrual.

Pensions buy-ins
During the year, the Trustees of the NGUKPS entered into two buy-in arrangements in order to manage various risks. The policies provide bulk annuities in respect of some pensioner and dependant members of Sections A and B of NGUKPS and were funded by existing assets. In Section A, £2.8 billion of gilts were exchanged for a buy-in policy with Rothesay Life. In Section B, £1.6 billion of gilts were exchanged for a buy-in policy with Legal & General. Both policies are held by the Trustee. For both transactions, the pricing of the policies was highly competitive; however, under IAS 19 the methodology for calculating the value of the buy-ins (as an asset held by the pension plan) differs from the price paid. This resulted in the recognition of an actuarial loss of £0.7 billion on purchase, recorded within the consolidated statement of other comprehensive income.

National Grid Electricity Group of the Electricity Supply Pension Scheme
The last full actuarial valuation for the NGEG of the ESPS determined that the plan was in deficit. National Grid and the Trustees agreed on a schedule of contributions, whereby deficit funding of £48 million is payable each year from 2016 to 2027, which should lead to the elimination of the funding shortfall by March 2027. All deficit funding amounts due will be adjusted for changes in the RPI. In addition, National Grid contributes 40.7% of pensionable salary, less member contributions, in respect of the ongoing service cost. The plan closed to new hires from 1 April 2006.

The plan holds a longevity insurance contract which covers improvements in longevity, providing long-term protection to the scheme, should some pensioner and dependant members live longer than currently expected.

Administration costs
Up to 31 March 2020, National Grid was responsible for the costs of plan administration and the Pension Protection Fund (PPF) levies for both Sections A and B of NGUKPS, and NGEG of ESPS. However, from 1 April 2020 onwards this will only apply to Section B of NGUKPS and NGEG of ESPS, whilst Section A of NGUKPS will fund these costs from the Section's assets.

Security arrangements
National Grid has also established security arrangements with charges in favour of the Trustees.

	Section A of NGUKPS	Section B of NGUKPS	NGEG of ESPS
Value of security arrangements at 31 March 2020[1]	£315 million	£180 million	£239 million
Principal supporting employers	National Grid plc and National Grid UK Limited	National Grid Gas plc (NGG)	National Grid Electricity Transmission plc (NGET)
Additional amounts payable[2] at 31 March 2020	£72 million	A maximum of £280 million	A maximum of £500 million

1. Following the completion of the March 2019 valuations for Sections A and B of NGUKPS, these amounts have changed to £186 million for Section A and to £nil for Section B.
2. These amounts are payable if certain trigger events occur which have been individually agreed between the plans and their relevant supporting employers.

The majority of the security is provided in the form of surety bonds with the remainder in letters of credit. The assets held in security will be paid to the respective section or plan in the event that the relevant supporting employer is subject to an insolvency event or fails to make the required contributions; and applicable to NGEG of ESPS only, if NGET loses its licence to operate under relevant legislation. Counter indemnities have also been taken out to ensure the obligations will be fulfilled.

25. Pensions and other post-retirement benefits continued

US pension plans

National Grid has multiple DC pension plans which allow employee as well as Company contributions. Non-union employees hired after 1 January 2011, as well as new hire represented union employees, receive a core contribution into the DC plan, irrespective of the employee's contribution into the plan.

National Grid sponsors four non-contributory qualified DB pension plans, which provide vested union employees, and vested non-union employees hired before 1 January 2011 with retirement benefits within prescribed limits as defined by the US Internal Revenue Service. National Grid also provides non-qualified DB pension arrangements for a section of current and former employees, which are closed to new entrants. Benefits under the DB plans generally reflect age, years of service and compensation and are paid in the form of an annuity or lump sum. An independent actuary performs valuations annually. The Company funds the DB plans by contributing no less than the minimum amount required, but no more than the maximum tax-deductible amount allowed under US Internal Revenue Service regulations. The range of contributions determined under these regulations can vary significantly depending upon the funded status of the plans. At present, there is some flexibility in the amount that is contributed on an annual basis. In general, the Company's policy for funding the US pension plans is to contribute the amounts collected in rates and capitalised in the rate base during the year, to the extent that the funding is no less than the minimum amount required. For the current financial year, these contributions amounted to approximately £153 million (2019: £231 million).

US retiree healthcare and life insurance plans

National Grid provides healthcare and life insurance benefits to eligible employees, post-retirement. Eligibility is based on certain age and length of service requirements, and in most cases, retirees contribute to the cost of their healthcare coverage. In the US, there is no governmental requirement to pre-fund post-retirement healthcare and life insurance plans. However, in general, the Company's policy for funding the US retiree healthcare and life insurance plans is to contribute amounts collected in rates and capitalised in the rate base during the year. For the current financial year, these contributions amounted to £18 million (2019: £14 million).

For the last few years it has been the Company's policy to primarily direct contributions to the DB pension plans due to concerns over tax deductible limitations relating to the retiree and healthcare and life insurance plans.

Actuarial assumptions

The Company has applied the following financial assumptions in assessing DB liabilities:

	UK pensions		
	2020 %	2019 %	2018 %
Discount rate – past service	**2.35**	2.40	2.60
Discount rate – future service	**2.35**	2.45	2.65
Salary increases	**2.90**	3.50	3.40
Rate of increase in RPI – past service	**2.65**	3.25	3.15
Rate of increase in RPI – future service	**2.45**	3.20	3.10

At 31 March 2020, single equivalent financial assumptions are shown above for presentational purposes, although full yield curves have been used in our calculations. In 2018 and 2019, single equivalent financial assumptions were set which reflected the average duration for the aggregate past and future service obligations.

The discount rate is determined by reference to high-quality UK corporate bonds at the reporting date. The rate of increase in salaries has been set using a promotional scale where appropriate. The rates of increases stated are not indicative of historical increases awarded or a guarantee of future increase, but merely an appropriate assumption used in assessing DB liabilities. Retail Price Index (RPI) is the key assumption that determines assumed increases in pensions in payment and deferment in the UK only.

	US pensions			US other post-retirement benefits		
	2020 %	2019 %	2018 %	**2020 %**	2019 %	2018 %
Discount rate	**3.30**	3.95	4.00	**3.30**	3.95	4.00
Salary increases	**3.50**	3.50	3.50	**3.50**	3.50	3.50
Initial healthcare cost trend rate	**n/a**	n/a	n/a	**7.00**	7.25	7.50
Ultimate healthcare cost trend rate	**n/a**	n/a	n/a	**4.50**	4.50	4.50

Discount rates for US pension liabilities have been determined by reference to appropriate yields on high-quality US corporate bonds at the reporting date based on the duration of plan liabilities. The healthcare cost trend rate is expected to reach the ultimate trend rate by 2030 (2019: 2028).

	2020		2019		2018	
	UK years	**US years**	UK years	US years	UK years	US years
Assumed life expectations for a retiree age 65						
Males	**22.1**	**20.9**	22.0	22.1	22.3	22.0
Females	**23.8**	**23.4**	23.6	24.2	23.9	24.2
In 20 years:						
Males	**23.3**	**22.5**	23.3	23.7	23.7	23.6
Females	**25.3**	**25.1**	25.2	25.9	25.5	25.8

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

25. Pensions and other post-retirement benefits continued

Maturity profile of DB obligations

The weighted average duration of the DB obligation for each category of plan is 14 years for UK pension plans; 14 years for US pension plans and 16 years for US other post-retirement benefit plans.

As at the reporting date, the present value of the funded obligations split according to member status was approximately:

- UK pensions: 8% active members (2019: 10%; 2018: 10%); 14% deferred members (2019: 16%; 2018: 18%); 78% pensioner members (2019: 74%; 2018: 72%);
- US pensions: 36% active members (2019: 37%; 2018: 38%); 9% deferred members (2019: 9%; 2018: 8%); 55% pensioner members (2019: 54%; 2018: 54%); and
- US other post-retirement benefits: 35% active members (2019: 39%; 2018: 38%); 0% deferred members (2019: 0%; 2018: 0%); 65% pensioner members (2019: 61%; 2018: 62%).

For sensitivity analysis see note 35.

Amounts recognised in the consolidated statement of financial position

	2020 £m	2019 £m	2018 £m
Present value of funded obligations	(24,281)	(24,609)	(23,747)
Fair value of plan assets	23,748	24,793	23,858
	(533)	184	111
Present value of unfunded obligations	(345)	(330)	(307)
Other post-employment liabilities	(75)	(72)	(67)
Net defined benefit liability	(953)	(218)	(263)
Represented by:			
Liabilities	(2,802)	(1,785)	(1,672)
Assets	1,849	1,567	1,409
	(953)	(218)	(263)

The geographical split of pensions and other post-retirement benefits is as shown below:

	UK Pensions			US Pensions			US other post-retirement benefits		
	2020 £m	2019 £m	2018 £m	2020 £m	2019 £m	2018 £m	2020 £m	2019 £m	2018 £m
Present value of funded obligations	(12,775)	(14,200)	(14,152)	(7,809)	(6,901)	(6,349)	(3,697)	(3,508)	(3,246)
Fair value of plan assets	14,364	15,507	15,330	6,972	6,646	6,030	2,412	2,640	2,498
	1,589	1,307	1,178	(837)	(255)	(319)	(1,285)	(868)	(748)
Present value of unfunded obligations	(69)	(76)	(74)	(276)	(254)	(233)	–	–	–
Other post-employment liabilities	–	–	–	–	–	–	(75)	(72)	(67)
Net defined benefit asset/(liability)	1,520	1,231	1,104	(1,113)	(509)	(552)	(1,360)	(940)	(815)
Represented by:									
Liabilities	(69)	(76)	(74)	(1,373)	(769)	(783)	(1,360)	(940)	(815)
Assets	1,589	1,307	1,178	260	260	231	–	–	–
	1,520	1,231	1,104	(1,113)	(509)	(552)	(1,360)	(940)	(815)

The recognition of the pension assets in both the UK in relation to the NGUKPS, the NGEG of ESPS and the US in relation to Niagara Mohawk Plan reflects legal and actuarial advice that we have taken regarding recognition of surpluses under IFRIC 14. We have concluded that the Group has an unconditional right to a refund from the individual plans, including from each Section of the NGUKPS and the NGEG of ESPS, in the event of a winding up. In the UK, the Trustees must seek the agreement of the Company to any benefit augmentation beyond the provisions set out in the Scheme Rules. In the US, surplus assets may be used to pay benefits under other Plans, thereby allowing the Company to settle other liabilities under other Plans.

25. Pensions and other post-retirement benefits continued

Amounts recognised in the income statement and statement of other comprehensive income

	2020 £m	2019 £m	2018 £m
Included within operating costs			
Administration costs	16	14	16
Included within payroll costs			
Defined benefit plan costs:			
Current service cost	178	193	193
Past service cost – augmentations	–	5	1
Past service credit – redundancies	–	(7)	(1)
Special termination benefit cost – redundancies	2	55	9
Past service cost – plan amendments[1]	–	34	–
	180	280	202
Included within finance income and costs			
Net interest cost	23	22	65
Total included in income statement	219	316	283
Remeasurement (losses)/gains of pension assets and post-retirement benefit obligations[2]	(724)	68	1,313
Exchange adjustments	(97)	(101)	175
Total included in the statement of other comprehensive income	(821)	(33)	1,488

1. For the year ended 31 March 2019, the estimated cost of equalising for the impact of GMP under the most cost-effective permissible methodology (Section A of NGUKPS – £17 million; Section B of NGUKPS – £12 million; NGEG of ESPS – £5 million).
2. For the year ended 31 March 2020, this includes an actuarial loss from the purchase of buy-in policies of £0.7 billion.

The geographical split of pensions and other post-retirement benefits is as shown below:

	UK Pensions			US Pensions			US other post-retirement benefits		
	2020 £m	2019 £m	2018 £m	2020 £m	2019 £m	2018 £m	2020 £m	2019 £m	2018 £m
Included within operating costs									
Administration costs	9	6	6	6	7	9	1	1	1
Included within payroll costs									
Defined benefit plan costs:									
Current service cost	33	41	49	100	104	98	45	48	46
Past service cost – augmentations	–	5	1	–	–	–	–	–	–
Past service credit – redundancies	–	(7)	(1)	–	–	–	–	–	–
Special termination benefit cost – redundancies	2	55	9	–	–	–	–	–	–
Past service cost – plan amendments	–	34	–	–	–	–	–	–	–
	35	128	58	100	104	98	45	48	46
Included within finance income and costs									
Net interest (income)/cost	(31)	(31)	3	21	21	27	33	32	35
Total included in income statement	13	103	67	127	132	134	79	81	82
Remeasurement gains/(losses) of pension assets and post-retirement benefit obligations[1]	143	57	1,177	(588)	(14)	27	(279)	25	109
Exchange adjustments	–	–	–	(42)	(42)	75	(55)	(59)	100
Total included in the statement of other comprehensive income	143	57	1,177	(630)	(56)	102	(334)	(34)	209

1. For the year ended 31 March 2020, UK pensions is stated after an actuarial loss from the purchase of buy-in policies of £0.7 billion.

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

25. Pensions and other post-retirement benefits continued

Reconciliation of the net defined benefit liability

	2020 £m	2019 £m	2018 £m
Opening net defined benefit liability	**(218)**	(263)	(1,933)
Cost recognised in the income statement	**(219)**	(316)	(283)
Remeasurement and foreign exchange effects recognised in the statement of other comprehensive income	**(821)**	(33)	1,488
Employer contributions	**327**	419	475
Other movements	**(22)**	(25)	(10)
Closing net defined benefit liability	**(953)**	(218)	(263)

The geographical split of pensions and other post-retirement benefits is as shown below:

	UK pensions			US pensions			US other post-retirement benefits		
	2020 £m	2019 £m	2018 £m	2020 £m	2019 £m	2018 £m	2020 £m	2019 £m	2018 £m
Opening net defined benefit asset/(liability)	**1,231**	1,104	(156)	**(509)**	(552)	(728)	**(940)**	(815)	(1,049)
Cost recognised in the income statement	**(13)**	(103)	(67)	**(127)**	(132)	(134)	**(79)**	(81)	(82)
Remeasurement and foreign exchange effects recognised in the statement of other comprehensive income	**143**	57	1,177	**(630)**	(56)	102	**(334)**	(34)	209
Employer contributions	**156**	174	150	**153**	231	208	**18**	14	117
Other movements	**3**	(1)	–	**–**	–	–	**(25)**	(24)	(10)
Closing net defined benefit asset/(liability)	**1,520**	1,231	1,104	**(1,113)**	(509)	(552)	**(1,360)**	(940)	(815)

Changes in the present value of defined benefit obligations (including unfunded obligations)

	2020 £m	2019 £m	2018 £m
Opening defined benefit obligations	**(24,939)**	(24,054)	(26,230)
Current service cost	**(178)**	(193)	(193)
Interest cost	**(751)**	(771)	(775)
Actuarial gains/(losses) – experience	**148**	(69)	(100)
Actuarial gains – demographic assumptions	**452**	266	671
Actuarial (losses)/gains – financial assumptions	**(84)**	(619)	174
Past service credit – redundancies	**–**	7	1
Special termination benefit cost – redundancies	**(2)**	(55)	(9)
Past service cost – augmentations	**–**	(5)	(1)
Past service cost – plan amendments	**–**	(34)	–
Medicare subsidy received	**(22)**	(19)	(21)
Employee contributions	**(1)**	(1)	(1)
Benefits paid	**1,282**	1,376	1,285
Exchange adjustments	**(531)**	(768)	1,145
Closing defined benefit obligations	**(24,626)**	(24,939)	(24,054)

The geographical split of pensions and other post-retirement benefits is as shown below:

	UK pensions			US pensions			US other post-retirement benefits		
	2020 £m	2019 £m	2018 £m	2020 £m	2019 £m	2018 £m	2020 £m	2019 £m	2018 £m
Opening defined benefit obligations	**(14,276)**	(14,226)	(15,645)	**(7,155)**	(6,582)	(7,050)	**(3,508)**	(3,246)	(3,535)
Current service cost	**(33)**	(41)	(49)	**(100)**	(104)	(98)	**(45)**	(48)	(46)
Interest cost	**(335)**	(358)	(366)	**(280)**	(277)	(273)	**(136)**	(136)	(136)
Actuarial gains/(losses) – experience	**113**	(56)	(95)	**(45)**	(52)	(38)	**80**	39	33
Actuarial gains – demographic assumptions	**140**	224	565	**78**	–	30	**234**	42	76
Actuarial gains/(losses) – financial assumptions	**798**	(568)	604	**(595)**	(24)	(279)	**(287)**	(27)	(151)
Past service credit – redundancies	**–**	7	1	**–**	–	–	**–**	–	–
Special termination benefit cost – redundancies	**(2)**	(55)	(9)	**–**	–	–	**–**	–	–
Past service cost – augmentations	**–**	(5)	(1)	**–**	–	–	**–**	–	–
Past service cost – plan amendments	**–**	(34)	–	**–**	–	–	**–**	–	–
Medicare subsidy received	**–**	–	–	**–**	–	–	**(22)**	(19)	(21)
Employee contributions	**(1)**	(1)	(1)	**–**	–	–	**–**	–	–
Benefits paid	**752**	837	770	**374**	398	362	**156**	141	153
Exchange adjustments	**–**	–	–	**(362)**	(514)	764	**(169)**	(254)	381
Closing defined benefit obligations	**(12,844)**	(14,276)	(14,226)	**(8,085)**	(7,155)	(6,582)	**(3,697)**	(3,508)	(3,246)

25. Pensions and other post-retirement benefits continued

Changes in the value of plan assets

	2020 £m	2019 £m	2018 £m
Opening fair value of plan assets	**24,793**	23,858	24,375
Interest income	**728**	749	710
Return on plan assets (less than)/in excess of interest[1]	**(1,240)**	490	568
Administration costs	**(16)**	(14)	(16)
Employer contributions	**327**	419	475
Employee contributions	**1**	1	1
Benefits paid	**(1,279)**	(1,377)	(1,285)
Exchange adjustments	**434**	667	(970)
Closing fair value of plan assets	**23,748**	24,793	23,858
Actual return on plan assets	**(512)**	1,239	1,278
Expected contributions to plans in the following year	**269**	307	363

1. For the year ended 31 March 2020, this includes an actuarial loss from the purchase of buy-in policies of £0.7 billion.

The geographical split of pensions and other post-retirement benefits is as shown below:

	UK pensions			US pensions			US other post-retirement benefits		
	2020 £m	2019 £m	2018 £m	2020 £m	2019 £m	2018 £m	2020 £m	2019 £m	2018 £m
Opening fair value of plan assets	**15,507**	15,330	15,489	**6,646**	6,030	6,322	**2,640**	2,498	2,564
Interest income	**366**	389	363	**259**	256	246	**103**	104	101
Return on plan assets (less than)/ in excess of interest[1]	**(908)**	457	103	**(26)**	62	314	**(306)**	(29)	151
Administration costs	**(9)**	(6)	(6)	**(6)**	(7)	(9)	**(1)**	(1)	(1)
Employer contributions	**156**	174	150	**153**	231	208	**18**	14	117
Employee contributions	**1**	1	1	**–**	–	–	**–**	–	–
Benefits paid	**(749)**	(838)	(770)	**(374)**	(398)	(362)	**(156)**	(141)	(153)
Exchange adjustments	**–**	–	–	**320**	472	(689)	**114**	195	(281)
Closing fair value of plan assets	**14,364**	15,507	15,330	**6,972**	6,646	6,030	**2,412**	2,640	2,498
Actual return on plan assets	**(542)**	846	466	**233**	318	560	**(203)**	75	252
Expected contributions to plans in the following year	**137**	148	140	**125**	150	221	**7**	9	2

1. For the year ended 31 March 2020, UK pensions includes an actuarial loss from the purchase of buy-in policies of £0.7 billion.

The markets for unquoted investments are illiquid and the valuations that have been provided by fund managers as at 31 March 2020 may be based on valuation models that have unobservable inputs. Given the current market volatility that has arisen as a result of COVID-19, this means that the prices provided are subject to additional estimation uncertainty. Sensitivity analyses for changes in private equity, property and diversified alternative valuations have been provided in note 35.

Asset allocation strategy

Each plan's investment strategy is formulated in order to target specific asset allocations and returns, and to manage risk. The asset allocation of the plans is as follows:

	2020			2019		
	UK pensions %	US pensions %	US other post-retirement benefits %	UK pensions %	US pensions %	US other post-retirement benefits %
Equities	**10.2**	**36.0**	**57.6**	12.7	40.8	60.2
Corporate bonds	**26.7**	**31.0**	**0.6**	23.4	26.4	0.7
Government securities	**14.3**	**18.2**	**22.9**	39.4	16.0	20.6
Property	**4.8**	**4.4**	**–**	5.5	4.7	–
Diversified alternatives	**6.2**	**9.0**	**13.4**	5.0	10.1	12.9
Liability matching assets	**34.3**	**–**	**–**	11.1	–	–
Infrastructure	**–**	**1.7**	**–**	–	1.5	–
Cash and cash equivalents	**1.8**	**0.3**	**–**	1.9	0.3	–
Other	**1.7**	**(0.6)**	**5.5**	1.0	0.2	5.6
	100.0	**100.0**	**100.0**	100.0	100.0	100.0

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

25. Pensions and other post-retirement benefits continued

Defined benefit investment strategies and risks

DB pension plans can pose a significant risk to future cash flows, as National Grid underwrites the financial and demographic risks associated with these plans. Although the governing bodies have sole responsibility for setting investment strategies and managing risks, National Grid closely works with and supports the governing bodies of each plan, to assist them in mitigating the risks associated with their plans and to ensure that the plans are funded to meet their obligations.

In the UK, each plan has a Trustee that is the governing body. The Trustees' responsibilities are set out in the Trust Deed and Rules. In the US, the fiduciary committee for all the retirement plans is the Retirement Plan Committee (RPC). The RPC is structured in accordance with US laws governing retirement plans under the Employee Retirement Income Security Act (ERISA).

The Trustees and RPC, after taking advice from professional investment advisors and in consultation with National Grid, set the key principles, including expected returns, risk and liquidity requirements. In setting these they take into account expected contributions, maturity of the pension liabilities, and in the UK, the strength of the covenant. The Trustees and RPC formulate an investment strategy to manage risk through diversification, including the use of liability-matching assets, which move in line with the long-term liabilities of the plan, and return-seeking assets, some of which are designed to mitigate downside risk. Where appropriate, the strategies may include interest rate and inflation hedging instruments, and currency hedging to hedge overseas holdings.

Investments are usually grouped into:

- Return-seeking assets: equities, property and diversified funds where the objective is to achieve growth within the constraints of the plans' risk profiles. These assets should produce returns greater than the liability increase, so improving the funding position, and are assessed by reference to benchmarks and performance targets agreed with the investment managers; and
- Liability-matching assets: liability-driven investment (LDI) funds, buy-ins, government securities, corporate bonds and swaps, where the objective is to secure fixed or inflation-adjusted cash flows in future. These investments are generally expected to match the change in liability valuation, so protecting the funding position. Bonds and securities are also measured against certain market benchmarks.

Investments are predominantly made in assets considered to be of investment grade. Where investments are made in non-investment grade assets, the higher volatility involved is carefully judged and balanced against the expected higher returns. Similarly, investments are made predominantly in regulated markets. Where investments are made either in non-investment grade assets or outside of regulated markets, investment levels are kept to prudent levels and subject to agreed control ranges, to control the risk. Should these investments fall outside the pre-agreed ranges, corrective actions and timescales are agreed with the investment manager to remedy the position.

The governing bodies ensure that the performance of investment managers is regularly reviewed against measurable objectives, consistent with each pension plan's long-term objectives and accepted risk levels. Where required, the portfolios are amended, or investment managers changed.

The Trustees and RPC can generally delegate responsibility for the selection of specific bonds, securities and other investments to appointed investment managers. Investment managers are selected based on the required skills, expertise of those markets, process and financial security to manage the investments. The investment managers use their skill and expertise to manage the investments competently. In some cases, they may further delegate this responsibility, through appointing sub-managers.

The pension plans hold sufficient cash to meet benefit requirements, with other investments being held in liquid or realisable assets to meet unexpected cash flow requirements. The plans do not borrow money, or act as guarantor, to provide liquidity to other parties (unless it is temporary).

In the UK, both NGUKPS and NGEG of ESPS have Responsible Investment (RI) Policies, which take into account Environmental, Social and Governance (ESG) areas. The NGUKPS RI also incorporates the six UN-backed Principles for Responsible Investment (UNPRI). The Trustees believe that ESG factors can be material to financial outcomes and therefore these should and will be considered alongside other factors. The Trustees recognise that their primary responsibility remains a fiduciary one, i.e. their first duty is to ensure the best possible return on investments with the appropriate level of risk. However, the Trustees also recognise the increasing materiality of ESG factors and that they have a fiduciary and regulatory duty to consider RI, including ESG factors and the potential impact on the quality and sustainability of long-term investment returns and therefore on the Trustees' primary fiduciary duty.

Whilst in the US there is no regulatory requirement to have ESG-specific principles embedded in investment policies, investment managers often utilise ESG principles to inform their decision-making process.

The most significant risks associated with the DB plans are:

- Asset volatility – the plans invest in a variety of asset classes, but principally in government securities, bulk annuities, corporate bonds, equities and property. Consequently, actual returns will differ from the underlying discount rate adopted, impacting on the funding position of the plan through the net balance sheet asset or liability. Each plan seeks to balance the level of investment return required with the risk that it can afford to take, to design the most appropriate investment portfolio. Volatility will be controlled through using liability-matching asset strategies including bulk annuities, as well as interest rate hedging and management of foreign exchange exposure, and diversification of the return-seeking assets;
- Changes in bond yields – liabilities are calculated using discount rates set with reference to the yields in high-quality corporate bonds prevailing in the UK and US debt markets and will fluctuate as yields change;
- Member longevity – longevity is a key driver of liabilities and changes in life expectancy have a direct impact on liabilities. The NGEG of ESPS holds a longevity insurance contract ("longevity swap") and NGUKPS holds buy-in policies for both Sections A and B, which covers exposure to improvement in longevity, providing long-term protection in the event that members live longer than expected;
- Counterparty risk – is managed by having a diverse range of counterparties and through having a strong collateralisation process (including for the longevity swap held by NGEG of ESPS). Measurement and management of counterparty risk is delegated to the relevant investment managers. For our bulk annuity policies, various termination provisions were introduced in the contracts, managing our exposure to counterparty risk. The insurers' operational performance and financial strength are monitored on a regular basis;
- Deficit risk – the risk that the increase in the liability will outpace the growth in assets is managed through assessing the progress of the actual growth of the liabilities relative to the selected investment policy and adjusting the policy as required;
- Manager risk – expected deviation of the return, relative to the benchmark, is carefully monitored, as is the process, team and expertise of the manager. Where appropriate, the Trustee or RPC will move assets under management to a more robust manager, whom they consider will have a better expectation of performing well in the future;
- Currency risk – fluctuations in the value of foreign denominated assets due to exposure to currency exchange rates is managed through a combination of segregated currency hedging overlay and currency hedging carried out by some of the investment managers;

25. Pensions and other post-retirement benefits continued

Defined benefit investment strategies and risks continued

- Interest rate and inflation risk – changes in inflation will affect the current and future pensions but are partially mitigated through investing in inflation-matching assets and hedging instruments as well as bulk annuity buy-in policies;
- Investment funds – the credit risk arising from investing in investment funds is mitigated by the underlying assets of the investment funds being ring-fenced from the fund managers, the regulatory environments in which the fund managers operate and diversification of investments among investment fund arrangements;
- Political risk – an adverse influence on asset values arising from political intervention in a specific country or region is managed through regular review of the asset distribution and through ensuring geographical diversification of investments within the managers; and
- Custodian risk – the creditworthiness and ability of the custodians to settle trades on time and provide secure safekeeping of the assets under custody is managed by ongoing monitoring of the custodial arrangements against pre-agreed service levels and credit ratings.

Asset allocations

Within the asset allocations below, there is significant diversification across regions, asset managers, currencies and bond categories.

UK pensions

	2020			2019			2018		
	Quoted £m	Unquoted £m	Total £m	Quoted £m	Unquoted £m	Total £m	Quoted £m	Unquoted £m	Total £m
Equities	732	732	1,464	1,181	784	1,965	1,420	813	2,233
Corporate bonds	3,837	–	3,837	3,625	–	3,625	3,949	–	3,949
Government securities	2,051	–	2,051	6,114	–	6,114	5,629	–	5,629
Property	103	585	688	108	749	857	129	834	963
Diversified alternatives	–	893	893	–	771	771	99	690	789
Liability-matching assets	1,704[1]	3,278[2]	4,982	1,751	–	1,751	1,174	–	1,174
Longevity swap	–	(51)	(51)	–	(35)	(35)	–	–	–
Cash and cash equivalents	29	222	251	40	259	299	211	215	426
Other (including net current assets and liabilities)	–	249	249	–	160	160	–	167	167
	8,456	5,908	14,364	12,819	2,688	15,507	12,611	2,719	15,330

1. Consists of pooled funds which invests mainly in fixed interest securities.
2. Comprises the buy-in policies held by NGUKPS.

US pensions

	2020			2019			2018		
	Quoted £m	Unquoted £m	Total £m	Quoted £m	Unquoted £m	Total £m	Quoted £m	Unquoted £m	Total £m
Equities	467	2,043	2,510	533	2,178	2,711	577	1,954	2,531
Corporate bonds	1,640	518	2,158	1,329	425	1,754	1,085	413	1,498
Government securities	535	732	1,267	422	640	1,062	414	565	979
Property	–	307	307	–	316	316	–	279	279
Diversified alternatives	162	464	626	183	487	670	198	421	619
Infrastructure	–	121	121	–	99	99	–	77	77
Cash and cash equivalents	24	–	24	21	–	21	14	–	14
Other (including net current assets and liabilities)	(44)	3	(41)	(8)	21	13	6	27	33
	2,784	4,188	6,972	2,480	4,166	6,646	2,294	3,736	6,030

US other post-retirement benefits

	2020			2019			2018		
	Quoted £m	Unquoted £m	Total £m	Quoted £m	Unquoted £m	Total £m	Quoted £m	Unquoted £m	Total £m
Equities	353	1,037	1,390	404	1,184	1,588	412	1,110	1,522
Corporate bonds	15	–	15	19	–	19	24	–	24
Government securities	551	1	552	540	3	543	508	2	510
Diversified alternatives	162	161	323	175	166	341	161	144	305
Other[1]	–	132	132	–	149	149	–	137	137
	1,081	1,331	2,412	1,138	1,502	2,640	1,105	1,393	2,498

1. Other primarily comprises insurance contracts.

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

26. Provisions

We make provisions when an obligation exists resulting from a past event, and it is probable that cash will be paid to settle it, but the exact amount of cash required can only be estimated.

The main estimates relate to environmental remediation and decommissioning costs for various sites we own or have owned and other provisions, including restructuring plans and lease contracts we have entered into that are now loss making. The evaluation of the likelihood of the contingent events has required best judgement by management regarding the probability of exposure to potential loss. Should circumstances change following unforeseeable developments, the likelihood could alter.

Provisions are recognised where a legal or constructive obligation exists at the reporting date, as a result of a past event, where the amount of the obligation can be reliably estimated and where the outflow of economic benefit is probable.

Provision is made for decommissioning and environmental costs, based on future estimated expenditures, discounted to present values. An initial estimate of decommissioning and environmental costs attributable to property, plant and equipment is recorded as part of the original cost of the related property, plant and equipment.

Changes in the provision arising from revised estimates, discount rates or changes in the expected timing of expenditure that relates to property, plant and equipment, are recorded as adjustments to their carrying value and depreciated prospectively over their remaining estimated useful economic lives; otherwise such changes are recognised in the income statement.

The unwinding of the discount is included within the income statement within finance costs.

	Environmental £m	Decommissioning £m	Restructuring £m	Emissions £m	Other £m	Total provisions £m
At 1 April 2018	1,531	194	3	8	316	2,052
Exchange adjustments	103	7	–	–	14	124
Additions[1]	32	18	125	16	35	226
Unused amounts reversed	(36)	(10)	(3)	(6)	(10)	(65)
Unwinding of discount	62	5	–	–	7	74
Utilised[2]	(53)	(26)	(42)	(9)	(79)	(209)
Transfers[3]	–	–	–	–	(3)	(3)
At 31 March 2019	1,639	188	83	9	280	2,199
Exchange adjustments	82	5	–	1	9	97
Additions[1]	437	93	7	12	40	589
Unused amounts reversed	(29)	(16)	(16)	–	(9)	(70)
Unwinding of discount	65	5	–	–	7	77
Utilised[2]	(123)	(21)	(39)	(5)	(50)	(238)
At 31 March 2020	**2,071**	**254**	**35**	**17**	**277**	**2,654**

	2020 £m	2019 £m
Current	**348**	316
Non-current	**2,306**	1,883
	2,654	2,199

1. For the year ended 31 March 2020, £402 million (2019: £nil) of additions relate to exceptional environmental provisions, of which £76 million relates to the impact of the change in the real discount rate from 1% to 0.5% during the year (see note 5 for details). Additions to other provisions include £15 million (2019: £nil) in relation to discontinued operations.
2. Utilised amounts for other provisions include £8 million (2019: £20 million) in relation to discontinued operations.
3. Represents net amounts transferred to trade and other payables (see note 22) of £nil (2019: £3 million).

26. Provisions continued

Environmental provisions

The environmental provision represents the estimated restoration and remediation costs relating to a number of sites owned and managed by subsidiary undertakings, together with certain US sites that National Grid no longer owns. The environmental provision is as follows:

	2020			2019		
	Discounted £m	**Undiscounted £m**	**Real discount rate**	Discounted £m	Undiscounted £m	Real discount rate
UK sites	**175**	**184**	**0.5%**	189	210	1%
US sites	**1,896**	**1,955**	**0.5%**	1,450	1,555	1%
	2,071	**2,139**		1,639	1,765	

The remediation expenditure in the UK relates to old gas manufacturing sites and also to electricity transmission sites. Cash flows are expected to be incurred until 2075 although the weighted average duration of the cash flows is 11 years. A number of estimation uncertainties affect the calculation of the provision, including the impact of regulation, the accuracy of site surveys, unexpected contaminants, transportation costs, the impact of alternative technologies and changes in the real discount rate. This provision incorporates our best estimate of the financial effect of these uncertainties, but future changes in any of the assumptions could materially impact the calculation of the provision. The undiscounted amount is the undiscounted best estimate of the liability having regard to these uncertainties.

The remediation expenditure in the US is expected to be incurred until 2069, of which the majority relates to three Superfund sites (being sites where hazardous substances are present as a result of the historic operations of manufactured gas plants in Brooklyn, New York). The weighted average duration of the cash flows is nine years. The uncertainties regarding the calculation of this provision are similar to those considered in respect of UK sites. Under the terms of our rate plans, we are entitled to recovery of environmental clean-up costs from rate payers.

Decommissioning provisions

The decommissioning provisions represent £174 million (2019: £80 million) of expenditure relating to asset retirement obligations estimated to be incurred until 2115, with additional amounts being recognised in the year relating to both interconnectors and other assets commissioned in the year. In addition, £74 million (2019: £90 million) of expenditure relating to the demolition of gas holders is estimated to be incurred until 2026.

Restructuring provisions

In 2019, a cost-efficiency and restructuring programme was undertaken in both our UK and US businesses, as detailed in note 5, which resulted in the recognition of a £125 million charge in that year. £39 million (2019: £42 million) was utilised during the current year, resulting in a closing provision of £35 million (2019: £83 million).

Other provisions

Included within other provisions at 31 March 2020 are the following amounts:

- £37 million (2019: £30 million) in respect of legacy provisions recognised following the sale of UK Gas Distribution;
- £31 million (2019: £29 million) in respect of onerous lease commitments and rates payable on surplus properties with expenditure expected to be incurred until 2039;
- £164 million (2019: £164 million) of estimated liabilities in respect of past events insured by insurance subsidiary undertakings, including employer liability claims. In accordance with insurance industry practice, these estimates are based on experience from previous years, but we currently expect that cash flows will be incurred until 2049; and
- £nil (2019: £13 million) in respect of obligations associated with investments in joint ventures and associates.

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

27. Share capital

Ordinary share capital represents the total number of shares issued which are publicly traded. We also disclose the number of treasury shares the Company holds, which are shares that the Company has bought itself, predominantly to actively manage scrip issuances and settle employee share option and reward plan liabilities.

Share capital is accounted for as an equity instrument. An equity instrument is any contract that includes a residual interest in the consolidated assets of the Company after deducting all its liabilities and is recorded at the proceeds received, net of direct issue costs, with an amount equal to the nominal amount of the shares issued included in the share capital account and the balance recorded in the share premium account.

	Allotted, called-up and fully paid	
	million	£m
At 1 April 2018	3,638	452
Issued during the year in lieu of dividends[1]	49	6
At 31 March 2019	3,687	458
Issued during the year in lieu of dividends[1]	93	12
At 31 March 2020	**3,780**	**470**

1. The issue of shares under the scrip dividend programme is considered to be a bonus issue under the terms of the Companies Act 2006, and the nominal value of the shares is charged to the share premium account.

The share capital of the Company consists of ordinary shares of $12^{204/473}$ pence nominal value each including ADSs. The ordinary shares and ADSs allow holders to receive dividends and vote at general meetings of the Company. The Company holds treasury shares but may not exercise any rights over these shares including the entitlement to vote or receive dividends. There are no restrictions on the transfer or sale of ordinary shares.

In line with the provisions of the Companies Act 2006, the Company has amended its Articles of Association and ceased to have authorised share capital.

Treasury shares
At 31 March 2020, the Company held 272 million (2019: 277 million) of its own shares. The market value of these shares as at 31 March 2020 was £2,574 million (2019: £2,359 million).

For the benefit of employees and in connection with the operation of the Company's various share plans, the Company made the following transactions in respect of its own shares during the year ended 31 March 2020:

i. During the year, 3 million (2019: 3 million) treasury shares were gifted to National Grid Employee Share Trusts and 2 million (2019: 3 million) treasury shares were re-issued in relation to employee share schemes, in total representing approximately 0.1% (2019: 0.2%) of the ordinary shares in issue as at 31 March 2020. The nominal value of these shares was £1 million (2019: £1 million) and the total proceeds received were £17 million (2019: £18 million). National Grid settles share awards under its Long Term Incentive Plan and the Save As You Earn scheme, by the transfer of treasury shares to its employee share trusts.
ii. During the year, the Company made payments totalling £6 million (2019: £2 million) to National Grid Employee Share Trusts to enable the trustees to make purchases of National Grid plc shares to settle share awards in relation to all employee share plans and discretionary reward plans. The cost of such purchases is deducted from retained earnings in the period that the transaction occurs.

The maximum number of ordinary shares held in treasury during the year was 277 million (2019: 283 million) representing approximately 7.3% (2019: 7.7%) of the ordinary shares in issue as at 31 March 2020 and having a nominal value of £34 million (2019: £35 million).

28. Other equity reserves

Other equity reserves are different categories of equity as required by accounting standards and represent the impact of a number of our historical transactions.

Other equity reserves comprise the translation reserve (see accounting policy D in note 1), cash flow hedge reserve and the cost of hedging reserve (see note 32), available-for-sale reserve, debt instruments at fair value through other comprehensive income reserve (FVOCI debt) and equity investments at fair value through other comprehensive income reserve (FVOCI equity) (see note 15), the capital redemption reserve and the merger reserve.

The merger reserve arose as a result of the application of merger accounting principles under the then prevailing UK GAAP, which under IFRS 1 was retained for mergers that occurred prior to the IFRS transition date. Under merger accounting principles, the difference between the carrying amount of the capital structure of the acquiring vehicle and that of the acquired business was treated as a merger difference and included within reserves. The merger reserve represents the difference between the carrying value of subsidiary undertaking investments and their respective capital structures following the Lattice demerger from BG Group plc and the 1999 Lattice refinancing.

The cash flow hedge reserve will amortise as the committed future cash flows from borrowings are paid or capitalised in fixed assets (as described in note 32). Cost of hedging, FVOCI debt, and FVOCI equity reserves arose as a result of the adoption of IFRS 9 on 1 April 2018. See note 15 for further detail on available-for-sale, FVOCI debt and FVOCI equity reserves and note 32 in respect of cost of hedging reserve.

As the amounts included in other equity reserves are not attributable to any of the other classes of equity presented, they have been disclosed as a separate classification of equity.

	Translation £m	Cash flow hedge £m	Cost of hedging £m	Available-for-sale £m	FVOCI equity £m	FVOCI debt £m	Own credit £m	Capital redemption £m	Merger £m	Total £m
At 1 April 2017	894	103	–	162	–	–	–	19	(5,165)	(3,987)
Exchange adjustments[1]	(504)	–	–	–	–	–	–	–	–	(504)
Net gains/(losses) taken to equity[2]	–	296	–	(30)	–	–	–	–	–	266
Share of net gains of associates taken to equity	–	5	–	–	–	–	–	–	–	5
Transferred from profit or loss[2]	–	(280)	–	(73)	–	–	–	–	–	(353)
Tax	–	4	–	29	–	–	–	–	–	33
At 31 March 2018 (as previously reported)	390	128	–	88	–	–	–	19	(5,165)	(4,540)
Transfer on transition to IFRS 9	–	(3)	76	(88)	34	46	7	–	–	72
At 1 April 2018 (as restated)	390	125	76	–	34	46	7	19	(5,165)	(4,468)
Exchange adjustments[1]	346	–	–	–	–	–	–	–	–	346
Net (losses)/gains taken to equity[2]	–	(206)	(107)	–	–	2	7	–	–	(304)
Share of net gains of associates taken to equity	–	1	–	–	–	–	–	–	–	1
Transferred to profit or loss[2]	–	166	41	–	–	–	–	–	–	207
Net losses in respect of cash flow hedging of capital expenditure	–	(13)	–	–	–	–	–	–	–	(13)
Tax	–	6	7	–	–	–	(1)	–	–	12
Cash flow hedges transferred to the statement of financial position, net of tax	–	(18)	–	–	–	–	–	–	–	(18)
At 1 April 2019	736	61	17	–	34	48	13	19	(5,165)	(4,237)
Exchange adjustments[1]	550	–	–	–	–	–	–	–	–	550
Net losses taken to equity	–	(142)	(33)	–	(13)	(15)	(3)	–	–	(206)
Share of net losses of associates taken to equity	–	(5)	–	–	–	–	–	–	–	(5)
Transferred to profit or loss	–	14	(45)	–	–	–	–	–	–	(31)
Net losses in respect of cash flow hedging of capital expenditure	–	(17)	–	–	–	–	–	–	–	(17)
Tax	–	29	11	–	4	(2)	–	–	–	42
Cash flow hedges transferred to the statement of financial position, net of tax	–	(15)	–	–	–	–	–	–	–	(15)
At 31 March 2020	**1,286**	**(75)**	**(50)**	**–**	**25**	**31**	**10**	**19**	**(5,165)**	**(3,919)**

1. The exchange adjustments recorded in the translation reserve comprise a gain of £545 million (2019: gain of £896 million; 2018: loss of £1,304 million) relating to the translation of foreign operations offset by a gain of £5 million (2019: loss of £550 million; 2018: gain of £800 million) relating to borrowings, cross-currency swaps and foreign exchange forward contracts used to hedge the net investment in non-sterling denominated subsidiaries.
2. Following a review in the year, we have changed our presentation of spot foreign exchange movements on derivatives designated in cash flow hedges of foreign currency risk and interest rates. This has no net impact on the consolidated statement of comprehensive income. It has resulted in a prior year gross up to £166 million (2018: £277 million) to 'Net losses taken to equity' with an equal and offsetting gross up to 'Transferred to profit or loss'.

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

29. Net debt

Net debt represents the amount of borrowings and overdrafts less cash, current financial investments and related financing derivatives.

Funding and liquidity risk management is carried out by the treasury function under policies and guidelines approved by the Finance Committee of the Board. The Finance Committee is responsible for the regular review and monitoring of treasury activity and for the approval of specific transactions, the authority for which fall outside the delegation of authority to management.

The primary objective of the treasury function is to manage our funding and liquidity requirements. A further important objective is to manage the associated financial risks, in the form of interest rate risk and foreign exchange risk, to within pre-authorised parameters. Details of the main risks arising from our financing and commodity hedging activities are included in note 32.

Investment of surplus funds, usually in short-term fixed deposits or placements with money market funds that invest in highly liquid instruments of high credit quality, is subject to our counterparty risk management policy.

(a) Reconciliation of net cash flow to movement in net debt

	2020 £m	2019 £m	2018 £m
Decrease in cash and cash equivalents	(183)	(80)	(807)
Decrease in financial investments	(7)	(822)	(5,953)
Increase/(decrease) in borrowings and related derivatives[1]	(23)	(708)	1,209
Net interest paid on the components of net debt[2]	888	866	808
Change in debt resulting from cash flows	675	(744)	(4,743)
Changes in fair value of financial assets and liabilities and exchange movements	(1,081)	(1,648)	2,098
Net interest charge on the components of net debt	(1,097)	(1,076)	(1,017)
Other non-cash movements	(84)	(27)	(66)
Movement in net debt (net of related derivative financial instruments) in the year	(1,587)	(3,495)	(3,728)
Net debt (net of related derivative financial instruments) at start of year	(26,529)	(23,002)	(19,274)
Impact of transition to IFRS 16 (2019: IFRS 9)	(474)	(32)	–
Net debt (net of related derivative financial instruments) at end of year	(28,590)	(26,529)	(23,002)

Composition of net debt
Net debt is comprised as follows:

	2020 £m	2019 £m	2018 £m
Cash, cash equivalents and financial investments	2,071	2,233	3,023
Borrowings	(30,794)	(28,730)	(26,625)
Financing derivatives[1]	133	(32)	600
	(28,590)	(26,529)	(23,002)

1. The financing derivatives balance included in net debt excludes the commodity derivatives (see note 17).
2. Excludes £6 million (2019: £23 million; 2018: £27 million) cash interest from the Quadgas shareholder loan included within discontinued operations in the cash flow statement.

29. Net debt continued

(b) Analysis of changes in net debt

	Cash and cash equivalents £m	Financial investments £m	Borrowings £m	Financing derivatives £m	Total[1] £m
At 1 April 2017	1,139	8,741	(28,638)	(516)	(19,274)
Cash flow	(807)	(5,983)	2,108	(61)	(4,743)
Fair value gains and losses and exchange movements	(3)	(149)	1,088	1,162	2,098
Interest income/(charges)	–	85	(1,117)	15	(1,017)
Other non-cash movements	–	–	(66)	–	(66)
At 31 March 2018	329	2,694	(26,625)	600	(23,002)
Impact of transition to IFRS 9	–	–	(32)	–	(32)
At 1 April 2018 (as restated)	329	2,694	(26,657)	600	(23,034)
Cash flow	(80)	(846)	(240)	422	(744)
Fair value gains and losses and exchange movements	3	93	(733)	(1,011)	(1,648)
Interest income/(charges)	–	29	(1,062)	(43)	(1,076)
Other non-cash movements	–	11	(38)	–	(27)
At 1 April 2019	252	1,981	(28,730)	(32)	(26,529)
Impact of transition to IFRS 16	–	–	(474)	–	(474)
Cash flow	(183)	(42)	450	450	675
Fair value gains and losses and exchange movements	4	25	(864)	(246)	(1,081)
Interest income/(charges)	–	34	(1,092)	(39)	(1,097)
Other non-cash movements	–	–	(84)	–	(84)
At 31 March 2020	**73**	**1,998**	**(30,794)**	**133**	**(28,590)**
Balances at 31 March 2020 comprise:					
Non-current assets	–	–	–	1,205	1,205
Current assets	73	1,998	–	62	2,133
Current liabilities	–	–	(4,072)	(254)	(4,326)
Non-current liabilities	–	–	(26,722)	(880)	(27,602)
	73	**1,998**	**(30,794)**	**133**	**(28,590)**

1. Includes accrued interest at 31 March 2020 of £246 million (2019: £223 million; 2018: £197 million).

(c) Reconciliation of cash flow from financing liabilities to cash flow statement

	2020 £m	2019 £m	2018 £m
Cash flows per financing activities section of cash flow statement:			
Proceeds received from loans	**4,218**	2,932	1,941
Repayment of loans	**(3,253)**	(1,969)	(2,156)
Payments of lease liabilities	**(121)**	(70)	(71)
Net movements in short-term borrowings	**(424)**	179	(764)
Net movements in derivatives	**(187)**	35	(267)
Interest paid	**(957)**	(914)	(853)
Cash flows per financing activities section of cash flow statement	**(724)**	193	(2,170)
Adjustments:			
Non-net debt-related items	**34**	24	12
Derivative cash inflow in relation to capital expenditure	**13**	13	12
Derivative cash flows per investing section of cash flow statement	**(223)**	(412)	330
Discontinued operations	**–**	–	(231)
Cash flows relating to financing liabilities within net debt	**(900)**	(182)	(2,047)
Analysis of changes in net debt:			
Borrowings	**(450)**	240	(2,108)
Financing derivatives	**(450)**	(422)	61
Cash flow movements relating to financing liabilities within net debt	**(900)**	(182)	(2,047)

Notes to the consolidated financial statements
– analysis of items in the primary statements continued

29. Net debt continued

(d) Reconciliation of changes in liabilities arising from financing activities

The table below reconciles changes in liabilities arising from financing activities, including both changes arising from cash flows and non-cash changes. Liabilities arising from financing activities are those for which cash flows were, or future cash flows will be, classified in the statement of cash flows within financing activities.

Following a review in the year, we have changed our accounting policy in relation to the presentation of certain derivatives in the cash flow statement to be presented as investing activities rather than financing activities (further detail is disclosed in note 1). The reclassified cash flows are in relation to derivatives associated with our net investment hedges, and given they are designated in a hedge relationship, the Group has decided to present them together with the underlying hedged item rather than as part of our overall financing activities.

As a result we have separately disclosed the reconciliation below, excluding derivatives associated with our net investment hedges, given that they are classified in the statement of cash flows within investing activities.

	Borrowings £m	Financing derivatives £m	Total £m
At 1 April 2017	(28,638)	16	(28,622)
Cash flow	2,108	281	2,389
Fair value gains and losses and exchange movements	1,088	222	1,310
Interest income/(charges)	(1,117)	34	(1,083)
Other non-cash movements	(66)	–	(66)
At 31 March 2018	(26,625)	553	(26,072)
Impact of transition to IFRS 9	(32)	–	(32)
At 1 April 2018 (as restated)	(26,657)	553	(26,104)
Cash flow	(240)	23	(217)
Fair value gains and losses and exchange movements	(733)	(334)	(1,067)
Interest charges	(1,062)	(14)	(1,076)
Other non-cash movements	(38)	–	(38)
At 1 April 2019	(28,730)	228	(28,502)
Impact of transition to IFRS 16	(474)	–	(474)
Cash flow	450	240	690
Fair value gains and losses and exchange movements	(864)	(231)	(1,095)
Interest charges	(1,092)	(9)	(1,101)
Other non-cash movements	(84)	–	(84)
At 31 March 2020	**(30,794)**	**228**	**(30,566)**

Notes to the consolidated financial statements
– supplementary information

This section includes information that is important to enable a full understanding of our financial position, particularly areas of potential uncertainty that could affect us in the future.

We also include specific disclosures for Niagara Mohawk Power Corporation in accordance with various rules including Rule 3-10 of Regulation S-X (a US SEC requirement), as they have issued public debt securities which have been guaranteed by National Grid plc. Additional disclosures have also been included in respect of the guarantor company. These disclosures are in lieu of publishing separate financial statements for these companies (see note 36 for further information).

30. Commitments and contingencies

Commitments are those amounts that we are contractually required to pay in the future as long as the other party meets its obligations. These commitments primarily relate to energy purchase agreements and contracts for the purchase of assets which, in many cases, extend over a long period of time. Commitments previously included operating lease commitments but on transition to IFRS 16, which was effective from 1 April 2019, substantially all lease commitments are included on the balance sheet as right-of-use assets (see note 13) and lease liabilities (see note 21). Therefore, only low-value leases and short-term leases are off-balance sheet commitments, both of which are immaterial. We also disclose any contingencies, which include guarantees that companies have given, where we pledge assets against current obligations that will remain for a specific period.

	2020 £m	2019 £m
Future capital expenditure		
Contracted for but not provided	**2,629**	1,973
Energy purchase commitments[1]		
Less than 1 year	**1,365**	1,353
In 1 to 2 years	**890**	779
In 2 to 3 years	**973**	651
In 3 to 4 years	**955**	827
In 4 to 5 years	**861**	862
More than 5 years	**11,314**	11,237
	16,358	15,709
Guarantees[2]		
Guarantee of sublease for US property (expires 2040)	**173**	173
Guarantees of certain obligations of Grain LNG (expire up to 2025)	**34**	39
Guarantees of certain obligations for construction of HVDC West Coast Link (expected expiry 2020)	**92**	139
Guarantees of certain obligations of Nemo Link Limited (expired 2019)	**–**	19
Guarantees of certain obligations of National Grid North Sea Link Limited (various expiry dates)[2]	**683**	865
Guarantees of certain obligations of St William Homes LLP (various expiry dates)[3]	**30**	22
Guarantees of certain obligations for construction of IFA 2 (expected expiry 2022)[2]	**564**	505
Guarantees of certain obligations of National Grid Viking Link Limited (expected expiry 2024)	**1,096**	872
Other guarantees and letters of credit (various expiry dates)	**150**	341
	2,822	2,975

	2019 £m
Operating lease commitments	
Less than 1 year	43
In 1 to 2 years	39
In 2 to 3 years	34
In 3 to 4 years	35
In 4 to 5 years	27
More than 5 years	123
	301

1. Energy purchase commitments relate to contractual commitments to purchase electricity or gas that are used to satisfy physical delivery requirements to our customers or for energy that we use ourselves (i.e. normal purchase, sale or usage) and hence are accounted for as ordinary purchase contracts (see note 32(f)). Details of commodity contract derivatives that do not meet the normal purchase, sale or usage criteria, and hence are accounted for as derivative contracts, are shown in note 17(b).
2. Included within total guarantees are guarantees to both joint ventures and Engineering, Procurement and Construction contractors regarding the construction of interconnectors of £358 million (2019: £470 million).
3. Includes guarantees to related parties.

Through the ordinary course of our operations, we are party to various litigation, claims and investigations. We do not expect the ultimate resolution of any of these proceedings to have a material adverse effect on our results of operations, cash flows or financial position.

Notes to the consolidated financial statements
– supplementary information continued

31. Related party transactions

Related parties include joint ventures, associates, investments and key management personnel.

The following significant transactions with related parties were in the normal course of business. Amounts receivable from and payable to related parties are due on normal commercial terms:

	2020 £m	2019 £m	2018 £m
Sales: Goods and services supplied to a pension plan	**5**	5	3
Sales: Goods and services supplied to joint ventures[1]	**101**	151	14
Sales: Goods and services supplied to associates[2]	**33**	192	220
Purchases: Goods and services received from joint ventures[3]	**61**	26	135
Purchases: Goods and services received from associates[3]	**56**	141	160
Receivable from joint ventures[4]	**255**	584	160
Receivable from associates[4]	**1**	368	376
Payable to joint ventures	**72**	8	–
Payable to associates	**4**	12	17
Interest income from joint ventures	**2**	5	4
Interest income from associates	**8**	23	27
Dividends received from joint ventures[5]	**34**	30	43
Dividends received from associates[6]	**41**	171	170

1. During the year, £38 million (2019: £139 million) of property sites were sold to a joint venture, St William Homes LLP. A further £32 million of sales were made to NGET/SPT Upgrades Limited in 2020.
2. Sales relate to transactions with Quadgas, until the date it ceased to be a related party following the disposal of our 39% stake in June 2019 (see note 10). Included within this is other income of £31 million (2019: £52 million) relating to a Transitional Service Agreement following the sale of the UK Gas Distribution business to Quadgas.
3. During the year, the Group received goods and services from a number of US associates, both for the transportation of gas and for pipeline services in the US, most notably, £31 million (2019: £30 million) of purchases from Millennium Pipeline Company LLC. The Group also purchased capitalised assets of £58 million (2019: £26 million) from NGET/SPT Upgrades Limited (a joint venture).
4. Amounts receivable from associates includes a loan receivable balance of £242 million (2019: £325 million) in relation to St William Homes LLP (a joint venture). There is no longer a loan receivable from Quadgas (2019: £352 million) and Nemo Link (a joint venture) (2019: £258 million). The loan receivable balance from Nemo Link was transferred to equity during 2020 (see note 16 for details).
5. Dividends of £25 million (2019: £30 million) were received from BritNed Development Limited.
6. Includes £32 million (2019: £24 million) of dividend income from Millennium Pipeline Company LLC. No dividends were received from Quadgas this year (2019: £133 million).

Details of investments in principal subsidiary undertakings, joint ventures and associates are disclosed in note 34, and information relating to pension fund arrangements is disclosed in note 25. For details of Directors' and key management remuneration, refer to the Directors' Remuneration Report on pages 88 – 108 and note 4(c).

32. Financial risk management

Our activities expose us to a variety of financial risks including credit risk, liquidity risk, capital risk, currency risk, interest rate risk, inflation risk and commodity price risk. Our risk management programme focuses on the unpredictability of financial markets and seeks to minimise potential volatility of financial performance from these risks. We use financial instruments, including derivative financial instruments, to manage these risks.

Risk management related to financing activities is carried out by a central treasury department under policies approved by the Finance Committee of the Board. The objective of the treasury department is to manage funding and liquidity requirements, including managing associated financial risks, to within acceptable boundaries. The Finance Committee provides written principles for overall risk management, and written policies covering the following specific areas: foreign exchange risk, interest rate risk, credit risk, liquidity risk, use of derivative financial instruments and non-derivative financial instruments, and investment of excess liquidity. The Finance Committee has delegated authority to administer the commodity price risk policy and credit policy for US-based commodity transactions to the Energy Procurement Risk Management Committee and the National Grid USA Board of Directors. Details of key activities in the current year are set out in the Finance Committee report on page 82.

We have exposure to the following risks, which are described in more detail below:
- credit risk;
- liquidity risk;
- currency risk;
- interest rate risk;
- commodity price risk; and
- capital risk.

Where appropriate, derivatives and other financial instruments used for hedging currency and interest rate risk exposures are formally designated as fair value, cash flow or net investment hedges as defined in IFRS 9. Hedge accounting allows the timing of the profit or loss impact of qualifying hedging instruments to be recognised in the same reporting period as the corresponding impact of hedged exposures. To qualify for hedge accounting, documentation is prepared specifying the risk management objective and strategy, the component transactions and methodology used for measurement of effectiveness.

32. Financial risk management continued

Hedge accounting relationships are designated in line with risk management activities further described below. Categories designated at National Grid are as follows:

- currency risk arising from our forecasted foreign currency transactions (capital expenditure or revenues) is designated in cash flow hedges;
- currency risk arising from our net investments in foreign operations is designated in net investment hedges; and
- currency and interest rate risk arising from borrowings are designated in cash flow or fair value hedges.

Critical terms of hedging instruments and hedged items are transacted to match on a 1:1 ratio by notional values. Hedge ineffectiveness can nonetheless arise from inherent differences between derivatives and non-derivative instruments and other market factors including credit, correlations, supply and demand, and market volatilities. Ineffectiveness is recognised in the remeasurements component of finance income and costs (see note 6). Hedge accounting is discontinued when a hedging relationship no longer qualifies for hedge accounting.

Certain hedging instrument components are treated separately as costs of hedging with the gains and losses deferred in a component of other equity reserves and released systematically into profit or loss to correspond with the timing and impact of hedged exposures, or released in full to finance costs upon an early discontinuation of a hedging relationship.

Refer to sections (c) currency risk and (d) interest rate risk below for further details about hedge accounting.

(a) Credit risk

We are exposed to the risk of loss resulting from counterparties' default on their commitments including failure to pay or make a delivery on a contract. This risk is inherent in our commercial business activities. Exposure arises from derivative financial instruments, deposits with banks and financial institutions, trade receivables and committed transactions with wholesale and retail customers.

Treasury credit risk

Counterparty risk arises from the investment of surplus funds and from the use of derivative financial instruments. As at 31 March 2020, the following limits were in place for investments held with banks and financial institutions:

	Maximum limit £m	Long-term limit £m
Triple 'A' G7 sovereign entities (AAA)	2,049	1,024
Triple 'A' vehicles (AAA)	500	–
Triple 'A' range institutions and non-G7 sovereign entities (AAA)	1,118	559
Double 'A+' G7 sovereign entities (AA+)	1,863	931
Double 'A' range institutions (AA)	745 to 931	372 to 465
Single 'A' range institutions (A)	261 to 373	130 to 186

The maximum limit applies to all transactions, including long-term transactions. The long-term limit applies to transactions which mature in more than 12 months' time.

As at 31 March 2020 and 2019, we had a number of exposures to individual counterparties. In accordance with our treasury policies, counterparty credit exposure utilisations are monitored daily against the counterparty credit limits. Counterparty credit ratings and market conditions are reviewed continually with limits being revised and utilisation adjusted, if appropriate. Management does not expect any significant losses from non-performance by these counterparties. Further information on financial investments subject to impairment provisioning is included in note 15.

Commodity credit risk

The credit policy for US-based commodity transactions is owned by the Finance Committee to the Board, which establishes controls and procedures to determine, monitor and minimise the credit exposure to counterparties.

Wholesale and retail credit risk

Our principal commercial exposure in the UK is governed by the credit rules within the regulated codes: Uniform Network Code and Connection and Use of System Code. These set out the level of credit relative to the RAV for each credit rating. In the US, we are required to supply electricity and gas under state regulations. Our policies and practices are designed to limit credit exposure by collecting security deposits prior to providing utility services, or after utility service has commenced if certain applicable regulatory requirements are met. Collection activities are managed on a daily basis. Sales to retail customers are usually settled in cash, cheques, electronic bank payments or by using major credit cards. We are committed to measuring, monitoring, minimising and recording counterparty credit risk in our wholesale business. The utilisation of credit limits is regularly monitored, and collateral is collected against these accounts when necessary. In March 2020, the Group's US distribution business ceased certain cash collection and termination activities in response to regulatory instructions following the COVID-19 pandemic. This has resulted in the recognition of expected credit losses as at 31 March 2020 (see note 19 for further details).

Notes to the consolidated financial statements
– supplementary information continued

32. Financial risk management continued
(a) Credit risk continued

Offsetting financial assets and liabilities

The following tables set out our financial assets and liabilities which are subject to offset and to enforceable master netting arrangements or similar agreements. The tables show the amounts which are offset and reported net in the statement of financial position. Amounts which cannot be offset under IFRS, but which could be settled net under terms of master netting arrangements if certain conditions arise, and with collateral received or pledged, are shown to present National Grid's net exposure.

Financial assets and liabilities on different transactions are only reported net if the transactions are with the same counterparty, a currently enforceable legal right of offset exists, and the cash flows are intended to be settled on a net basis.

Amounts which do not meet the criteria for offsetting on the statement of financial position, but could be settled net in certain circumstances, principally relate to derivative transactions under ISDA agreements, where each party has the option to settle amounts on a net basis in the event of default of the other party.

Commodity contract derivatives that have not been offset on the balance sheet may be settled net in certain circumstances under ISDA or North American Energy Standards Board (NAESB) agreements.

For bank account balances and bank overdrafts, the 'Gross amounts offset' under cash pooling arrangements is £23 million as at 31 March 2020 (2019: £19 million). Our UK bank accounts for National Grid subsidiaries participate in GBP, EUR and USD Composite Accounting System overdraft facilities subject to offsetting gross and net overdraft limits. In the US, no offsetting arrangements exist, and cash transactions are settled through Service Company bank accounts with subsequent intercompany payables and receivables reported by subsidiaries with the Service Company.

The gross amounts offset for trade payables and receivables, which are subject to general terms and conditions, are insignificant.

				Related amounts available to be offset but not offset in statement of financial position		
At 31 March 2020	**Gross carrying amounts £m**	**Gross amounts offset £m**	**Net amount presented in statement of financial position £m**	**Financial instruments £m**	**Cash collateral received/ pledged £m**	**Net amount £m**
Assets						
Financing derivatives	**1,267**	**–**	**1,267**	**(351)**	**(694)**	**222**
Commodity contract derivatives	**75**	**–**	**75**	**(5)**	**(3)**	**67**
	1,342	**–**	**1,342**	**(356)**	**(697)**	**289**
Liabilities						
Financing derivatives	**(1,134)**	**–**	**(1,134)**	**351**	**646**	**(137)**
Commodity contract derivatives	**(200)**	**–**	**(200)**	**5**	**8**	**(187)**
	(1,334)	**–**	**(1,334)**	**356**	**654**	**(324)**
	8	**–**	**8**	**–**	**(43)**	**(35)**

				Related amounts available to be offset but not offset in statement of financial position		
At 31 March 2019	Gross carrying amounts £m	Gross amounts offset £m	Net amount presented in statement of financial position £m	Financial instruments £m	Cash collateral received/ pledged £m	Net amount £m
Assets						
Financing derivatives	1,052	–	1,052	(299)	(551)	202
Commodity contract derivatives	101	–	101	29	–	130
	1,153	–	1,153	(270)	(551)	332
Liabilities						
Financing derivatives	(1,084)	–	(1,084)	299	615	(170)
Commodity contract derivatives	(99)	–	(99)	(29)	–	(128)
	(1,183)	–	(1,183)	270	615	(298)
	(30)	–	(30)	–	64	34

32. Financial risk management continued

(b) Liquidity risk

Our policy is to determine our liquidity requirements by the use of both short-term and long-term cash flow forecasts. These forecasts are supplemented by a financial headroom analysis which is used to assess funding requirements for at least a 24-month period and maintain adequate liquidity for a continuous 12-month period.

We believe our contractual obligations, including those shown in commitments and contingencies in note 30, can be met from existing cash and investments, operating cash flows and other financing that we reasonably expect to be able to secure in the future, together with the use of committed facilities if required.

Our debt agreements and banking facilities contain covenants, including those relating to the periodic and timely provision of financial information by the issuing entity and financial covenants such as restrictions on the level of subsidiary indebtedness. Failure to comply with these covenants, or to obtain waivers of those requirements, could in some cases trigger a right, at the lender's discretion, to require repayment of some of our debt and may restrict our ability to draw upon our facilities or access the capital markets.

The following is a maturity profile of our financial liabilities and derivatives:

At 31 March 2020	Less than 1 year £m	1 to 2 years £m	2 to 3 years £m	More than 3 years £m	Total £m
Non-derivative financial liabilities					
Borrowings, excluding lease liabilities	(3,672)	(2,150)	(1,611)	(22,214)	(29,647)
Interest payments on borrowings[1]	(765)	(750)	(714)	(12,002)	(14,231)
Lease liabilities	(132)	(114)	(99)	(629)	(974)
Other non-interest-bearing liabilities	(3,149)	(318)	–	–	(3,467)
Contingent consideration	(32)	(16)	(32)	(16)	(96)
Derivative financial liabilities					
Financing derivatives – receipts[2]	2,249	986	1,208	3,510	7,953
Financing derivatives – payments[2]	(2,582)	(1,136)	(1,463)	(4,067)	(9,248)
Commodity contract derivatives – receipts[2]	4	2	–	–	6
Commodity contract derivatives – payments[2]	(116)	(50)	(24)	(12)	(202)
Derivative financial assets					
Financing derivatives – receipts[2]	2,469	1,063	570	1,775	5,877
Financing derivatives – payments[2]	(2,271)	(527)	(375)	(1,478)	(4,651)
Commodity contract derivatives – receipts[2]	20	1	1	–	22
Commodity contract derivatives – payments[2]	(21)	–	–	–	(21)
	(7,998)	(3,009)	(2,539)	(35,133)	(48,679)

At 31 March 2019	Less than 1 year £m	1 to 2 years £m	2 to 3 years £m	More than 3 years £m	Total £m
Non-derivative financial liabilities					
Borrowings, excluding lease liabilities	(4,129)	(2,348)	(1,998)	(19,673)	(28,148)
Interest payments on borrowings[1]	(800)	(733)	(721)	(13,465)	(15,719)
Lease liabilities	(72)	(63)	(52)	(123)	(310)
Other non-interest-bearing liabilities	(3,306)	(340)	–	–	(3,646)
Derivative financial liabilities					
Financing derivatives – receipts[2]	3,045	1,703	163	2,560	7,471
Financing derivatives – payments[2]	(3,421)	(2,029)	(223)	(3,276)	(8,949)
Commodity contract derivatives – receipts[2]	2	3	1	–	6
Commodity contract derivatives – payments[2]	(98)	(26)	(4)	(1)	(129)
Derivative financial assets					
Financing derivatives – receipts[2]	1,928	561	863	1,112	4,464
Financing derivatives – payments[2]	(1,251)	(459)	(783)	(875)	(3,368)
Commodity contract derivatives – receipts[2]	23	9	2	–	34
Commodity contract derivatives – payments[2]	–	(5)	(1)	–	(6)
	(8,079)	(3,727)	(2,753)	(33,741)	(48,300)

1. The interest on borrowings is calculated based on borrowings held at 31 March without taking account of future issues. Floating rate interest is estimated using a forward interest rate curve as at 31 March. Payments are included on the basis of the earliest date on which the Company can be required to settle.
2. The receipts and payments line items for derivatives comprise gross undiscounted future cash flows, after considering any contractual netting that applies within individual contracts. Where cash receipts and payments within a derivative contract are settled net, and the amount to be received/(paid) exceeds the amount to be paid/(received), the net amount is presented within derivative receipts/(payments).

Notes to the consolidated financial statements – supplementary information continued

32. Financial risk management continued

(c) Currency risk

National Grid operates internationally with mainly the pound sterling as the functional currency for the UK companies and the US dollar for the US businesses. Currency risk arises from three major areas: funding activities, capital investment and related revenues, and holdings in foreign operations. This risk is managed using financial instruments including derivatives as approved by policy, typically cross-currency interest rate swaps, foreign exchange swaps and forwards.

Funding activities – our policy is to borrow in the most advantageous market available. Foreign currency funding gives rise to risk of volatility in the amount of functional currency cash to be repaid. This risk is reduced by swapping principal and interest back into the functional currency of the issuer. All foreign currency debt and transactions are hedged except where they provide a natural offset to assets elsewhere in the Group.

Capital investment and related revenues – capital projects often incur costs or generate revenues in a foreign currency, most often euro transactions done by the UK business. Our policy for managing foreign exchange transaction risk is to hedge contractually committed foreign currency cash flows over a prescribed minimum size, typically by buying euro forwards to hedge future expenditure, and selling euro forwards to hedge future revenues. For hedges of forecast cash flows our policy is to hedge a proportion of highly probable cash flows.

Holdings in foreign operations – we are exposed to fluctuations on the translation into pounds sterling of our foreign operations. The policy for managing this translation risk is to issue foreign currency debt or to replicate foreign debt using derivatives that pay cash flows in the currency of the foreign operation. The primary managed exposure arises from dollar denominated assets and liabilities held by our US operations, with a smaller euro exposure in respect of joint venture investments.

Derivative financial instruments were used to manage foreign currency risk as follows:

	2020					2019				
	Sterling £m	Euro £m	Dollar £m	Other £m	Total £m	Sterling £m	Euro £m	Dollar £m	Other £m	Total £m
Cash and cash equivalents	18	–	55	–	73	97	2	153	–	252
Financial investments	813	–	1,185	–	1,998	965	–	1,016	–	1,981
Borrowings	(12,407)	(4,150)	(13,217)	(1,020)	(30,794)	(10,591)	(4,787)	(12,126)	(1,226)	(28,730)
Pre-derivative position	(11,576)	(4,150)	(11,977)	(1,020)	(28,723)	(9,529)	(4,785)	(10,957)	(1,226)	(26,497)
Derivative effect	(1,169)	4,341	(4,214)	1,175	133	(1,055)	4,803	(5,245)	1,465	(32)
Net debt position	(12,745)	191	(16,191)	155	(28,590)	(10,584)	18	(16,202)	239	(26,529)

The exposure to dollars largely relates to our net investment hedge activities; exposure to euros largely relates to hedges for our future non-sterling capital expenditure.

The currency exposure on other financial instruments is as follows:

	2020					2019				
	Sterling £m	Euro £m	Dollar £m	Other £m	Total £m	Sterling £m	Euro £m	Dollar £m	Other £m	Total £m
Trade and other receivables	306	–	1,403	–	1,709	398	–	1,635	–	2,033
Trade and other payables	(1,177)	–	(2,002)	–	(3,179)	(1,221)	–	(2,085)	–	(3,306)
Other non-current liabilities	(85)	–	(277)	–	(362)	(93)	–	(247)	–	(340)

The carrying amounts of other financial instruments are denominated in the above currencies, which in most instances are the functional currency of the respective subsidiaries. Our exposure to dollars is due to activities in our US subsidiaries. We do not have any other significant exposure to currency risk on these balances.

Hedge accounting for currency risk

Where available, derivatives transacted for hedging are designated for hedge accounting. Economic offset is qualitatively determined because the critical terms (currency and volume) of the hedging instrument match the hedged exposure. If a forecast transaction was no longer expected to occur, the cumulative gain or loss previously reported in equity would be transferred to the income statement. This has not occurred in the current or comparative years.

Cash flow hedging of currency risk of capital expenditure and revenues is designated as hedging the exposure to movements in the spot translation rates only; the timing of forecasted transactions is not designated as a hedged risk. Gains and losses on hedging instruments arising from forward points and foreign currency basis spreads are excluded from designation and are recognised immediately in profit or loss, along with any hedge ineffectiveness. On recognition of the hedged purchase or sale in the financial statements, the associated hedge gains and losses, deferred in the cash flow hedge reserve in other equity reserves, are transferred out of reserves and included with the recognition of the underlying transaction. Where a non-financial asset or a non-financial liability results from a forecast transaction or firm commitment being hedged, the amounts deferred in reserves are included directly in the initial measurement of that asset or liability.

Net investment hedging is also designated as hedging the exposure to movements in spot translation rates only: spot-related gains and losses on hedging instruments are presented in the cumulative translation reserve within other equity reserves to offset gains or losses on translation of the hedged balance sheet exposure. Any ineffectiveness is recognised immediately in the income statement. Gains and losses arising from forward points and foreign currency basis spreads are excluded from designation and are treated as a cost of hedging, deferred initially in other equity reserves and released into profit or loss over the life of the hedging relationship. Amounts deferred in the cumulative translation reserve with respect to net investment hedges are subsequently recognised in the income statement in the event of disposal of the overseas operations concerned. Any remaining amounts deferred in the cost of hedging reserve are also released to the income statement.

Hedges of foreign currency funding are designated as cash flow hedges or fair value hedges of forward exchange risk (hedging both currency and interest rate risk together, where applicable). Hedge accounting for funding is described further in the interest rate risk section below.

32. Financial risk management continued

(d) Interest rate risk

National Grid's interest rate risk arises from our long-term borrowings. Our interest rate risk management policy is to seek to minimise total financing costs (being interest costs and changes in the market value of debt). Hedging instruments principally consist of interest rate and cross-currency swaps that are used to translate foreign currency debt into functional currency and to adjust the proportion of fixed-rate and floating-rate in the borrowings portfolio to within a range set by the Finance Committee of the Board. The benchmark interest rates hedged are currently based on LIBOR.

LIBOR is being replaced as an interest rate benchmark by alternative reference rates in certain currencies including our functional currencies, USD and GBP, and foreign currencies in which we operate. This impacts contracts including financial liabilities that pay LIBOR-based cash flows, and derivatives that receive or pay LIBOR-based cash flows. The change in benchmark also affects discount rates which can impact valuations. We are managing the risk by planning to replace LIBOR cash flows with alternative reference rates on our affected contracts.

We also consider inflation risk and hold some inflation-linked borrowings. We believe that these provide a partial economic offset to the inflation risk associated with our UK inflation-linked revenues.

The table in note 21 sets out the carrying amount, by contractual maturity, of borrowings that are exposed to interest rate risk before taking into account interest rate swaps.

Net debt was managed using derivative financial instruments to hedge interest rate risk as follows:

	2020					2019				
	Fixed rate £m	**Floating rate £m**	**Inflation linked £m**	**Other[1] £m**	**Total £m**	Fixed rate £m	Floating rate £m	Inflation linked £m	Other[1] £m	Total £m
Cash and cash equivalents	**71**	**10**	**–**	**(8)**	**73**	59	104	–	89	252
Financial investments	**–**	**1,966**	**–**	**32**	**1,998**	6	1,944	–	31	1,981
Borrowings	**(20,969)**	**(3,085)**	**(6,740)**	**–**	**(30,794)**	(19,043)	(3,045)	(6,642)	–	(28,730)
Pre-derivative position	**(20,898)**	**(1,109)**	**(6,740)**	**24**	**(28,723)**	(18,978)	(997)	(6,642)	120	(26,497)
Derivative effect	**2,259**	**(1,892)**	**(234)**	**–**	**133**	1,740	(1,559)	(213)	–	(32)
Net debt position	**(18,639)**	**(3,001)**	**(6,974)**	**24**	**(28,590)**	(17,238)	(2,556)	(6,855)	120	(26,529)

1. Represents financial instruments which are not directly affected by interest rate risk, such as investments in equity or other similar financial instruments.

Hedge accounting for interest rate risk

Borrowings paying variable or floating-rates expose National Grid to cash flow interest rate risk, partially offset by cash held at variable rates. Where a hedging instrument results in paying a fixed-rate, it is designated as a cash flow hedge because it has reduced the cash flow volatility of the hedged borrowing. Changes in the fair value of the derivative are initially recognised in other comprehensive income as gains or losses in the cash flow hedge reserve, with any ineffective portion recognised immediately in the income statement.

Borrowings paying fixed-rates expose National Grid to fair value interest rate risk. Where the hedging instrument pays a floating-rate, it is designated as a fair value hedge because it has reduced the fair value volatility of the borrowing. Changes in the fair value of the derivative and changes in the fair value of the hedged item in relation to the risk being hedged are both adjusted on the balance sheet and offset in the income statement to the extent the fair value hedge is effective, with the residual difference remaining as ineffectiveness.

Both types of hedges are designated as hedging the currency and interest rate risk arising from changes in forward points. Amounts accumulated in the cash flow hedge reserve (cash flow hedges only) and the deferred cost of hedging reserve (both cash flow and fair value hedges) are reclassified from reserves to the income statement on a systematic basis as hedged interest expense is recognised. Adjustments made to the carrying value of hedged items in fair value hedges are similarly released to the income statement to match the timing of the hedged interest expense.

When hedge accounting is discontinued, any remaining cumulative hedge accounting balances continue to be released to the income statement to match the impact of outstanding hedged items. Any remaining amounts deferred in the cost of hedging reserve are released immediately to the income statement as finance costs.

The Group early-adopted IFRS Interest Rate Benchmark Reform amendments related to hedge accounting, with effect from 1 April 2019. The amendments allow existing hedge designations to continue unchanged during the period of uncertainty relating to the timing and method of benchmark migrations.

The amendments will be applied until the earlier point in time where affected cash flows are amended, the relationship is formally discontinued, and any cash flow hedge reserve balance has been released, or formal market conventions ending uncertainty are published and widely adopted. If amended cash flows do not cause a hedging relationship to be discontinued, then the amendments will cease to be applied only when that relationship is discontinued under IFRS 9.

The IFRS amendments impact fair value and cash flow hedges of interest rate risk and related hedging instruments, and certain net investment hedges that use cross-currency interest rate swaps to pay a foreign currency floating rate and receive a functional currency floating rate. The notional values of hedging instruments, for each type of hedging relationship impacted, are shown in the hedge accounting tables in note 32(e). These amounts also correspond to the exposures designated as hedged.

Notes to the consolidated financial statements
– supplementary information continued

32. Financial risk management continued

(e) Hedge accounting

In accordance with the requirements of IFRS 9, certain additional information about hedge accounting is disaggregated by risk type and hedge designation type in the tables below:

Year ended 31 March 2020	Fair value hedges of foreign currency and interest rate risk £m	Cash flow hedges of foreign currency and interest rate risk £m	Cash flow hedges of foreign currency risk £m	Net investment hedges £m
Consolidated statement of comprehensive income				
Net losses in respect of:				
Cash flow hedges		(143)	(17)	–
Cost of hedging	5	(7)	–	(30)
Transferred to profit or loss in respect of:				
Cash flow hedges	–	14	–	–
Cost of hedging	1	(1)	–	(45)
Consolidated statement of changes in equity				
Other equity reserves – cost of hedging balances	2	(8)	–	(43)
Consolidated statement of financial position				
Derivatives – carrying value of hedging instruments[1]				
Assets – current	1	–	4	9
Assets – non-current	247	106	8	–
Liabilities – current	(1)	(105)	(8)	(82)
Liabilities – non-current	(39)	(264)	(12)	(19)
Profiles of the significant timing, price and rate information of hedging instruments				
Maturity range	May 2020 – Feb 2040	Jul 2020 – Dec 2039	Apr 2020 – Dec 2024	Jun 2020 – Sep 2027
Spot foreign exchange range:				
GBP:USD	1.64	1.30 – 1.66	1.24 – 1.41	1.21 – 1.49
GBP:EUR	1.19 – 1.24	1.10 – 1.24	1.04 – 1.30	1.14
EUR:USD	1.13 – 1.17	1.13 – 1.14	n/a	n/a
Interest rate range:				
GBP	LIBOR +30bps/+408bps	1.331% – 5.850%	n/a	n/a
USD	LIBOR -44bps/+ 115bps	1.103% – 3.864%	n/a	n/a

1. The use of derivatives may entail a derivative transaction qualifying for more than one hedge type designation under IFRS 9. Therefore, the derivative amounts in the table above are grossed up by hedge type, whereas they are presented net at an instrument level in the statement of financial position.

32. Financial risk management continued
(e) Hedge accounting continued

Year ended 31 March 2019	Fair value hedges of foreign currency and interest rate risk £m	Cash flow hedges of foreign currency and interest rate risk £m	Cash flow hedges of foreign currency risk £m	Net investment hedges £m
Consolidated statement of comprehensive income				
Net losses in respect of:				
Cash flow hedges[1]	–	(206)	(12)	–
Cost of hedging	(6)	(12)	–	(90)
Transferred to profit or loss in respect of:				
Cash flow hedges[1]	–	166	–	–
Cost of hedging	3	–	–	39
Consolidated statement of changes in equity				
Other equity reserves – cost of hedging balances	(4)	–	–	32
Consolidated statement of financial position				
Derivatives – carrying value of hedging instruments[2]				
Assets – current	17	–	9	–
Assets – non-current	168	78	23	–
Liabilities – current	(9)	(28)	(3)	(43)
Liabilities – non-current	(25)	(134)	(4)	(249)
Profiles of the significant timing, price and rate information of hedging instruments				
Maturity range	Nov 2019 – May 2038	Aug 2019 – Feb 2039	Apr 2019 – Dec 2023	Mar 2020 – Jun 2025
Spot foreign exchange range:				
GBP:USD	1.64 – 1.65	1.52 – 1.66	1.29 – 1.41	1.49
GBP:EUR	1.19 – 1.24	1.14 – 1.24	1.07 – 1.32	1.15
EUR:USD	1.13 – 1.16	1.13 – 1.14	n/a	n/a
Interest rate range:				
GBP	LIBOR +30bps/+561bps	1.795% – 5.850%	n/a	n/a
USD	LIBOR -44bps/+115bps	1.103% – 3.864%	n/a	n/a

1. Following a review in the year, we have changed our presentation of spot foreign exchange movements on derivatives designated in cash flow hedges of foreign currency risk and interest rates. This has no net impact on the consolidated statement of comprehensive income. It has resulted in a prior year gross up of £166 million to net losses in respect of cash flow hedges with an equal and offsetting gross up to transferred to profit and loss in respect of cash flow hedges.
2. The use of derivatives may entail a derivative transaction qualifying for more than one hedge type designation under IFRS 9. Therefore, the derivative amounts in the table above are grossed up by hedge type, whereas they are presented net at an instrument level in the statement of financial position.

Notes to the consolidated financial statements – supplementary information continued

32. Financial risk management continued

(e) Hedge accounting continued

The following tables show the effects of hedge accounting on financial position and year-to-date performance for each type of hedge. These tables also present notional values of hedging instruments (and equal hedged exposures) impacted by IFRS 9 Interest Rate Benchmark Reform amendments.

(i) Fair value hedges of foreign currency and interest rate risk on recognised borrowings:

As at 31 March 2020		Balance of fair value hedge adjustments in borrowings		Change in value used for calculating ineffectiveness		
Hedge type	Hedging instrument notional £m	Continuing hedges £m	Discontinued hedges £m	Hedged item £m	Hedging instrument £m	Hedge ineffectiveness £m
Foreign currency and interest rate risk on borrowings[1,2]	(1,751)	(31)	(95)	(42)	48	6

1. The carrying value of the hedged borrowings is £1,883 million, of which £72 million is current and £1,811 million is non-current.
2. Included within the hedging instrument notional balance is £1,675 million impacted by Interest Rate Benchmark Reform amendments.

As at 31 March 2019		Balance of fair value hedge adjustments in borrowings		Change in value used for calculating ineffectiveness		
Hedge type	Hedging instrument notional £m	Continuing hedges £m	Discontinued hedges £m	Hedged item £m	Hedging instrument £m	Hedge ineffectiveness £m
Foreign currency and interest rate risk on borrowings[1]	(1,707)	11	(117)	15	(10)	5

1. The carrying value of the hedged borrowings was £1,810 million, of which £202 million was current and £1,608 million was non-current. Following a review in the year, we have changed our presentation of spot foreign exchange movements on derivatives designated in fair value hedges of foreign currency risk and interest rates. It has resulted in a prior year equal and offsetting impact of £4 million to the balances used for the 'Change in value used for calculating ineffectiveness'.

(ii) Cash flow hedges of foreign currency and interest rate risk:

As at 31 March 2020		Balance in cash flow hedge reserve		Change in value used for calculating ineffectiveness		
Hedge type	Hedging instrument notional £m	Continuing hedges £m	Discontinued hedges £m	Hedged item £m	Hedging instrument £m	Hedge ineffectiveness £m
Foreign currency and interest rate risk on borrowings[1]	(4,127)	(69)	(22)	142	(143)	(1)
Foreign currency risk on forecasted cash flows	(794)	8	–	17	(17)	–

1. Included within the hedging instrument notional balance is £176 million impacted by Interest Rate Benchmark Reform amendments.

As at 31 March 2019		Balance in cash flow hedge reserve		Change in value used for calculating ineffectiveness		
Hedge type	Hedging instrument notional £m	Continuing hedges £m	Discontinued hedges £m	Hedged item £m	Hedging instrument £m	Hedge ineffectiveness £m
Foreign currency and interest rate risk on borrowings[1]	(3,804)	(17)	51	206	(206)	–
Foreign currency risk on forecasted cash flows	(697)	45	–	12	(12)	–

1. Following a review in the year, we have changed our presentation of spot foreign exchange movements on derivatives designated in cash flow hedges of foreign currency risk and interest rates. This has no net impact on the consolidated statement of comprehensive income. It has resulted in a prior year equal and offsetting impact of £167 million to the balances used for the 'Change in value used for calculating ineffectiveness'.

(iii) Net investment hedges of foreign currency risk:

As at 31 March 2020		Balance in translation reserve		Change in value used for calculating ineffectiveness		
Hedge type	Hedging instrument notional £m	Continuing hedges £m	Discontinued hedges £m	Hedged item £m	Hedging instrument £m	Hedge ineffectiveness £m
Currency risk on foreign operations[1]	(3,064)	45	(2,871)	(6)	6	–

1. Included within the hedging instrument notional balance is £nil impacted by Interest Rate Benchmark Reform amendments.

As at 31 March 2019		Balance in translation reserve		Change in value used for calculating ineffectiveness		
Hedge type	Hedging instrument notional £m	Continuing hedges £m	Discontinued hedges £m	Hedged item £m	Hedging instrument £m	Hedge ineffectiveness £m
Currency risk on foreign operations	(2,974)	(329)	(2,502)	550	(550)	–

32. Financial risk management continued

(f) Commodity price risk

We purchase electricity and gas to supply our customers in the US and to meet our own energy needs. Substantially all our costs of purchasing electricity and gas for supply to customers are recoverable at an amount equal to cost. The timing of recovery of these costs can vary between financial periods leading to an under- or over-recovery within any particular year that can lead to large fluctuations in the income statement. We follow approved policies to manage price and supply risks for our commodity activities.

Our energy procurement risk management policy and delegations of authority govern our US commodity trading activities for energy transactions. The purpose of this policy is to ensure we transact within pre-defined risk parameters and only in the physical and financial markets where we or our customers have a physical market requirement. In addition, state regulators require National Grid to manage commodity risk and cost volatility prudently through diversified pricing strategies. In some jurisdictions we are required to file a plan outlining our strategy to be approved by regulators. In certain cases, we might receive guidance with regard to specific hedging limits.

Energy purchase contracts for the forward purchase of electricity or gas that are used to satisfy physical delivery requirements to customers, or for energy that the Group uses itself, meet the expected purchase or usage requirements of IFRS 9. They are, therefore, not recognised in the financial statements until they are realised. Disclosure of commitments under such contracts is made in note 30.

US states have introduced a variety of legislative requirements with the aim of increasing the proportion of our electricity that is derived from renewable or other forms of clean energy. Annual compliance filings regarding the level of Renewable Energy Certificates (and other similar environmental certificates) are required by the relevant department of utilities. In response to the legislative requirements, National Grid has entered into long-term, typically fixed-price, energy supply contracts to purchase both renewable energy and environmental certificates. We are entitled to recover all costs incurred under these contracts through customer billing.

Under IFRS, where these supply contracts are not accounted for as finance leases, they are considered to comprise two components, being a forward purchase of power at spot prices, and a forward purchase of environmental certificates at a variable price (being the contract price less the spot power price). With respect to our current contracts, neither of these components meets the requirement to be accounted for as a derivative. The environmental certificates are currently required for compliance purposes, and at present there are no liquid markets for these attributes. Accordingly, this component meets the expected purchase or usage exemption of IFRS 9. We expect to enter into an increasing number of these contracts, in order to meet our compliance requirements in the short to medium term. It is possible that in future, if and when liquid markets develop, and to the extent that we are in receipt of environmental certificates in excess of our required levels, this exemption may cease to apply, and we may be required to account for forward purchase commitments for environmental certificates as derivatives at fair value through profit and loss.

Notes to the consolidated financial statements
– supplementary information continued

32. Financial risk management continued

(g) Fair value analysis

Included in the statement of financial position are financial instruments which are measured at fair value. These fair values can be categorised into hierarchy levels that are representative of the inputs used in measuring the fair value. The best evidence of fair value is a quoted price in an actively traded market. In the event that the market for a financial instrument is not active, a valuation technique is used.

	2020				2019			
	Level 1 £m	Level 2 £m	Level 3 £m	Total £m	Level 1 £m	Level 2 £m	Level 3 £m	Total £m
Assets								
Investments held at FVTPL	1,278	–	108	1,386	1,311	–	62	1,373
Investments held at FVOCI	83	352	–	435	93	343	–	436
Investments in associates[1]	–	–	103	103	–	–	90	90
Financing derivatives	–	1,257	10	1,267	–	1,050	2	1,052
Commodity contract derivatives	–	9	66	75	–	33	68	101
	1,361	1,618	287	3,266	1,404	1,426	222	3,052
Liabilities								
Financing derivatives	–	(889)	(245)	(1,134)	–	(868)	(216)	(1,084)
Commodity contract derivatives	–	(136)	(64)	(200)	–	(32)	(67)	(99)
Liabilities held at fair value	(741)	–	–	(741)	(667)	–	–	(667)
Contingent consideration[2]	–	–	(74)	(74)	–	–	–	–
	(741)	(1,025)	(383)	(2,149)	(667)	(900)	(283)	(1,850)
	620	593	(96)	1,117	737	526	(61)	1,202

1. Our Level 3 investments include investments relating to Sunrun Neptune 2016 LLC accounted for at FVTPL.
2. Contingent consideration relates to the acquisition of Geronimo (see note 38).

Level 1: Financial instruments with quoted prices for identical instruments in active markets.

Level 2: Financial instruments with quoted prices for similar instruments in active markets or quoted prices for identical or similar instruments in inactive markets, and financial instruments valued using models where all significant inputs are based directly or indirectly on observable market data.

Level 3: Financial instruments valued using valuation techniques where one or more significant inputs are based on unobservable market data.

Our Level 1 financial investments and liabilities held at fair value are valued using quoted prices from liquid markets.

Our Level 2 financial investments held at fair value are valued using quoted prices for similar instruments in active markets, or quoted prices for identical or similar instruments in inactive markets. Alternatively, they are valued using models where all significant inputs are based directly or indirectly on observable market data.

Our Level 2 financing derivatives include cross-currency, interest rate and foreign exchange derivatives. We value these by discounting all future cash flows by externally sourced market yield curves at the reporting date, taking into account the credit quality of both parties. These derivatives can be priced using liquidly traded interest rate curves and foreign exchange rates, and therefore we classify our vanilla trades as Level 2 under the IFRS 13 framework.

Our Level 2 commodity contract derivatives include over-the-counter gas and power swaps as well as forward physical gas deals. We value our contracts based on market data obtained from the New York Mercantile Exchange (NYMEX) and the Intercontinental Exchange (ICE) where monthly prices are available. We discount based on externally sourced market yield curves at the reporting date, taking into account the credit quality of both parties and liquidity in the market. Our commodity contracts can be priced using liquidly traded swaps. Therefore, we classify our vanilla trades as Level 2 under the IFRS 13 framework.

Our Level 3 financing derivatives include cross-currency swaps, inflation-linked swaps and equity options, where the market is illiquid. In valuing these instruments, we use in-house valuation models and obtain external valuations to support each reported fair value.

Our Level 3 commodity contract derivatives primarily consist of our forward purchases of electricity and gas that we value using proprietary models. Derivatives are classified as Level 3 where significant inputs into the valuation technique are neither directly nor indirectly observable (including our own data, which are adjusted, if necessary, to reflect the assumptions market participants would use in the circumstances).

Our Level 3 investments include equity instruments accounted for at fair value through profit and loss. These equity holdings are part of our corporate venture capital portfolio held by National Grid Partners and comprise a series of small unquoted investments where prices or valuation inputs are unobservable. These investments are either recently acquired or there have been recent funding rounds with third parties and therefore the valuation is based on the latest transaction price and any subsequent investment-specific adjustments.

Our Level 3 investments in associates include our investment in Sunrun Neptune 2016 LLC, which is accounted for at fair value. The investment is fair valued by discounting expected cash flows using a weighted average cost of capital specific to Sunrun Neptune 2016 LLC.

In light of the current ongoing impact of the COVID-19 pandemic, the valuations of certain assets and liabilities can be more subjective. While there have been significant movements in market indices, we are satisfied that there has been no significant impact on the fair values of our financial instruments measured at fair value, and that any impact is reflected in the fair values in the table above.

32. Financial risk management continued

(g) Fair value analysis continued

The changes in value of our Level 3 financial instruments are as follows:

	Financing derivatives		Commodity contract derivatives		Other[3,4]		Total	
	2020 £m	2019 £m	**2020 £m**	2019 £m	**2020 £m**	2019 £m	**2020 £m**	2019 £m
At 1 April	**(214)**	(219)	**1**	(1)	**152**	194	**(61)**	(26)
Net (losses)/gains for the year[1,2]	**(20)**	4	**6**	(16)	**26**	15	**12**	3
Purchases	**–**	–	**26**	44	**51**	57	**77**	101
Acquisition of Geronimo	**–**	–	**–**	–	**(74)**	–	**(74)**	–
Settlements	**(1)**	1	**(31)**	(26)	**(18)**	(4)	**(50)**	(29)
Reclassification to held for sale[3]	**–**	–	**–**	–	**–**	(110)	**–**	(110)
At 31 March	**(235)**	(214)	**2**	1	**137**	152	**(96)**	(61)

1. Loss of £20 million (2019: £4 million gain) is attributable to derivative financial instruments held at the end of the reporting period and has been recognised in finance costs in the income statement.
2. Loss of £17 million (2019: £21 million loss) is attributable to commodity contract derivative financial instruments held at the end of the reporting period.
3. Relates to our put and call options over our interests in Quadgas, that were classified as held for sale at 31 March 2019.
4. Other comprises our investments in Sunrun Neptune 2016 LLC, Enbala and the investments made by National Grid Partners, which are accounted for at fair value through profit and loss as well as the contingent consideration arising from the acquisition of Geronimo (see note 38).

The impacts on a post-tax basis of reasonably possible changes in significant Level 3 assumptions are as follows:

	Financing derivatives		Commodity contract derivatives		Other[3]	
	2020 £m	2019 £m	**2020 £m**	2019 £m	**2020 £m**	2019 £m
10% increase in commodity prices[1]	**–**	–	**2**	(1)	**–**	–
10% decrease in commodity prices[1]	**–**	–	**–**	2	**–**	–
+10% market area price change	**–**	–	**(4)**	(10)	**–**	–
-10% market area price change	**–**	–	**4**	10	**–**	–
+20 basis points change in Limited Price Inflation (LPI) market curve[2]	**(95)**	(88)	**–**	–	**–**	–
-20 basis points change in LPI market curve[2]	**90**	83	**–**	–	**–**	–
+50 basis points change in discount rate	**–**	–	**–**	–	**(3)**	(3)
-50 basis points change in discount rate	**–**	–	**–**	–	**4**	3

1. Level 3 commodity price sensitivity is included within the sensitivity analysis disclosed in note 35.
2. A reasonably possible change in assumption of other Level 3 derivative financial instruments is unlikely to result in a material change in fair values.
3. The investments acquired in the period were on market terms, and sensitivity is considered insignificant at 31 March 2020.

The impacts disclosed above were considered on a contract-by-contract basis with the most significant unobservable inputs identified.

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32. Financial risk management continued

(h) Capital risk management

The capital structure of the Group consists of shareholders' equity, as disclosed in the consolidated statement of changes in equity, and net debt (note 29). National Grid's objectives when managing capital are: to safeguard our ability to continue as a going concern; to remain within regulatory constraints of our regulated operating companies; and to maintain an efficient mix of debt and equity funding thus achieving an optimal capital structure and cost of capital. We regularly review and manage the capital structure as appropriate in order to achieve these objectives.

Maintaining appropriate credit ratings for our operating and holding companies is an important aspect of our capital risk management strategy and balance sheet efficiency. We monitor our balance sheet efficiency using several metrics including retained cash flow/net debt (RCF), regulatory gearing and interest cover. For the year ended 31 March 2020, these metrics for the Group were 9.2% (2019: 9.4%), 63% (2019: 66%) and 4.1x (2019: 4.4x), respectively – see pages 28 and 244 – 245. We believe these are consistent with the current credit ratings for National Grid plc in respect of the main companies of the Group, based on guidance from the rating agencies.

We monitor the RAV gearing within NGET and the regulated transmission businesses within NGG. This is calculated as net debt expressed as a percentage of RAV, and indicates the level of debt employed to fund our UK regulated businesses. It is compared with the level of RAV gearing indicated by Ofgem as being appropriate for these businesses, at around 60% to 62.5%. We also monitor net debt as a percentage of rate base for our US operating companies, comparing this with the allowed rate base gearing inherent within each of our agreed rate plans, typically around 50%.

The majority of our regulated operating companies in the US and the UK are subject to certain restrictions on the payment of dividends by administrative order, contract and/or licence. The types of restrictions that a company may have that would prevent a dividend being declared or paid unless they are met include:

- dividends must be approved in advance by the relevant US state regulatory commission;
- subsidiary must have at least two recognised rating agency credit ratings of at least investment grade;
- dividends must be limited to cumulative retained earnings, including pre-acquisition retained earnings;
- the securities of National Grid plc must maintain an investment grade credit rating, and if that rating is the lowest investment grade bond rating it cannot have a negative watch/review for downgrade notice by a credit rating agency;
- the subsidiary must not carry on any activities other than those permitted by the licences;
- the subsidiary must not create any cross-default obligations or give or receive any intra-group cross-subsidies; and
- the percentage of equity compared with total capital of the subsidiary must remain above certain levels.

There is a further restriction relating only to The Narragansett Electric Company, which is required to maintain its consolidated net worth above certain levels.

These restrictions are subject to alteration in the US as and when a new rate case or rate plan is agreed with the relevant regulatory bodies for each operating company and in the UK through the normal licence review process.

As most of our business is regulated, at 31 March 2020 the majority of our net assets are subject to some of the restrictions noted above. These restrictions are not considered to be significantly onerous, nor do we currently expect they will prevent the planned payment of dividends in future in line with our dividend policy.

All the above requirements are monitored on a regular basis in order to ensure compliance. The Group has complied with all externally imposed capital requirements to which it is subject.

33. Borrowing facilities

To support our liquidity requirements and provide backup to commercial paper and other borrowings, we agree loan facilities with financial institutions over and above the value of borrowings that may be required. These committed credit facilities have never been drawn, and our undrawn amounts are listed below.

At 31 March 2020, we had bilateral committed credit facilities of £5,495 million (2019: £5,463 million). In addition, we had committed credit facilities from syndicates of banks of £277 million at 31 March 2020 (2019: £264 million). All committed credit facilities were undrawn in 2020 and 2019. An analysis of the maturity of these undrawn committed facilities is shown below:

	2020 £m	2019 £m
Undrawn committed borrowing facilities expiring:		
Less than 1 year	**–**	–
In 1 to 2 years	**1,940**	–
In 2 to 3 years	**1,668**	2,190
In 3 to 4 years	**277**	1,668
In 4 to 5 years	**1,887**	1,869
More than 5 years	**–**	–
	5,772	5,727

Of the unused facilities at 31 March 2020, £5,495 million (2019: £5,463 million) is available for liquidity purposes, while £277 million (2019: £264 million) is available as backup to specific US borrowings. £1,923 million of the undrawn bilateral facilities due to mature in one to two years, were renegotiated between 1 April and 17 June 2020 with new expiry dates to June 2024. Of the £1,887 million of undrawn committed borrowings facilities due to expire within four to five years, £110 million was renegotiated before 31 March 2020, with the expiry extended by a further year, with effect from 1 June 2020.

For the separately regulated business of National Grid Electricity System Operator Limited, the Group has a facility of £550 million (2019: £550 million). This facility is not available as Group general liquidity support and is not represented in the table above.

In addition to the above, the Group has Export Credit Agreements (ECAs) totalling £901 million (2019: £859 million), of which £233 million (2019: £510 million) is undrawn. Subsequent to the year end, two new ECAs totalling £598 million have been made available and have not been drawn.

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34. Subsidiary undertakings, joint ventures and associates

While we present consolidated results in these financial statements as if we were one company, our legal structure is such that there are a number of different operating and holding companies that contribute to the overall result. This structure has evolved through acquisitions as well as regulatory requirements to have certain activities within separate legal entities.

Subsidiary undertakings

A list of the Group's subsidiaries as at 31 March 2020 is given below. The entire share capital of subsidiaries is held within the Group except where the Group's ownership percentages are shown. These percentages give the Group's ultimate interest and therefore allow for the situation where subsidiaries are owned by partly owned intermediate subsidiaries. Where subsidiaries have different classes of shares, this is largely for historical reasons, and the effective percentage holdings given represent both the Group's voting rights and equity holding. Shares in National Grid (US) Holdings Limited, National Grid Holdings One plc and NGG Finance plc are held directly by National Grid plc. All other holdings in subsidiaries are owned by other subsidiaries within the Group. All subsidiaries are consolidated in the Group's financial statements.

Principal Group companies are identified in bold. These companies are incorporated and principally operate in the countries under which they are shown.

Incorporated in England and Wales

Registered office: 1 – 3 Strand, London WC2N 5EH, UK (unless stated otherwise in footnotes).

Beegas Nominees Limited
Birch Sites Limited
Carbon Sentinel Limited
Droylsden Metering Services Limited
Gridcom Limited
Icelink Interconnector Limited
Landranch Limited
Lattice Group Employee Benefit Trust Limited
Lattice Group Limited
Lattice Group Trustees Limited
Natgrid Limited
NatGrid One Limited
NatgridTW1 Limited
National Grid Belgium Limited[1*]
National Grid Blue Power Limited[1*]
National Grid Carbon Limited
National Grid Commercial Holdings Limited
National Grid Distributed Energy Limited
National Grid Electricity Group Trustee Limited
National Grid Electricity System Operator Limited
National Grid Electricity Transmission plc
National Grid Energy Metering Limited
National Grid Four Limited[1*]
National Grid Fourteen Limited[1*]
National Grid Gas Holdings Limited
National Grid Gas plc
National Grid Grain LNG Limited
National Grid Holdings Limited
National Grid Holdings One plc
National Grid IFA 2 Limited
National Grid Interconnector Holdings Limited
National Grid Interconnectors Limited
National Grid International Limited
National Grid Metering Limited
National Grid North Sea Link Limited
National Grid Offshore Limited (previously NG Shetland Link Limited)
National Grid Partners Limited
National Grid Plus Limited (previously National Grid Offshore Limited)
National Grid Property Holdings Limited
National Grid Seventeen Limited[1*]
National Grid Smart Limited
National Grid Ten
National Grid Thirty Five Limited[1*]
National Grid Thirty Six Limited
National Grid Twelve Limited
National Grid Twenty Eight Limited
National Grid Twenty-Five Limited[1*]
National Grid Twenty Seven Limited
National Grid Twenty Three Limited
National Grid UK Limited
National Grid UK Pension Services Limited
National Grid (US) Holdings Limited
National Grid (US) Investments 2 Limited
National Grid (US) Investments 4 Limited
National Grid (US) Partner 1 Limited
National Grid Ventures Limited
National Grid Viking Link Limited
National Grid William Limited
NG Nominees Limited
NGC Employee Shares Trustee Limited
NGG Finance plc
Ngrid Intellectual Property Limited
NGT Telecom No. 1 Limited[1*]
NGT Two Limited
Port Greenwich Limited
Stargas Nominees Limited
Supergrid Electricity Limited
Supergrid Energy Transmission Limited
Supergrid Limited
Thamesport Interchange Limited
The National Grid Group Quest Trustee Company Limited
The National Grid YouPlan Trustee Limited
Transco Limited
Warwick Technology Park Management Company (No 2) Limited (60.56%)[2]

1. Registered office: c/o KPMG, 15 Canada Square, London E14 5GL, UK
2. Registered office: Shire Hall, PO Box 9, Warwick CV34 4RL, UK
* In liquidation.

34. Subsidiary undertakings, joint ventures and associates continued

Subsidiary undertakings continued

Incorporated in the US

Registered office: National Registered Agents, Inc., 1209 Orange Street, Wilmington, DE 19801, USA (unless stated otherwise in footnotes).

Alden Solar, LLC
Altona Solar, LLC
Apple River Solar, LLC
Apple Solar, LLC
Arapahoe Solar, LLC
Argenta Solar, LLC
Armenia Solar, LLC
Artemisia Solar, LLC[1]
Ashland Solar, LLC
Athens Solar, LLC
Audubon Wind Farm, LLC
Banner Solar, LLC
Bee Hollow Solar, LLC
Benevolent Solar, LLC
Blaze Solar, LLC
Blue Ridge Wind, LLC
Blues Solar, LLC
Blue Stone Solar Energy, LLC
Bluewater Solar, LLC
Boone Solar, LLC
Boston Gas Company[2]
Brewster Solar, LLC
Brilliance Solar, LLC
British Transco Capital Inc.[3]
British Transco Finance, Inc.[3]
Brock Solar, LLC
Broken Bridge Corp.[4]
Brook Trout Solar, LLC
Brookside Solar, LLC
Burlington Solar, LLC
Burr Ridge Wind, LLC
Cage Ranch Solar, LLC
Cage Ranch Solar II, LLC
Cage Ranch Solar III, LLC
Caldwell Solar, LLC
Caldwell Solar II, LLC
Canby Solar, LLC
Cattle Ridge Wind Farm 2, LLC
Cepheus Community Solar Gardens LLC[1]
Claddagh Solar, LLC[1]
Clear Creek Solar, LLC
Clermont Solar, LLC
Clinton County Solar, LLC
Commonwealth Solar, LLC
Conestoga Wind, LLC
Copperhead Solar, LLC
Crocker Wind Farm 2, LLC
Cygnus Community Solar Garden, LLC[1]
Daybreak Solar, LLC
Deer Trail Solar, LLC
Dekalb Solar, LLC
Desoto Solar, LLC
Dodson Creek Solar, LLC
Dorado Community Solar Gardens, LLC[1]
Dorsey Road Solar, LLC
East Galesburg Solar, LLC
East Macomb Solar, LLC
Eastern Hemlock Solar, LLC
Elba Solar, LLC
Elburn Solar, LLC
Eldena Solar, LLC
Elk Creek Solar, LLC
Elk Creek Solar 2, LLC
Empire Solar, LLC
EUA Energy Investment Corporation[2]
Falls City Solar, LLC
Firstview Wind Farm, LLC
Franklin Solar, LLC
Front Range Wind Farm, LLC
Fulton Solar, LLC
Galesburg Solar, LLC
Genesee Solar Energy, LLC
Geronimo Energy LLC
Geronimo E Wind LLC[5]
Geronimo Solar Energy, LLC[1]
Geronimo Stutsman Wind Farm, LLC
Geronimo White Pine Solar, LLC
Gladiolus Solar, LLC[1]
Glenwood Solar, LLC
Glen Rock Solar, LLC
Golden Solar, LLC
Goldendale Solar, LLC
Goldfinch Solar, LLC
Granite State Power Link LLC[3]
Grant Solar, LLC
Grant Solar 2, LLC
Grayson Solar, LLC
Greenbrier Creek Solar, LLC
Greentown Solar, LLC
Greenwood Solar, LLC
Grid NY, LLC[6]
Grindstone Wind Farm, LLC[7]
Hale Solar, LLC
Hampton Solar, LLC
Handley Road Solar, LLC
Hardeman County Solar, LLC
Harmony Solar ND, LLC
Harmony Solar ND 2, LLC
Harrington Solar, LLC
Hartley Solar, LLC
Hearth Solar, LLC
Henderson Solar, LLC
Heyworth Solar, LLC
Honeybee Solar, LLC
Hoosier Solar, LLC[1]
Hyacinth Solar, LLC[1]
Illumination Solar, LLC
Innovation Solar, LLC
Irwin Solar, LLC
Itasca Energy Development, LLC[8]
Itasca Energy Services, LLC
Jack Rabbit Wind, LLC
Jackson County Solar, LLC
Jantz Solar, LLC
Junction Solar, LLC
Kankakee Solar, LLC
Keslinger Solar, LLC
KeySpan CI Midstream Limited[3]
KeySpan Energy Corporation[6]
KeySpan Energy Services Inc.[3]
KeySpan Gas East Corporation[6]
KeySpan International Corporation[3]
KeySpan MHK, Inc.[3]
KeySpan Midstream Inc.[3]
KeySpan Plumbing Solutions, Inc.[6]
Kindle Solar, LLC
KSI Contracting, LLC[3]
KSI Electrical, LLC[3]
KSI Mechanical, LLC[3]
Lake Iris Solar, LLC
Lakeside Solar, LLC
Lamdin Solar, LLC
Lamplight Solar, LLC
Land Management & Development, Inc.[6]
Landwest, Inc.[6]
Lansing Solar, LLC
Lawrence Solar, LLC
Leola Wind Farm, LLC
Lilac Solar, LLC[1]
Lindy Solar, LLC
Lockport Solar, LLC
Lordsburg Solar, LLC
Lydia Solar, LLC
Madden Creek Solar, LLC
Marigold Community Solar Garden, LLC[1]
Massachusetts Electric Company[2]
Maverick Wind Farm, LLC
Mazon Solar, LLC
McFadden Solar, LLC
Merton Solar, LLC
Metro Energy, LLC[6]
Metrowest Realty LLC[3]
Miller Creek Solar, LLC
Morning Glory Solar, LLC[1]
Mottville Solar, LLC
Mountain Laurel Solar, LLC
Mustang Ridge Wind Farm, LLC
Mystic Steamship Corporation[3]
Nantucket Electric Company[2]
National Grid Algonquin LLC[3]
National Grid Connect Inc.3
National Grid Development Holdings Corp.[3]
National Grid Electric Services, LLC[6]
National Grid Energy Management, LLC[3]
National Grid Energy Services LLC[3]
National Grid Energy Trading Services LLC[6]
National Grid Engineering & Survey Inc.[6]
National Grid Generation LLC[6]
National Grid Generation Ventures LLC[6]
National Grid Glenwood Energy Center, LLC[3]
National Grid IGTS Corp.[6]
National Grid Insurance USA Ltd[6]
National Grid Islander East Pipeline LLC[3]
National Grid LNG GP LLC[3]

Notes to the consolidated financial statements – supplementary information continued

34. Subsidiary undertakings, joint ventures and associates continued
Subsidiary undertakings continued

Incorporated in the US continued

National Grid LNG LLC[3]
National Grid LNG LP LLC[3]
National Grid Millennium LLC[3]
National Grid NE Holdings 2 LLC[2]
National Grid North America Inc.[3]
National Grid North East Ventures Inc.[3]
National Grid Partners Inc.[6]
National Grid Partners LLC[3]
National Grid Port Jefferson Energy Center LLC[3]
National Grid Services Inc.[3]
National Grid Transmission Services Corporation[2]
National Grid US 6 LLC[3]
National Grid US LLC[3]
National Grid USA[3]
National Grid USA Service Company, Inc.[2]
Nees Energy, Inc.[2]
New Bremen Solar, LLC
New England Electric Transmission Corporation[4]
New England Energy Incorporated[2]
New England Hydro Finance Company, Inc. (53.704%)[2]
New England Hydro-Transmission Corporation (53.704%)[4]
New England Hydro-Transmission Electric Company Inc. (53.704%)[2]
New England Power Company[2]
Newport America Corporation[9]
NGNE LLC[3]
NGV Emerald Acquisition Co. LLC[3]
NGV Emerald Energy Venture Holdings LLC[3]
NGV Emerald Holdings LLC[3]
NGV US Distributed Energy Inc.[3] (previously National Grid Green Homes Inc.)
NGV US Transmission Inc.[3] (previously Grid America Holdings Inc.)
Niagara Falls Solar, LLC
Niagara Mohawk Energy, Inc.[3]
Niagara Mohawk Holdings, Inc.[6]
Niagara Mohawk Power Corporation[6]
Niobrara Wind, LLC
NM Properties, Inc.[6]
Nordic Vos, LLC
North Adair Solar, LLC
Northeast Renewable Link LLC[3]
North East Transmission Co., Inc.[3]
North Fork Wind, LLC
North Rock Solar, LLC
North Wonder Lake Solar, LLC
Onton Solar, LLC
Opinac North America, Inc.[3]
Oreana Solar, LLC
Patriotic Solar, LLC
Pennington Solar, LLC
Peony Solar, LLC
Perseus Community Solar Garden, LLC[1]
Philadelphia Coke Co., Inc.[3]
Piper Solar, LLC
Pipestone Solar, LLC
Pleasant Plains Solar, LLC
Plum Creek Wind Farm, LLC
Plum Creek Wind Farm 2, LLC
Polaris Community Solar Garden, LLC[1]
Port of the Islands North, LLC[6]
Prairie Oasis Solar, LLC
Prairie Rose Wind 2, LLC[1]
Prairie Wolf Solar, LLC
Prosperity Wind Farm, LLC
Prosperity Wind Farm 2, LLC
Radiance Solar, LLC[1]
Red Rock Solar SD, LLC
Regal Solar, LLC
Regulus Community Solar Gardens, LLC[1]
Rising Solar, LLC
River North Solar, LLC
River Run Solar, LLC
Riverside Solar, LLC
Rochester Solar, LLC[1]
Rock Falls Solar, LLC
Rock Ridge Wind Farm, LLC
Ross County Solar, LLC
Royal Solar, LLC
Royal Solar 2, LLC
Royerton Solar, LLC
Saginaw Bay Solar, LLC
Sandstone Creek Solar, LLC
Sandstone Creek Solar 2, LLC
Sawmill Wind Farm, LLC
Silver City Solar, LLC
Scorpius Community Solar Garden, LLC[1]
Serenity Solar, LLC[1]
Sheas Lake Solar, LLC
Sherco Solar, LLC[1]
Silver Lake Solar, LLC
Sirius Community Solar Gardens, LLC[1]
Snowdrop Solar, LLC[1]
Somerset Solar, LLC
South Belleville Solar, LLC
South Macomb Solar, LLC
Spotlight Solar, LLC
Spring Brook Solar, LLC
Springfield Solar Farm, LLC
Springfield Wind Farm, LLC[1]
Springville Solar, LLC
St. Thomas Solar, LLC
Stockton Solar, LLC
Stony Brook Wind, LLC
Stove Creek Solar, LLC
Sturgis Solar, LLC
Sugar Maple Solar, LLC
Summit Lake Solar, LLC
Sunbeam Solar, LLC
Sunray Solar, LLC
Sunrise Solar, LLC
Sycamore Creek Solar, LLC
The Brooklyn Union Gas Company[6]
The Narragansett Electric Company[9]
Tilton Solar, LLC
Torchlight Solar, LLC[1]
Transgas, Inc.[2]
Uintah Solar, LLC
Upper Hudson Development Inc.[6]
Valley Appliance and Merchandising Company[9]
Vermont Green Line Devco, LLC3 (90%)
Vibrant Solar, LLC
Virgo Community Solar Gardens, LLC[1]
Virtue Solar, LLC
Vivid Solar, LLC
Vulpecula Community Solar Garden, LLC[1]
Wayfinder Group, Inc.[2]
Wheatfield Solar, LLC
Wild Springs Solar, LLC[1]
Wildcat Ridge Wind Farm, LLC
Wilder Junction Wind Farm, LLC
Wildhorse Creek Solar, LLC
Willard Solar, LLC
Wiregrass Solar, LLC
Wonder Lake Solar, LLC
Woodlands Solar, LLC
Yellowbud Solar, LLC

34. Subsidiary undertakings, joint ventures and associates continued

Subsidiary undertakings continued

Incorporated in Australia
Registered office: Level 7, 330 Collins Street, Melbourne, VIC 3000, Australia

National Grid Australia Pty Limited

Incorporated in Canada
Registered office: Stewart McKelvey Stirling Scales, c/o Charles Reagh, 1959 Upper Water Street, Suite 900, Halifax Nova Scotia, B3J 2N2, Canada

KeySpan Energy Development Co.

Incorporated in Hong Kong
Registered office: Level 54, Hopewell Centre, 183 Queen's Road East, Hong Kong

National Grid Hong Kong Limited (previously HK NewCo 2019 Limited)

Incorporated in the Isle of Man
Registered office: Third Floor, St George's Court, Upper Church Street, Douglas, IM1 1EE, Isle of Man, UK

National Grid Insurance Company (Isle of Man) Limited
NGT Holding Company (Isle of Man) Limited*

Incorporated in Jersey
Registered office: 44 Esplanade, St Helier, Jersey JE4 9WG, UK

National Grid Jersey Investments Limited**
NG Jersey Limited**

Incorporated in Luxembourg
Registered office: 412F, Route d'Esch, L-2086, Luxembourg, Grand Duchy of Luxembourg

National Grid Luxembourg Sarl (previously 21 June Sarl)

Incorporated in the Netherlands
Registered office: Westblaak 89, 3012 KG Rotterdam, PO Box 21153, 3001 AD, Rotterdam, Netherlands
British Transco International Finance B.V.

Registered office: Prins Bernhardplein 200, 1097 JB, Amsterdam, Netherlands
National Grid Holdings B.V.*

Incorporated in the Republic of Ireland
Registered office: c/o Moore Stephens Nathans, Third Floor, Ulysses House, 23/24 Foley Street, Dublin 1, D01 W2T2, Ireland

National Grid Company (Ireland) Designated Activity Company (previously National Grid Insurance Company (Ireland) Designated Activity Company)*

1. Registered office: c/o Geronimo Energy LLC, 8400 Normandale Lake Bvld. Suite 1200, Bloomington, MN 55437, USA.
2. Registered office: Corporation Service Company, 84 State Street, Boston MA 02109, USA.
3. Registered office: Corporation Service Company, 251 Little Falls Drive, Wilmington DE 19808, USA.
4. Registered office: Lawyers Incorporating Service, 10 Ferry Street, Suite 313, Concord NH 03301, USA.
5. Registered office: National Registered Agents, Inc., 301 S. Bedford St. Suite 1 Madison, WI 53703, USA.
6. Registered office: Corporation Service Company, 80 State Street, Albany NY 12207-2543, USA.
7. Registered office: National Registered Agents, Inc., 30600 Telegraph Road, Suite2345, Bingham Farms, MI 48025-5720, USA.
8. Registered office: 10710 Town Square Drive NE, Suite 201 Minneapolis, MN 55449, USA.
9. Registered office: Corporation Service Company, 222 Jefferson Boulevard, Suite 200, Warwick RI 02888, USA.

* In liquidation.
** Entered liquidation 29 April 2020.

Notes to the consolidated financial statements
– supplementary information continued

34. Subsidiary undertakings, joint ventures and associates continued

Joint ventures

A list of the Group's joint ventures as at 31 March 2020 is given below. All joint ventures are included in the Group's financial statements using the equity method of accounting. Principal joint ventures are identified in **bold**.

Incorporated in England and Wales
Registered office: 1–3 Strand, London WC2N 5EH, UK (unless stated otherwise in footnotes).

BritNed Development Limited (50%)*
Joint Radio Company Limited (50%)[1]**
Nemo Link Limited (50%)
NGET/SPT Upgrades Limited (50%)†
St William Homes LLP (50%)[2]

Incorporated in the US
Registered office: Corporation Service Company, 251 Little Falls Drive, Wilmington, DE 19808, USA (unless stated otherwise in footnotes).

Clean Energy Generation, LLC (50%)
Emerald Energy Venture LLC (51%)
Goldendale Energy Storage LLC (50%)
Island Park Energy Center, LLC (50%)
Islander East Pipeline Company, LLC (50%)[3]
LI Energy Storage System, LLC (50%)
LI Solar Generation, LLC (50%)
Swan Lake North Holdings LLC (50%)

Incorporated in France
Registered office: 1 Terrasse Bellini, Tour Initiale, TSA 41000 – 9291, Paris La Defense, CEDEX, France

IFA2 SAS (50%)

Associates

A list of the Group's associates as at 31 March 2020 is given below. Unless otherwise stated, all associates are included in the Group's financial statements using the equity method of accounting. Principal associates are identified in bold.

Incorporated in the US
Registered office: Corporation Service Company, 251 Little Falls Drive, Wilmington, DE 19808, USA (unless stated otherwise in footnotes).

Clean Line Energy Partners LLC (32%)[3]
Connecticut Yankee Atomic Power Company (19.5%)[4]
Direct Global Power, Inc. (26%)[3]
Energy Impact Fund LP (9.42%)[5]
Greeneru, Inc. (21.6%)[3]
KHB Venture LLC (33%)[6]
Maine Yankee Atomic Power Company (24%)[7]
Millennium Pipeline Company, LLC (26.25%)[3]
New York Transco LLC (28.3%)[8]
Nysearch RMLD, LLC (22.63%)
Sunrun Neptune Investor 2016 LLC[3]***
Yankee Atomic Electric Company (34.5%)[9]

Incorporated in Belgium
Registered office: Avenue de Cortenbergh 71, 1000 Brussels, Belgium

Coreso SA (15.84%)

Other investments

A list of the Group's other investments as at 31 March 2020 is given below.

Incorporated in England and Wales
Registered office: 1 More London Place, London SE1 2AF, UK

Energis plc (33.06%)‡

1. Registered office: Friars House, Manor House Drive, Coventry CV1 2TE, UK.
2. Registered office: Berkeley House, 19 Portsmouth Road, Cobham, Surrey KT11 1JG, UK.
3. Registered office: Corporation Trust Company, 1209 Orange, Wilmington DE 19808, New Castle County, USA.
4. Registered office: Carla Pizzella, 362 Injun Hollow Road, East Hampton CT 06424, USA.
5. Registered office: Harvard Business Services, Inc., 16192 Coastal Highway, Lewes DE 19958, Sussex County, USA.
6. Registered office: De Maximus Inc., 135 Beaver Street, 4th Floor, Waltham MA 02452, USA.
7. Registered office: Joseph D Fay, 321 Old Ferry Road, Wiscasset ME 04578, USA.
8. Registered office: Corporation Service Company, 80 State Street, Albany NY 12207, USA.
9. Registered office: Karen Sucharzewski, 49 Yankee Road, Rowe MA 01367, USA.

* National Grid Interconnector Holdings Limited owns 284,500,000 €0.20 C Ordinary shares and one £1.00 Ordinary A share.
** National Grid Gas plc owns all £1.00 A Ordinary shares.
*** NGV US Distributed Energy Inc. owns 1,000 Class A Membership Interests.
† National Grid Electricity Transmission plc owns 50 £1.00 A Ordinary shares.
‡ In administration.

Our interests and activities are held or operated through the subsidiaries, joint arrangements or associates as disclosed above. These interests and activities (and their branches) are established in – and subject to the laws and regulations of – these jurisdictions.

35. Sensitivities

In order to give a clearer picture of the impact on our results or financial position of potential changes in significant estimates and assumptions, the following sensitivities are presented. These sensitivities are based on assumptions and conditions prevailing at the year-end and should be used with caution. The effects provided are not necessarily indicative of the actual effects that would be experienced because our actual exposures are constantly changing.

The sensitivities in the tables below show the potential impact in the income statement (and consequential impact on net assets) for a reasonably possible range of different variables each of which have been considered in isolation (i.e. with all other variables remaining constant). There are a number of these sensitivities which are mutually exclusive, and therefore if one were to happen, another would not, meaning a total showing how sensitive our results are to these external factors is not meaningful.

The sensitivities included in the tables below broadly have an equal and opposite effect if the sensitivity increases or decreases by the same amount unless otherwise stated.

(a) Sensitivities on areas of estimation uncertainty

The table below sets out the sensitivity analysis for certain areas of estimation uncertainty set out in note 1E. These estimates are those that have a significant risk of resulting in a material adjustment to the carrying values of assets and liabilities in the next year. Note that the sensitivity analysis for the useful economic lives of our gas network assets is included in note 13.

	2020		2019	
	Income statement £m	**Net assets £m**	Income statement £m	Net assets £m
Pensions and other post-retirement benefit liabilities (pre-tax)[1]:				
UK discount rate change of 0.5%[2]	**6**	**877**	6	1,064
US discount rate change of 0.5%[2]	**10**	**514**	16	688
UK RPI rate change of 0.5%[3]	**4**	**670**	4	908
UK long-term rate of increase in salaries change of 0.5%	**1**	**39**	1	56
US long-term rate of increase in salaries change of 0.5%	**2**	**47**	2	46
UK change of one year to life expectancy at age 65[4]	**1**	**545**	1	610
US change of one year to life expectancy at age 65	**4**	**456**	4	406
Assumed US healthcare cost trend rates change of 1%	**31**	**507**	32	503
Pension assets:				
Change in value of unquoted equities by 10%	**–**	**381**	–	415
Change in value of unquoted properties by 10%	**–**	**89**	–	107
Change in value of unquoted diversified alternatives by 10%	**–**	**152**	–	142
Environmental provision:				
10% change in estimated future cash flows	**210**	**210**	165	165

1. The changes shown are a change in the annual pension or other post-retirement benefit service charge and change in the defined benefit obligations.
2. A change in the discount rate is likely to occur as a result of changes in bond yields and as such would be expected to be offset to a significant degree by a change in the value of the bond assets held by the plans. In the UK, there would also be a £205 million net assets offset from the buy-in policies purchased in the year, where the accounting value of the buy-in asset is set equal to the associated liabilities.
3. The projected impact resulting from a change in RPI reflects the underlying effect on pensions in payment, pensions in deferment and resultant increases in salary assumptions. The buy-in policies purchased during the year would have a £152 million net assets offset to the above.
4. In the UK, the buy-in policies purchased during the year, and the longevity swap entered into previously, would have a £223 million net assets offset to the above.

Pensions and other post-retirement benefits assumptions

Sensitivities have been prepared to show how the defined benefit obligations and annual service costs could potentially be impacted by changes in the relevant actuarial assumption that were reasonably possible as at 31 March 2020. In preparing sensitivities, the potential impact has been calculated by applying the change to each assumption in isolation and assuming all other assumptions remain unchanged. This is with the exception of RPI in the UK where the corresponding change to increases to pensions in payment, increases to pensions in deferment and increases in salary are recognised.

Notes to the consolidated financial statements
– supplementary information continued

35. Sensitivities continued

(b) Sensitivities on financial instruments

We are further required to show additional sensitivity analysis under IFRS 7 and these are shown separately in the subsequent table due to the additional assumptions that are made in order to produce meaningful sensitivity disclosures.

Our net debt as presented in note 29 is sensitive to changes in market variables, primarily being UK and US interest rates, the UK RPI and the dollar to sterling exchange rate. These impact the valuation of our borrowings, deposits and derivative financial instruments. The analysis illustrates the sensitivity of our financial instruments to reasonably possible changes in these market variables.

The following main assumptions were made in calculating the sensitivity analysis for continuing operations:

- the amount of net debt, the ratio of fixed to floating interest rates of the debt and derivatives portfolio, and the proportion of financial instruments in foreign currencies are all constant and on the basis of the hedge designations in place at 31 March 2020 and 2019 respectively;
- the statement of financial position sensitivity to interest rates relates to items presented at their fair values: derivative financial instruments; our investments measured at fair value through profit and loss (FVTPL) and fair value through other comprehensive income; and our liability measured at FVTPL. Further debt and other deposits are carried at amortised cost and so their carrying value does not change as interest rates move;
- the sensitivity of interest to movements in interest rates is calculated on net floating rate exposures on debt, deposits and derivative instruments;
- changes in the carrying value of derivatives from movements in interest rates of designated cash flow hedges are assumed to be recorded fully within equity; and
- changes in the carrying value of derivative financial instruments designated as net investment hedges from movements in interest rates are presented in equity as costs of hedging, with a one-year release to the income statement. The impact of movements in the dollar to sterling exchange rate are recorded directly in equity.

	2020		2019	
	Income statement £m	Other equity reserves £m	Income statement £m	Other equity reserves £m
Financial risk (post-tax):				
UK RPI change of 0.5%[1]	27	–	27	–
UK interest rates change of 0.5%	14	47	16	13
US interest rates change of 0.5%	5	27	11	44
US dollar exchange rate change of 10%[2]	49	216	53	246

1. Excludes sensitivities to LPI curve. Further details on sensitivities are provided in note 32(g).
2. The other equity reserves impact does not reflect the exchange translation in our US subsidiaries' net assets. It is estimated this would change by £1,319 million (2019: £1,119 million) in the opposite direction if the dollar exchange rate changed by 10%.

Our commodity contract derivatives are sensitive to price risk. Additional sensitivities in respect to commodity price risk and to our derivative fair values are as follows:

	2020		2019	
	Income statement £m	Net assets £m	Income statement £m	Net assets £m
Commodity price risk (post-tax):				
10% increase in commodity prices	26	26	26	26
10% decrease in commodity prices	(27)	(27)	(27)	(27)
Assets and liabilities carried at fair value (post-tax):				
10% fair value change in derivative financial instruments[1]	12	12	(3)	(3)
10% fair value change in commodity contract derivative liabilities	9	9	–	–

1. The effect of a 10% change in fair value assumes no hedge accounting.

36. Additional disclosures in respect of guaranteed securities

We have preferred shares that are listed on a US national securities exchange and are guaranteed by other companies in the Group. These guarantors commit to honour any liabilities should the company issuing the debt have any financial difficulties. In order to provide debt holders with information on the financial stability of the companies providing the guarantees, we are required to disclose individual financial information for these companies. We have chosen to include this information in the Group financial statements rather than submitting separate stand-alone financial statements.

Niagara Mohawk Power Corporation, a wholly owned subsidiary of the Group, has issued preferred shares that are listed on a US national securities exchange and are guaranteed by National Grid plc. In order to provide preferred shareholders with information on the financial stability of the company providing the guarantee, we are required to disclose individual financial information for these companies. We have chosen to include this information in the Group financial statements rather than submitting separate stand-alone financial statements.

The following summarised financial information is given in respect of Niagara Mohawk Power Corporation as a result of National Grid plc's guarantee, dated 29 October 2007, of Niagara Mohawk Power Corporation's 3.6% and 3.9% issued preferred shares, which amount to £29 million. National Grid plc's guarantee of Niagara Mohawk Power Corporation's preferred shares is full and unconditional. There are no restrictions on the payment of dividends by Niagara Mohawk Power Corporation or limitations on National Grid plc's guarantee of the preferred shares, and there are no factors that may affect payments to holders of the guaranteed securities.

The following summarised financial information for National Grid plc and Niagara Mohawk Power Corporation is presented on a combined basis and is intended to provide investors with meaningful and comparable financial information, and is provided pursuant to the early adoption of Rule 13-01 of Regulation S-X in lieu of the separate financial statements of Niagara Mohawk Power Corporation.

Summarised financial information is presented, on a combined basis, as at 31 March 2020. The combined amounts are presented under IFRS measurement principles. Inter-company transactions have been eliminated. Investments in other non-issuer and non-guarantor subsidiaries are included at cost, subject to impairment.

Summarised financial information for the year ended 31 March 2020 – IFRS

	National Grid plc and Niagara Mohawk Power Corporation combined £m
Combined statement of financial position	
Non-current loans to other subsidiaries	363
Non-current assets	8,939
Current loans to other subsidiaries	12,435
Current assets	1,378
Current loans from other subsidiaries	(16,226)
Current liabilities	(1,648)
Non-current loans from other subsidiaries	(2,105)
Non-current liabilities	(5,460)
Net liabilities[1]	(2,324)
Equity	(2,324)

Combined income statement – continuing operations	
Revenue	2,365
Operating costs	(2,131)
Operating profit	234
Other income from other subsidiaries	3,888
Other income and costs, including taxation	(428)
Profit after tax	3,694

1. Excluded from net liabilities above are investments in other consolidated subsidiaries with a carrying value of £14,362 million.

37. Transition to new accounting standards

(a) Transition to IFRS 16

The Group has adopted IFRS 16 'Leases', with effect from 1 April 2019. IFRS 16 introduces a single lease accounting model for lessees (rather than the current distinction between operating and finance leases). A contract is, or contains, a lease, if it provides the right to control the use of an identified asset for a specific period of time in exchange for consideration. The new standard results in our operating leases being accounted for in the consolidated statement of financial position as 'right-of-use' assets with corresponding lease liabilities also recognised. It therefore increases both our assets and liabilities (including net debt). It also changes the timing and presentation in the consolidated income statement as it results in an increase in finance costs and depreciation largely offset by a reduction in the previously straight-line operating costs.

Transition options

We have applied IFRS 16 using the modified retrospective approach. Comparatives have not been restated on adoption. Instead, on the opening balance sheet date, right-of-use assets (net of accrued rent or rent-free periods, and reported within property, plant and equipment), additional lease liabilities (reported within borrowings) and any associated deferred tax have been recognised, with no cumulative transition adjustment to reflect through retained earnings. For short-term leases (lease term of 12 months or less) and leases of low-value assets (such as computers), the Group continues to recognise a lease expense on a straight-line basis as permitted by IFRS 16.

Notes to the consolidated financial statements
– supplementary information continued

37. Transition to new accounting standards continued

(a) Transition to IFRS 16 continued
We elected to apply the practical expedient to grandfather our previous assessments of whether contracts were previously accounted for as a lease, as permitted by the standard, instead of reassessing all significant contracts as at the date of initial application to determine whether they met the IFRS 16 definition of a lease.

We have elected to apply the practical expedient on transition, which permits right-of-use assets to be measured at an amount equal to the lease liability on adoption of the standard (adjusted for any prepaid or accrued lease expenses).

In addition, we have also elected the option to adjust the carrying amounts of the right-of-use assets as at 1 April 2019 for any onerous lease provisions that had been recognised on the Group consolidated statement of financial position as at 31 March 2019, rather than performing impairment assessments on transition.

Impact of transition
At 31 March 2019, the Group disclosed non-cancellable operating lease commitments of £0.3 billion, of which the majority were in the US. A further £0.4 billion of lease liabilities were recognised due to the requirement in IFRS 16 to recognise lease liabilities for the term that we are reasonably certain to exercise lease extension or lease termination options for, rather than only for the period of the minimum contractual term that was used in determining our lease liability commitments. This was partially offset by the £0.2 billion impact of discounting our lease liabilities at the incremental borrowing rate for each lease. The weighted average discount rate applied to lease liabilities recognised on the transition date was 2.8%.There were some immaterial short-term and low-value leases, which will be recognised on a straight-line basis as an expense in the consolidated income statement over the remaining lease term.

As a result, the Group has recognised additional right-of-use assets of £0.5 billion and lease liabilities (which are included within net debt) of £0.5 billion at 1 April 2019. No additional net deferred tax has arisen. The transition adjustment is in addition to the £270 million of finance leases already recognised on the consolidated statement of financial position under IAS 17. There has been no impact on net assets as shown in the table below, which shows the impacted balances from the Group consolidated statement of financial position.

Impact of transition	31 March 2019 As previously reported £m	IFRS 16 transition adjustments £m	1 April 2019 As restated £m
Property, plant and equipment – Right-of-use assets			
Land and buildings	2,560	381	**2,941**
Plant and machinery	36,589	67	**36,656**
Assets in the course of construction	4,425	–	**4,425**
Motor vehicles and office equipment	339	20	**359**
Total property, plant and equipment	43,913	468	**44,381**
Borrowings – Lease liabilities			
Current	(65)	(48)	**(113)**
Non-current	(205)	(426)	**(631)**
Total lease liabilities	(270)	(474)	**(744)**
Other liabilities			
Trade and other payables	(3,769)	3	**(3,766)**
Other non-current liabilities	(808)	3	**(805)**
Net assets	19,369	–	**19,369**
Equity			
Total equity	19,369	–	**19,369**

The impact of IFRS 16 on profit after tax as a result of adopting the new standard is not material. However, it has resulted in an increase in operating profit due to the operating costs now being replaced with depreciation and interest charges.

The impact on the cash flow statement has also not been material, although there has been an increase in operating cash flows and decrease in financing cash flows, because repayment of the principal portion of the lease liabilities is now classified as cash flows from financing activities rather than operating cash flows.

Ongoing accounting policy
With effect from 1 April 2019, new lease arrangements entered into are recognised as a right-of-use asset and a corresponding liability at the date at which the leased asset is available for use by the Group. The right-of-use asset and associated lease liability arising from a lease are initially measured at the present value of the lease payments expected over the lease term, plus any other costs. The discount rate applied is the rate implicit in the lease or if that is not available, then the incremental rate of borrowing for a similar term and similar security.

The lease term takes account of exercising any extension options that are at our option if we are reasonably certain to exercise the option and any lease termination options unless we are reasonably certain not to exercise the option.

Each lease payment is allocated between the liability and finance cost. The finance cost is charged to the income statement over the lease period using the effective interest rate method. The right-of-use asset is depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis. For short-term leases (lease term of 12 months or less) and leases of low-value assets (such as computers), the Group continues to recognise a lease expense on a straight-line basis.

37. Transition to new accounting standards continued

(b) Transition to IFRS 9 and IFRS 15

On 1 April 2018, the Group adopted IFRS 9 and IFRS 15. Both standards were applied using the modified retrospective approach whereby comparative amounts were not restated on transition, but a cumulative adjustment was made to retained earnings in the opening consolidated statement of financial position as at 1 April 2018. The impact of the transition on the opening consolidated statement of financial position is set out in the following table:

		Transition adjustments		
Impact of transition	31 March 2018 As previously reported £m	IFRS 9 £m	IFRS 15 £m	**1 April 2018 £m**
Non-current assets				
Goodwill	5,444	–	–	**5,444**
Other intangible assets	899	–	–	**899**
Property, plant and equipment	39,853	–	–	**39,853**
Other non-current assets	115	–	–	**115**
Pension assets	1,409	–	–	**1,409**
Financial and other investments	899	–[1]	–	**899**
Investments in joint ventures and associates	2,168	–	–	**2,168**
Derivative financial assets	1,319	–	–	**1,319**
Total non-current assets	52,106	–	–	**52,106**
Current assets				
Inventories and current intangible assets	341	–	–	**341**
Trade and other receivables	2,798	–[2]	(3)	**2,795**
Current tax assets	114	–	–	**114**
Financial and other investments	2,694	–[1]	–	**2,694**
Derivative financial assets	405	–	–	**405**
Cash and cash equivalents	329	–	–	**329**
Total current assets	6,681	–	(3)	**6,678**
Total assets	58,787	–	(3)	**58,784**
Current liabilities				
Borrowings	(4,447)	–	–	**(4,447)**
Derivative financial liabilities	(401)	–	–	**(401)**
Trade and other payables	(3,453)	–	59[7]	**(3,394)**
Contract liabilities	–	–	(53)[7]	**(53)**
Current tax liabilities	(123)	–	–	**(123)**
Provisions	(273)	–	–	**(273)**
Total current liabilities	(8,697)	–	6	**(8,691)**
Non-current liabilities				
Borrowings	(22,178)	(32)[3]	–	**(22,210)**
Derivative financial liabilities	(660)	–	–	**(660)**
Other non-current liabilities	(1,317)	–	567[7]	**(750)**
Contract liabilities	–	–	(813)[7]	**(813)**
Deferred tax liabilities	(3,636)	5[4]	74[8]	**(3,557)**
Pensions and other post-retirement benefit obligations	(1,672)	–	–	**(1,672)**
Provisions	(1,779)	–	–	**(1,779)**
Total non-current liabilities	(31,242)	(27)	(172)	**(31,441)**
Total liabilities	(39,939)	(27)	(166)	**(40,132)**
Net assets	18,848	(27)	(169)	**18,652**
Equity				
Share capital	452	–	–	**452**
Share premium account	1,321	–	–	**1,321**
Retained earnings	21,599	(99)[5]	(169)[9]	**21,331**
Other equity reserves	(4,540)	72[6]	–	**(4,468)**
Total shareholders' equity	18,832	(27)	(169)	**18,636**
Non-controlling interests	16	–	–	**16**
Total equity	18,848	(27)	(169)	**18,652**

Notes to the consolidated financial statements – supplementary information continued

37. Transition to new accounting standards continued

(b) Transition to IFRS 9 and IFRS 15 continued

IFRS 9: Financial Instruments

IFRS 9 has changed the rules concerning the classification and measurement of financial instruments, impairment of financial assets, and hedge accounting. Details of the impact of applying IFRS 9 for the year ended 31 March 2019 are set out below.

Adjustments arising in the year ended 31 March 2019 as a result of the transition to IFRS 9:

1. The available-for-sale category for financial assets was replaced with investments held at fair value through profit and loss (FVTPL) and investments held at fair value through other comprehensive income (FVOCI). Changes to the classification and measurement of financial assets did not alter the carrying value of any financial assets held by the Group. The net impact to retained earnings of the reclassification on transition was an £8 million gain.

   As described in note 15, all recognised financial assets that are within the scope of IFRS 9 are initially recorded at fair value and subsequently measured at amortised cost or fair value based on the Group's business model for managing the financial assets and the contractual cash flow characteristics of the financial assets. Therefore on 1 April 2018, the Group reclassified its investments as follows:
   - Money market funds and fund investments held by captive insurance companies were classified as financial assets at FVTPL because their contractual cash flows are not solely payments of principal and interest;
   - Investments in debt securities that have contractual payments that are solely payments of principal and interest, and which are held as part of the liquidity portfolio or to back employee benefit liabilities, were classified as financial assets at FVOCI because they are held in a business model whose objective is to collect the contractual cash flows and to sell the debt instruments;
   - The Group has elected to hold investments in equity securities, which are held to back employee benefit liabilities, as financial assets at FVOCI as the Group does not believe that changes in their fair value is reflective of the financial performance of the Group; and
   - Loans to joint ventures and associates, cash at bank, and short-term deposits are classified at amortised cost as they have contractual cash flows which are solely payments of principal and interest and the Group holds them to collect contractual cash flows.

   Aside from derivative financial instruments, which remain classified as FVTPL, the Group did not previously have any financial assets or liabilities classified at FVTPL.

   The table below illustrates those financial assets and liabilities that were reclassified at 1 April 2018:

Financial asset/liability	Note	Original measurement category under IAS 39	New measurement category under IFRS 9	Original carrying amount under IAS 39 £m	Change to measurement basis under IFRS 9 £m	New carrying amount under IFRS 9 £m
Money market funds and fund investments in equities and bonds	15	Available-for-sale investments	Financial assets at FVTPL	2,294	–	2,294
Cash surrender value of life insurance policies and investments in debt securities	15	Available-for-sale investments	Financial assets at FVOCI	343	–	343
Investments in equity securities	15	Available-for-sale investments	Financial assets at FVOCI (equity instruments)	84	–	84
Loans to joint ventures and associates and restricted balances	15	Loans and receivables	Financial assets at amortised cost	872	–	872
Borrowings	21	Financial liabilities at amortised cost	Financial liabilities at fair value through profit and loss	(570)	(32)	(602)

   Note that the table above does not include derivative assets, derivative liabilities, trade receivables, cash at bank and short-term deposits, borrowings measured at amortised cost or trade payables. This is because neither the classification nor the measurement of these items has changed on transition to IFRS 9.

2. The change from the incurred loss impairment model of IAS 39 to the expected loss model in IFRS 9 did not have a material impact on the Group's credit loss provision. The Group calculates its impairment provision on trade receivables using a sophisticated provisions matrix. The inclusion of forward-looking information did not have a significant impact on the matrix as the relevant short-term future economic conditions affecting our retail customers in the US are expected to be similar to recent experience.

3. The Group elected to reclassify an existing liability with a carrying value of £570 million from amortised cost to fair value through profit and loss to reduce a measurement mismatch. At transition, the resultant impacts included an increase in the carrying value of the liability of £32 million, a reduction in retained earnings of £40 million and the establishment of an own credit reserve (within other equity reserves) of £7 million.

4. Deferred tax was recognised on the adjustments recorded on the transition to IFRS 9. Reserve impacts are stated net of related deferred tax.

5. Retained earnings included the impact from adjustments 1, 3 and 6.

6. The Group adopted the hedge accounting requirements of IFRS 9, which more closely align with the Group's risk management policies. On transition, it was concluded that all IAS 39 hedge relationships are qualifying IFRS 9 relationships with the treatment of the cost of hedging being the main change. The effect was a reclassification in reserves of a £67 million gain from retained earnings and a £10 million gain from the cash flow hedge reserve, into a new cost of hedging reserve (within other equity reserves). In this reserve, qualifying unrealised gains and losses excluded from hedging relationships are deferred and released systematically into profit or loss to match the timing of hedged items.

37. Transition to new accounting standards continued

(b) Transition to IFRS 9 and IFRS 15 continued

IFRS 15: Revenue from Contracts with Customers

IFRS 15 has primarily changed the accounting for our connection and diversion revenues in our regulated businesses. No practical expedients on transition were applied.

The accounting for revenue under IFRS 15 did not represent a substantive change from the Group's previous practice under IAS 18 for recognising revenue from sales to customers with the exception of the following items:

- Certain pass-through revenues (principally revenues collected on behalf of the Scottish and Offshore transmission operators) were recorded net of operating costs, whereas previously they were recognised gross of operating costs. Had we not adopted IFRS 15, our revenues and operating costs for the year ended 31 March 2019 would have been £1,197 million higher, with no impact to operating profits;
- Contributions for capital works relating to connections for our customers were deferred as contract liabilities on our consolidated statement of financial position on transition, and released over the life of the connection assets. This was a change for our US Regulated business and our UK Gas Transmission business, where previously revenues were recorded once the work was completed. Had we not adopted IFRS 15, our revenues and operating profit for the year ended 31 March 2019 would have been £57 million higher; and
- In the UK, contributions for capital works relating to diversions were recognised as the works are completed. This was a change for the UK regulated businesses where revenues were previously deferred over the life of the asset. Had we not adopted IFRS 15, our revenues and operating profit for the year ended 31 March 2019 would have been £26 million and £23 million lower, respectively.

Adjustments arising in the year ended 31 March 2019 as a result of the transition to IFRS 15:

7. Deferred income from contributions for capital works were reclassified to contract liabilities. In addition, these liabilities for capital works relating to connections have increased as these capital contributions for connections were cumulatively adjusted for on 1 April 2018 and are now deferred and released over the life of the connection assets. This was a change for our US Regulated business and our UK Gas Transmission business where previously revenues were recorded once the work was completed.

   Partially offsetting the increase in contract liabilities for connections was the change in accounting treatment for contributions relating to diversions in our UK businesses. These contributions are recognised as revenue as the works are completed where previously revenue was recognised over the life of the assets.

8. Deferred tax was recorded on the incremental amounts recorded against capital contributions and contract liabilities on the transition to IFRS 15. Deferred tax balances have been calculated at the rate substantially enacted at the balance sheet date.

9. The transition adjustment reflected the net of adjustments 7 and 8 above.

Notes to the consolidated financial statements
– supplementary information continued

38. Acquisition of Geronimo Energy LLC and Emerald Energy Venture LLC

On 11 July 2019, National Grid Ventures acquired 100% of the share capital of Geronimo Energy LLC (Geronimo) and 51% of Emerald Energy Venture LLC (Emerald), which is jointly controlled by National Grid and Washington State Investment Board (WSIB). Geronimo is a leading developer of wind and solar generation based in Minneapolis in the US, and the acquisition is a significant step in National Grid's commitment to the decarbonisation agenda, towards developing and growing a large-scale renewable generation business in the US, and delivering sustainable, reliable and efficient energy. This is National Grid's first ownership stake in wind generation and an expansion of our activities in solar generation. Whilst Geronimo develops the assets, Emerald has a right of first refusal to buy, build and operate those assets.

The total consideration was £209 million, satisfied by a combination of cash and contingent consideration. The contingent consideration has been recorded within trade and other payables for the amount payable within one year, with the remainder recorded within other non-current liabilities. The fair value of contingent consideration recognised is determined as the present value of our best estimate of the value that we will be required to pay, taking into consideration management's estimates of the volume of successful development activity by Geronimo over the relevant period.

The fair values of the assets and liabilities recognised from both the acquisition of the subsidiary, Geronimo, and the joint venture, Emerald, are set out below.

	£m
Intangible assets	5
Property, plant and equipment	1
Investment in joint venture – Emerald	90
Cash	2
Other identifiable assets and liabilities	30
Total identifiable assets	128
Goodwill	81
Total consideration transferred	209
Satisfied by:	
Contingent consideration – Geronimo	70
Cash consideration – Geronimo	49
Cash consideration – Emerald	90
	209

The goodwill arising from the acquisition comprises the value associated with the potential future projects that will be developed by Geronimo as well as the expertise of the management team that have been acquired, neither of which qualify for recognition as tangible or intangible assets. At the acquisition date, there were no material contingent liabilities.

Subsequent to the acquisition date, we made an additional capital contribution of £50 million into Emerald.

Total acquisition-related costs of £3 million have been recognised within operating costs within the consolidated income statement, of which £1 million was recognised in the year ended 31 March 2020.

Geronimo earns revenue from selling its development stage assets to Emerald and other third parties. Emerald generates revenue from the assets it purchases from Geronimo once they are operational and has no other business (see note 16). Neither entity has generated significant revenues or profits for the period between the acquisition date and the reporting date. Even if the acquisition had completed on 1 April 2019, there would have been no significant revenues or profits.

39. Post balance sheet events

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

Company accounting policies

We are required to include the stand-alone balance sheet of our ultimate Parent Company, National Grid plc, under the Companies Act 2006. This is because the publicly traded shares are actually those of National Grid plc (the Company) and the following disclosures provide additional information to shareholders.

A. Basis of preparation
National Grid plc is the Parent Company of the National Grid Group, which is engaged in the transmission and distribution of electricity and gas in Great Britain and northeastern US. The Company is a public limited company, limited by shares. The Company is incorporated and domiciled in England, with its registered office at 1–3 Strand, London, WC2N 5EH.

The financial statements of National Grid plc for the year ended 31 March 2020 were approved by the Board of Directors on 17 June 2020. The Company meets the definition of a qualifying entity under Financial Reporting Standard 100 (FRS 100) issued by the Financial Reporting Council. Accordingly, these individual financial statements of the Company have been prepared in accordance with Financial Reporting Standard 101 'Reduced Disclosure Framework' (FRS 101). In preparing these financial statements the Company applies the recognition and measurement requirements of International Financial Reporting Standards (IFRS) as adopted by the EU, but makes amendments where necessary in order to comply with the provisions of the Companies Act 2006 and sets out below where advantage of the FRS 101 disclosure exemptions has been taken.

These individual financial statements have been prepared on an historical cost basis, except for the revaluation of financial instruments, and are presented in pounds sterling, which is the currency of the primary economic environment in which the Company operates. The 2019 comparative financial information has also been prepared on this basis.

These individual financial statements have been prepared on a going concern basis, which presumes that the Company has adequate resources to remain in operation, and that the Directors intend it to do so, for at least one year from the date the financial statements are signed. As the Company is part of a larger group it participates in the Group's centralised treasury arrangements and so shares banking arrangements with its subsidiaries. The Company is expected to generate positive cash flows or be in a position to obtain finance via intercompany loans to continue to operate for the foreseeable future.

As described further in note 1 to the consolidated financial statements, the Directors have considered the impact of COVID-19 on the Group and on the Company, and have concluded that the Company will have adequate resources to continue in operation for at least 12 months from the signing date of these financial statements. Therefore, they continue to adopt the going concern basis of accounting in preparing the financial statements.

In accordance with the exemption permitted by section 408 of the Companies Act 2006, the Company has not presented its own profit and loss account or statement of comprehensive income.

The following exemptions from the requirements of IFRS have been applied in the preparation of these financial statements of the Company in accordance with FRS 101:
- a cash flow statement and related notes;
- disclosures in respect of transactions with wholly owned subsidiaries;
- disclosures in respect of capital management; and
- the effects of new but not yet effective IFRS standards.

The exemption from disclosing key management personnel compensation has not been taken as there are no costs borne by the Company in respect of employees, and no related costs are recharged to the Company.

As the consolidated financial statements of National Grid plc, which are available from the registered office, include the equivalent disclosures, the Company has also taken the exemptions under FRS 101 in respect of certain disclosures required by IFRS 13 'Fair value measurement' and the disclosures required by IFRS 7 'Financial instruments: Disclosures'.

The Company has adopted IFRS 16 with effect from 1 April 2019. The adoption of IFRS 16 has had no impact on the Company.

There are no areas of judgement or key sources of estimation uncertainty that are considered to have a significant effect on the amounts recognised in the financial statements.

The balance sheet has been prepared in accordance with the Company's accounting policies approved by the Board and described below.

B. Fixed asset investments
Investments held as fixed assets are stated at cost less any provisions for impairment. Investments are reviewed for impairment if events or changes in circumstances indicate that the carrying amount may not be recoverable. Impairments are calculated such that the carrying value of the fixed asset investment is the lower of its cost or recoverable amount. Recoverable amount is the higher of its net realisable value and its value-in-use. The Company accounts for common control transactions at cost.

C. Tax
Current tax for the current and prior periods is provided at the amount expected to be paid or recovered using the tax rates and tax laws that have been enacted or substantively enacted by the balance sheet date.

Deferred tax is provided in full on temporary differences which result in an obligation at the balance sheet date to pay more tax, or the right to pay less tax, at a future date, at tax rates expected to apply when the temporary differences reverse based on tax rates and tax laws that have been enacted or substantively enacted by the balance sheet date. Deferred tax is provided for using the balance sheet liability method and is recognised on temporary differences between the carrying amount of assets and liabilities in the financial statements and the corresponding tax bases used in the computation of taxable profit.

Deferred tax assets are recognised to the extent that it is regarded as more likely than not that they will be recovered. Deferred tax assets and liabilities are not discounted.

Company accounting policies continued

D. Foreign currencies
Transactions in currencies other than the functional currency of the Company are recorded at the rates of exchange prevailing on the dates of the transactions. At each balance sheet date, monetary assets and liabilities that are denominated in foreign currencies are retranslated at closing exchange rates. Gains and losses arising on retranslation of monetary assets and liabilities are included in the profit and loss account.

E. Financial instruments
The Company's accounting policies are the same as the Group's accounting policies under IFRS, namely IAS 32 'Financial Instruments: Presentation', IFRS 9 'Financial Instruments' and IFRS 7 'Financial Instruments: Disclosures'. The Company applies these policies only in respect of the financial instruments that it has, namely investments, derivative financial instruments, debtors, cash at bank and in hand, borrowings and creditors.

The policies are set out in notes 15, 17, 19, 20, 21 and 22 to the consolidated financial statements. The Company is taking the exemption for financial instruments disclosures, because IFRS 7 disclosures are given in notes 32 and 35 to the consolidated financial statements.

F. Hedge accounting
The Company applies the same accounting policy as the Group in respect of fair value hedges and cash flow hedges. This policy is set out in note 32 to the consolidated financial statements.

G. Parent Company guarantees
The Company has guaranteed the repayment of the principal sum, any associated premium and interest on specific loans due by certain subsidiary undertakings primarily to third parties. Such guarantees are accounted for by the Company as insurance contracts. In the event of default or non-performance by the subsidiary, a liability is recorded in accordance with IAS 37 with a corresponding increase in the carrying value of the investment.

H. Share awards to employees of subsidiary undertakings
The issuance by the Company to employees of its subsidiaries of a grant over the Company's options represents additional capital contributions by the Company to its subsidiaries. An additional investment in subsidiaries results in a corresponding increase in shareholders' equity. The additional capital contribution is based on the fair value of the option at the date of grant, allocated over the underlying grant's vesting period. Where payments are subsequently received from subsidiaries, these are accounted for as a return of a capital contribution and credited against the Company's investments in subsidiaries. The Company has no employees.

I. Dividends
Interim dividends are recognised when they are paid to the Company's shareholders. Final dividends are recognised when they are approved by shareholders.

J. Directors' remuneration
Full details of Directors' remuneration are disclosed on pages 88 to 108.

Company balance sheet
as at 31 March

	Notes	2020 £m	2019 £m
Fixed assets			
Investments	1	**14,362**	9,923
Current assets			
Debtors (amounts falling due within one year)	2	**12,427**	12,625
Debtors (amounts falling due after more than one year)	2	**398**	358
Investments	5	**752**	895
Cash at bank and in hand		**2**	75
Total current assets		**13,579**	13,953
Creditors (amounts falling due within one year)	3	**(16,836)**	(15,529)
Net current liabilities		**(3,257)**	(1,576)
Total assets less current liabilities		**11,105**	8,347
Creditors (amounts falling due after more than one year)	3	**(2,620)**	(2,648)
Net assets		**8,485**	5,699
Equity			
Share capital	7	**470**	458
Share premium account		**1,301**	1,314
Cash flow hedge reserve		**(28)**	1
Cost of hedging reserve		**(6)**	–
Other equity reserves		**399**	380
Profit and loss account	8	**6,349**	3,546
Total shareholders' equity		**8,485**	5,699

The Company's profit after tax for the year was £3,684 million (2019: £202 million loss). Profits available for distribution by the Company to shareholders were in excess of £5 billion at 31 March 2020. The financial statements of the Company on pages 209 to 215 were approved by the Board of Directors on 17 June 2020 and were signed on its behalf by:

Sir Peter Gershon Chairman
Andy Agg Chief Financial Officer

National Grid plc
Registered number: 4031152

Company statement of changes in equity
for the years ended 31 March

	Share capital £m	Share premium account £m	Cash flow hedge reserve £m	Cost of hedging reserve £m	Other equity reserves £m	Profit and loss account £m	Total shareholders' equity £m
At 1 April 2018	452	1,321	2	–	353	4,892	7,020
Loss for the year	–	–	–	–	–	(202)	(202)
Other comprehensive loss for the year							
Transferred from equity (net of tax)	–	–	(1)	–	–	–	(1)
Total comprehensive loss for the year	–	–	(1)	–	–	(202)	(203)
Other equity movements							
Scrip dividend-related share issue[1]	6	(7)	–	–	–	–	(1)
Issue of treasury shares	–	–	–	–	–	18	18
Purchase of own shares	–	–	–	–	–	(2)	(2)
Share awards to employees of subsidiary undertakings	–	–	–	–	27	–	27
Equity dividends	–	–	–	–	–	(1,160)	(1,160)
At 31 March 2019	458	1,314	1	–	380	3,546	5,699
Profit for the year[2]	–	–	–	–	–	3,684	3,684
Other comprehensive (loss)/profit for the year							
Transferred from equity (net of tax)	–	–	(29)	(6)	–	–	(35)
Total comprehensive (loss)/profit for the year	–	–	(29)	(6)	–	3,684	3,649
Other equity movements							
Scrip dividend-related share issue[1]	12	(13)	–	–	–	–	(1)
Issue of treasury shares	–	–	–	–	–	17	17
Purchase of own shares	–	–	–	–	–	(6)	(6)
Share awards to employees of subsidiary undertakings	–	–	–	–	19	–	19
Equity dividends	–	–	–	–	–	(892)	(892)
At 31 March 2020	**470**	**1,301**	**(28)**	**(6)**	**399**	**6,349**	**8,485**

1. Included within the share premium account are costs associated with scrip dividends.
2. Included within profit for the year is dividend income from subsidiaries of £3,887 million (2019: £nil).

Notes to the Company financial statements

1. Fixed asset investments

	Shares in subsidiary undertakings £m
At 1 April 2018	9,896
Additions	27
At 31 March 2019	9,923
Additions	7,011
Disposals	(2,572)
At 31 March 2020	**14,362**

During the year there was a capital contribution of £19 million (2019: £27 million) which represents the fair value of equity instruments granted to subsidiaries' employees arising from equity-settled employee share schemes.

Furthermore, the Company made a further investment of £2,000 million in National Grid (US) Holdings Limited, following a rights issue by that company; acquired National Grid (US) Investments 2 Limited from an indirect subsidiary undertaking for £2,420 million; and disposed of its investments in National Grid Holdings One plc and National Grid (US) Investments 2 Limited in exchange for an investment in National Grid Luxembourg Sarl at a cost of £2,572 million.

The Company's direct subsidiary undertakings as at 31 March 2020 were as follows: National Grid (US) Holdings Limited; NGG Finance plc; and National Grid Luxembourg Sarl. The names of indirect subsidiary undertakings, joint ventures and associates are included in note 34 to the consolidated financial statements.

The Directors believe that the carrying value of the investments is supported by the fair value of their underlying net assets.

2. Debtors

	2020 £m	2019 £m
Amounts falling due within one year		
Derivative financial instruments (see note 4)	**37**	110
Amounts owed by subsidiary undertakings	**12,390**	12,514
Prepayments and accrued income	**–**	1
	12,427	12,625
Amounts falling due after more than one year		
Derivative financial instruments (see note 4)	**27**	–
Amounts owed by subsidiary undertakings	**363**	358
Deferred tax	**8**	–
	398	358

The carrying values stated above are considered to represent the fair values of the assets. For the purposes of the impairment assessment, loans to subsidiary undertakings are considered low credit risk as the subsidiaries are solvent and are covered by the Group's liquidity arrangements.

A reconciliation of the movement in deferred tax in the year is shown below:

	Deferred tax £m
At 1 April 2018	(1)
Credited to equity	1
At 31 March 2019	–
Charged to equity	8
At 31 March 2020	**8**

Notes to the Company financial statements continued

3. Creditors

	2020 £m	2019 £m
Amounts falling due within one year		
Borrowings (see note 6)	**666**	1,275
Derivative financial instruments (see note 4)	**278**	92
Amounts owed to subsidiary undertakings	**15,834**	14,104
Other creditors	**58**	58
	16,836	15,529
Amounts falling due after more than one year		
Borrowings (see note 6)	**355**	346
Derivative financial instruments (see note 4)	**160**	228
Amounts owed to subsidiary undertakings	**2,105**	2,074
	2,620	2,648
Amounts owed to subsidiary undertakings falling due after more than one year are repayable as follows:		
In 1 to 2 years	**–**	1,077
In 4 to 5 years	**443**	–
More than 5 years	**1,662**	997
	2,105	2,074

The carrying values stated above are considered to represent the fair values of the liabilities.

4. Derivative financial instruments

The fair values of derivative financial instruments are:

	2020			2019		
	Assets £m	**Liabilities £m**	**Total £m**	Assets £m	Liabilities £m	Total £m
Amounts falling due within one year	**37**	**(278)**	**(241)**	110	(92)	18
Amounts falling due after more than one year	**27**	**(160)**	**(133)**	–	(228)	(228)
	64	**(438)**	**(374)**	110	(320)	(210)

For each class of derivative, the notional contract[1] amounts are as follows:

	2020 £m	2019 £m
Interest rate swaps	**–**	(1,208)
Cross-currency interest rate swaps	**(3,804)**	(2,900)
Foreign exchange forward contracts	**(7,886)**	(7,920)
	(11,690)	(12,028)

1. The notional contract amounts of derivatives indicate the gross nominal value of transactions outstanding at the balance sheet date.

5. Investments

	2020 £m	2019 £m
Investments in short-term money funds	**572**	672
Restricted balances – collateral	**180**	223
	752	895

6. Borrowings

The following table analyses the Company's total borrowings:

	2020 £m	2019 £m
Amounts falling due within one year		
Bank loans	**46**	–
Bonds	**2**	435
Commercial paper	**618**	840
	666	1,275
Amounts falling due after more than one year		
Bonds	**355**	346
	1,021	1,621

The maturity of total borrowings is as follows:

	2020 £m	2019 £m
Total borrowings are repayable as follows:		
Less than 1 year	**666**	1,275
In 1 to 2 years	**355**	–
In 2 to 3 years	**–**	346
In 3 to 4 years	**–**	–
In 4 to 5 years	**–**	–
More than 5 years	**–**	–
	1,021	1,621

The notional amount of borrowings outstanding as at 31 March 2020 was £1,018 million (2019: £1,618 million).

7. Share capital

The called-up share capital amounting to £470 million (2019: £458 million) consists of 3,780,237,016 ordinary shares of $12^{204/473}$ pence each (2019: 3,687,483,073 ordinary shares of $12^{204/473}$ pence each). For further information on share capital, refer to note 27 of the consolidated financial statements.

8. Shareholders' equity and reserves

At 31 March 2020, the profit and loss account reserve stood at £6,349 million (2019: £3,546 million) of which profits available for distribution by the Company to shareholders were in excess of £5 billion at 31 March 2020. The Company bore no employee costs in either the current or prior year.

For further details of dividends paid and payable to shareholders, refer to note 9 of the consolidated financial statements.

9. Parent Company guarantees

The Company has guaranteed the repayment of the principal sum, any associated premium and interest on specific loans due by certain subsidiary undertakings primarily to third parties. At 31 March 2020, the sterling equivalent amounted to £2,169 million (2019: £2,152 million). The guarantees are for varying terms from less than one year to open-ended.

In addition, as part of the sectionalisation of the National Grid UK Pension Scheme on 1 January 2017, a guarantee of £1 billion has been provided to Section A. This payment is contingent on insolvency or on failure to pay pensions obligations to Section A and can be claimed against National Grid plc, National Grid Holdings One plc or Lattice Group Limited (up to £1 billion in total). Refer to note 25 of the consolidated financial statements.

10. Audit fees

The audit fee in respect of the Parent Company was £27,000 (2019: £26,000). Fees payable to Deloitte for non-audit services to the Company are not required to be disclosed as they are included within note 4 to the consolidated financial statements.