Financial statements

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Statement of Directors' responsibilities

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

Company law requires the Directors to prepare financial statements for each financial year. Under that law, the Directors are required to prepare the Group financial statements in accordance with International Accounting Standards in conformity with the requirements of the Companies Act 2006 and International Financial Reporting Standards (IFRS) as adopted by the UK. The financial statements also comply with IFRS as issued by the IASB. In addition, the Directors have elected to prepare the Parent Company financial statements in accordance with UK Generally Accepted Accounting Practice (UK 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 IFRS 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 judgements 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 UK 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 70 – 71 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 IFRS as issued by the IASB and IFRS as adopted by the UK 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, is 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 Guidance and Transparency Rules, comprising pages 1 – 106 and 218 – 260, was approved by the Board and signed on its behalf.

Strategic Report

The Strategic Report, comprising pages 1 – 65, was approved by the Board and signed on its behalf.

By order of the Board

Justine Campbell

Group General Counsel & Company Secretary

17 May 2023

Company number: 04031152

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 the Parent Company's affairs as at 31 March 2023 and of the Group's profit for the year then ended;
- the Group financial statements have been properly prepared in accordance with United Kingdom adopted International Accounting Standards and International Financial Reporting Standards (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.

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 38 to the consolidated financial statements.

Parent Company:

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

The financial reporting framework that has been applied in the preparation of the Group financial statements is applicable law, United Kingdom adopted International Accounting Standards 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 Generally Accepted Accounting Practice, including Financial Reporting Standard 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 4e to the consolidated financial statements and note 10 to the Company financial statements. We confirm that we have not provided any non-audit services that are prohibited by the FRC's Ethical Standard 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

Materiality	The materiality that we used for the Group financial statements was £150 million which represents 5.1% of adjusted profit before tax (profit before tax from continuing operations, excluding the impact of reported exceptional items and remeasurements) and 4.2% of profit before tax from continuing operations.
Scoping	Our scope covered eight 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 five were subject to specific procedures on certain account balances. Our scoping covered 92% of the Group's revenue; 83% of the Group's profit before tax; and 89% of the Group's net assets.
Key audit matters	The key audit matters that we identified in the current year were: • NGED impairment testing of the related goodwill; • impact of climate change on property, plant and equipment; and • US environmental provisions. The following item was identified as a key audit matter in the prior year but not in the current year: • the acquisition of WPD (rebranded to NGED) has not been deemed to be a key audit matter in the current year as the acquisition has now been completed alongside the finalisation of the associated exercise to fair value the assets and liabilities at the date of acquisition. We only consider the NGED goodwill impairment testing to be a key audit matter in the current year. US environmental provisions were identified as a key audit matter in the current year. This was due to the increased estimation uncertainty in determining the future cash flows and discount rate for the environmental remediation provision.

4. Conclusions relating to going concern

In auditing the financial statements, we have concluded that the directors' use of the going concern basis of accounting in the preparation of the financial statements is appropriate.

Our evaluation of the directors' assessment of the Group's and Parent Company's ability to continue to adopt the going concern basis of accounting included:

- assessing the financing facilities including the nature of facilities, repayment terms and covenants;
- testing the clerical accuracy and appropriateness of the model used to prepare the forecasts;
- assessing the assumptions used in the forecasts, including the impact of the current macroeconomic environment;
- assessing management's identified potential mitigating actions and the appropriateness of the inclusion of these in the going concern assessment;
- assessing the historical accuracy of forecasts prepared by management;
- reading analyst reports, industry data and other external information to determine if it provided corroborative or contradictory evidence in relation to assumptions used;
- reperforming management's sensitivity analysis; and
- evaluating the disclosures made within the financial statements.

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the Group's and Parent Company's ability to continue as a going concern for a period of at least twelve months from when the financial statements are authorised for issue.

In relation to the reporting on how the Group has applied the UK Corporate Governance Code, we have nothing material to add or draw attention to concerning the directors' statement in the financial statements about whether the directors considered it appropriate to adopt the going concern basis of accounting.

Our responsibilities and the responsibilities of the directors concerning going concern are described in the relevant sections of this report.

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.

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 NGED impairment testing of the related goodwill

Key audit matter description

Goodwill – Impairment Testing of National Grid Electricity Distribution – Refer to notes 1F and 11 to the financial statements and the Audit & Risk Committee's discussion on pages 83 to 87.

The National Grid Electricity Distribution ('NGED') goodwill balance of £4,721 million (2022: £4,721 million) was tested for impairment at 31 December 2022. This was performed in line with the requirement under IAS 36 – *Impairment of Assets* to perform an impairment review annually. A subsequent assessment of potential impairment indicators was performed at 31 March 2023.

Management prepared a discounted cash flow model to estimate the value-in-use and compared this to the carrying value; this indicated there was headroom and accordingly no impairment was recognised. The value-in-use was measured for the combined NGED Cash-Generating Units to which the goodwill relates (the 'Goodwill CGU'), and the calculation was derived from multiple inputs to the model. These inputs include the following areas of complexity:

- **Discount rate inputs** – Management utilised a nominal pre-tax discount rate of 5.6%. The discount rate should reflect the return required by the market and the risks inherent in the cash flows being discounted and accordingly should be independent of the actual capital structure of the business being assessed. Identification of appropriate inputs for the discount rate calculation requires significant judgement in the current macro-economic environment, and a failure to apply a reasonable discount rate methodology when determining the discount rate inputs could lead to a material misstatement of goodwill. Further, judgement is required when determining an appropriate company specific risk premium, including consideration of the level of risk adjustment reflected in the underlying cash flows.
- **Total expenditure ('totex') forecasts** – The model used for the impairment test leverages the cash flow forecasts which extend to 2050 with the terminal value then applied. This longer forecast period exceeds that required under IAS 36, and includes negative cash flows for a number of years, due to the level of totex required to reinforce the networks to meet expected electricity demand and comply with the Group's licence conditions. The future forecast expenditure reflects the future electrification of the network, with increased demand for Low-carbon Technologies ('LCTs') including electric vehicles and heat pumps, which will also require more connections on the distribution network. There are a number of potential pathways for the energy transition to 2050 with varying extents and timings for the incremental electricity demand leading to greater uncertainty in the level of future totex required. Thus, significant judgement must be applied when forecasting the future cash flows.

The impairment test of the NGED Goodwill CGU involved significant assumptions, particularly those mentioned above. Auditing these assumptions required a high degree of auditor judgement, including the need to involve more senior members of the team and several valuations specialists.

How the scope of our audit responded to the key audit matter	We tested the effectiveness of controls over management's impairment review of the NGED business. In addition, we conducted the following substantive procedures. **Discount rate inputs** • We engaged our valuation specialists to assess the reasonableness of the discount rate inputs and the methodology applied. Our specialists developed an independent range for a reasonable discount rate using relevant third-party market and peer data for the NGED business. We compared management's calculated rate to our reasonable range. • We challenged the company specific risk premium in the context of the risk adjustments and contingencies included in the underlying cash flow assumptions. • We challenged and independently assessed the disclosures around the discount rate in notes 1F and 11 to the financial statements. **Totex forecasts** • We compared the projected totex to historical information observed in ED1 and the allowances set by Ofgem as part of the ED2 final determinations. • We understood the underlying inputs used by management and its external expert in developing the forecast totex from ED3 onwards. We engaged our industry specialists to challenge these inputs and forecasts by benchmarking the assumptions against third-party and relevant industry publications to inform our assessment of the nature, timing and extent of the expected electrification in the UK. Some examples of industry publications include those obtained from the Department for Business, Energy & Industrial Strategy ('BEIS') such as the 'Electricity network strategic framework' ('ENSF') and 'Modelling 2050: Electricity system analysis' ('ESA'). • We evaluated the competence, capabilities and objectivity of the third-party industry experts used by management to develop the totex forecasts including through direct discussion. **Other** • We assessed whether the impairment methodology including the duration of the cash flows applied by management was acceptable under IFRS and tested the integrity and mechanical accuracy of the impairment model with the assistance of our valuation specialists. • We assessed whether management's impairment forecasts are consistent with other forecasts used by management, including the going concern model. • With the assistance of our climate specialists, we assessed whether management's forecasts are consistent overall with the Group's own-stated climate commitments. • We evaluated all changes to key assumptions between the prior year impairment review and the current year's review, and challenged whether market conditions in the current year had been appropriately considered in the assumptions. • We challenged management's assessment of potential impairment indicators as described in IAS 36 at 31 March 2023. • We challenged management's disclosures in notes 1F and 11 for compliance with the disclosure requirements described in IAS 36.
Key observations	Our testing confirmed that relevant controls over management's impairment test of the NGED Goodwill CGU were designed and operating effectively. Ofgem issued the final ED2 price control determinations which are effective from 1 April 2023 to 31 March 2028. Management's forecasts reflect and assume a continuation of the principles applied in ED2 for the future regulatory price controls to 2050. However, should there be a significant change in the stability of the regulatory model that governs the performance of electricity distribution operators, this could create a risk of impairment, as set out in note 11 to the financial statements. **Discount rate** Management's pre-tax discount rate of 5.6% is within the reasonable range determined by our specialists. We agree with the methodology applied in light of current macroeconomic conditions. **Totex forecasts** For the purpose of the impairment test, management has used forecasts for totex which we consider represent a reasonable view of the extent of expected electrification in targeting net-zero when compared with a range of scenarios in the public domain.

5.2 Impact of climate change on property, plant and equipment

Key audit matter description	**Property, plant and equipment – the impact of climate change on US gas assets – refer to notes 1F and 13 to the financial statements and the Audit & Risk Committee's discussion on pages 83 to 87.** The US 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 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 gas assets, which are used to facilitate gas distribution services in the period approaching 2050 and beyond. Particular focus is on the useful economic lives of the National Grid Group's gas assets in the US which are up to 80 years, 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 the gas assets in the US, such that they would be fully depreciated by 2050, would be an increase in the annual depreciation expense of £239 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, there is a risk that management judgements taken to determine the useful lives of US gas assets in the context of net zero commitments are not reasonable. The Group announced in April 2022 its Clean Energy Vision ('CEV') to eliminate fossil fuels from its gas and electric systems in New York state and Massachusetts by 2050, by decarbonising the gas network through the use of renewable natural gas ('RNG') and green hydrogen. Both New York and Massachusetts, the largest states in which the Group operates, announced non-legally binding climate action plans. The New York Scoping Plan targets 85% of homes and commercial building space in New York being electrified by 2050. The Massachusetts Clean Energy and Climate Plan for 2025 and 2030 ('CECP') targets a high use of electrification including widespread deployment of heat pumps for buildings. Both plans envisage moderate demand for RNG and hydrogen in 2050. Although there are uncertainties around the sufficiency of RNG supply and the use of hydrogen for home heating as they are early-stage technologies, management is of the view that a hybrid electric-gas heating system approach will be a practical and achievable pathway to meet the state and regional decarbonisation goals. Management's CEV, which will require legislative and regulatory support to implement, proposes a hybrid approach that management considers the most economically and technically viable home heating approach reflecting the climate and housing stock in the states in which it operates. This hybrid approach would mean there would be a need for the Group's US gas assets in the long term and hence management's judgement is that the regulatory lives of US gas assets continue to be considered as the best estimate of their useful economic lives. Management disclosed a key judgement in relation to the potential future use of the US gas assets post-2050 and disclosure of the gas asset lives as a key estimate along with disclosure of sensitivity analysis. We have identified the estimated useful lives of the Group's gas distribution assets in the US as a key audit matter due to the significance of the judgement involved.

How the scope of our audit responded to the key audit matter	We tested the effectiveness of controls over management's assessment and disclosure of the potential impacts associated with the energy transition and climate change.
	
	With the assistance of our sustainability specialists, we challenged the appropriateness of the useful lives of the US gas assets, including management's judgement that it is probable they will extend beyond 2050 in light of the different goals, commitments and legislation relating to net zero in the US states in which the Group operates by:
	
	• understanding management's CEV and other potential strategic pathways to achieve net zero targets in New York and Massachusetts;
	• obtaining and reading key federal and state policy announcements for achieving net zero including those set out below and evaluating the extent to which they were consistent or contradictory to management's CEV:
	  • The Massachusetts Clean Energy and Climate Plan (issued in December 2022)
	  • National Grid New York Climate Leadership and Community Protection Act Study (issued in February 2023)
	  • Future Energy Scenarios 2022, published by the Electricity System Operator (issued in February 2023)
	  • The New York State Climate Action Council Scoping Plan (issued in December 2022);
	• obtaining and reading third-party engineering and technical studies to assess the relative costs and viabilities of the different pathways and technologies proposed, including the technical feasibility of management's plans by considering the readiness for hydrogen blending with other gases across both transmission and distribution networks and the scalability of RNG supply;
	• discussing with Deloitte specialists in other countries regarding the suitability of existing gas infrastructure for transporting hydrogen across gas assets as well as the potential cost effectiveness of green hydrogen and considering the impact on management's CEV;
	• evaluating correspondence from the Group's regulators, including rate cases in the US, to consider whether they presented any contradictory evidence; and
	• assessing the disclosures set out in note 1F to the financial statements and the sensitivity analysis set out in note 13 to the financial statements regarding the useful economic lives of the Group's gas assets, for compliance with the disclosure requirements of IAS 1 – *Presentation of Financial Statements*.

Key observations	• Our testing confirmed that the relevant controls over management's assessment of the impact of the energy transition and climate change were designed and operating effectively. • 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 lives identified through engineering depreciation studies for each asset which are approved by the respective state regulator. Accordingly, the IFRS asset depreciable lives are identical to those agreed by the Group's regulators for regulatory purposes. • We observe that whilst some indicators do exist suggesting that the useful economic lives of the Group's US gas assets may be limited to 2050, these are contradicted by other policy statements and technical studies which suggest electrification alone is not the most economically and technically viable solution and therefore gas distribution assets in the US, will continue to have a role beyond 2050. • 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 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. • 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 and Accounts 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 US environmental provisions

Key audit matter description	**US environmental provisions – Refer to notes 1F, 26 and 35 to the financial statements and the Audit & Risk Committee's discussion on pages 83 to 87.** At 31 March 2023 the Group has £1,891 million (2022: £1,877 million) of environmental provisions, of which £1,768 million (2022: £1,725 million) are in the US and £123 million (2022: £152 million) are in the UK. 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 221 sites which vary in the level of remediation performed to date and remaining remediation required. Of the total US environmental provisions of £1,768 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, and additional environmental agencies at the state level, have the authority to force the parties responsible for the contamination of these sites either to perform remediation works or reimburse the government for work led by the EPA. Environmental provisions are calculated based on management's best estimate of the cash flows that will be required, discounted at a real discount rate, calculated based on the US government bond yield curve and the weighted average life of the provisions. There are a number of estimation uncertainties across all of the sites, including the Superfund sites. The Superfund sites are particularly complicated because of their size, the number of parties involved and the stage of remediation the projects are at. The uncertainties that exist in relation to these sites include: • the impact of changes in regulation or the environmental agencies' interpretation and implementation of the regulations; • the extent of contamination identified and modelled from ongoing exploratory works; • the form, timing, extent and associated cost of remediation needed; • the methods and technologies used in remediation; • the allocation of responsibility for remediation; and • the discount rate applied to the forecast cash flows. In the current year, additions of £142 million have been recorded, predominantly relating to a number of other higher risk US sites. We determined that the estimation of the discounted cash outflows was the most significant and sensitive estimate to a change in reasonably possible outcomes for the total US environmental provision. Management is required to make judgements in selecting an appropriate discount rate which reflects changes in US treasury rates as current market assessments of the time value of money. The Group increased the real discount rate applied to the undiscounted cash flows from 0.5% in the prior year to 1.5% for US provisions to reflect the substantial and sustained change in US government bond yield curves. As described in note 35, changes to the discount rate applied could have a material impact on the provision balance in the next year. We have identified the US environmental provisions as a key audit matter due to the complexities in estimating the future cost of remediation and the judgement involved in the determination of the discount rate applied.

How the scope of our audit responded to the key audit matter	We tested the effectiveness of controls over management's compilation of forecast cash flows and determination of the discount rate. With regard to the estimated cash outflows: • we performed detailed risk assessments to categorise US sites based on size and the level of estimation uncertainty; • with respect to higher risk sites, we agreed the proposed remediation activities and associated timing to technical engineering studies and remediation plans agreed with the environmental agencies where available. The associated costings of these activities were agreed to third-party contracts and other benchmarks. We utilised our environmental specialists to assist us in evaluating management's key assumptions; • in order to assess the completeness of the year end liabilities we completed public domain searches on federal databases across all Group subsidiaries to determine whether any relevant costs or applicable sites were omitted. We further checked for the latest regulatory changes at the federal and local level and precedent from remediation plans recently agreed with the environmental agencies, to determine any indication of changing requirements; • at selected sites, we evaluated the results of ongoing environmental testing for potential non-compliance or evidence that the existing or planned remediation activities would require revision or enhancement; • we read relevant correspondence and meeting minutes with the environmental agencies, using our specialists to evaluate management's position where significant estimation of uncertainty exists; • we considered information obtained from the Group's internal legal counsel in our evaluation of the recorded provisions; and • we performed additional procedures on one site with ongoing uncertainty around the allocation of responsibility. Specifically relating to the judgement over the estimated allocation of total remediation costs, we made enquiries of the US internal legal counsel and obtained analysis directly from external legal counsel to understand any potential changes to the previously determined positions. We enquired of the Group's external legal counsel to provide views regarding the Potentially Responsible Party ('PRP') allocation. We evaluated settlements in the period with PRPs and compared the results to their assumed shares. We evaluated publicly available financial statement information and disclosures for a selection of PRPs to identify contradictory evidence in their share percentage and test financial viability. We assessed the extent to which there is evidence obtained demonstrating that the allocations will be substantially followed by all parties. We challenged the methodology that management has adopted for calculating the discount rate with the support of our valuation specialists. In addition, we independently calculated an appropriate discount rate range and used this to assess management's rate. We assessed management's disclosures in notes 1F, 26 and 35.
Key observations	Our testing confirmed that the relevant controls over the compilation of forecast cash flows and the determination of the discount rate were designed and operating effectively. We found the provisioning assumptions associated with 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 increase in real discount rates from 0.5% to 1.5% applied to be reasonable based on the movement in treasury yields. We noted that the assumptions and judgements that are required to formulate the provisions mean that the range of possible outcomes is broad, hence it is appropriate for management to disclose the key estimation of uncertainty and the sensitivity of the judgments they applied. We are satisfied that the Group's disclosures of the key estimation of uncertainty, related contingent liabilities, and sensitivities, are reasonable.

6. Our application of materiality

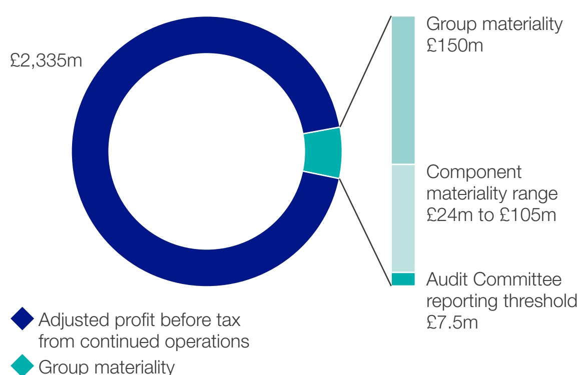
6.1 Materiality

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	£150 million (2022: £135 million)	£150 million (2022: £135 million)
The basis for determining materiality	Our determined materiality represents 5.1% (2022: 4.7%) of adjusted profit before tax from continuing operations and 4.2% (2022: 3.9%) of profit before tax from continuing operations. 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.	We determined materiality for our audit of the Parent Company financial statements using 0.92% of net assets (2022: 0.83%). The increase in materiality is in part a result of net assets increasing in the current year. In addition, we decided to cap the Parent Company materiality with Group materiality.

The 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. It was also the key measure applied in the prior year.	As the Company is non-trading, operates 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 financial statements	Parent Company financial statements
Performance materiality	70% (2022: 70%) of Group materiality. Consistent with the prior year, we have set this at 70% of materiality.	70% (2022: 70%) of Parent Company materiality. Consistent with the prior year, we align performance materiality with the Group performance materiality.
Basis and rationale for determining performance materiality	In determining 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. We also considered the level of change in the business from the prior year.	

6.3 Error reporting threshold

We agreed with the Audit & Risk Committee that we would report to the Committee all audit differences in excess of £7.5 million (2022: £6.75 million), as well as differences below that threshold that, in our view, warranted reporting on qualitative grounds. We also report to the Audit & Risk 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

7.1 Identification and scoping of components

Our audit was scoped by obtaining an understanding of the Group and its environment and assessing the risks of material misstatements at the Group level. We used data analytics tools and specialists to help inform our understanding of the business, identify key risk areas and evaluate the level of audit coverage required.

The UK Electricity Transmission, UK Electricity Distribution and US Regulated (comprising the New York and New England business units) components were subject to a full-scope audit, completed to the individual component materiality levels set out below.

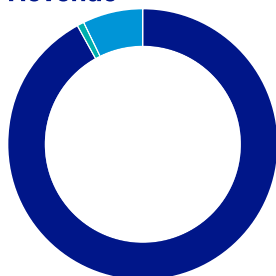
In addition to the above components subject to full scope audit procedures by the component teams, we have identified five other business units which form part of National Grid Ventures and Other, where we consider there to be a reasonable possibility of material misstatement in specific items within the financial statements: National Grid Electricity System Operator, UK Gas Transmission, National Grid Ventures UK, National Grid Ventures US (including GENCO) and National Grid Partners. 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.

Business unit	Audit scope	Component materiality
UK Electricity Transmission	Full scope audit	£58 million
US Regulated (comprising New York and New England)	Full scope audit	£105 million
UK Electricity Distribution	Full scope audit	£58 million
National Grid Electricity System Operator	Audit of specified account balances	£42 million
UK Gas Transmission	Audit of specified account balances	£53 million
National Grid Ventures UK	Audit of specified account balances	£58 million
National Grid Ventures US (including GENCO)	Audit of specified account balances	£58 million
National Grid Partners	Audit of specified account balances	£40 million

In addition to the work performed at a component level, the Group audit team performed audit procedures on the Parent Company financial statements, including but not limited to corporate activities such as treasury as well as on the consolidated financial statements themselves, including entity-level controls, 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 performed analytical reviews on out-of-scope components, co-ordinated the work in connection with the impact of climate change on the useful lives of the Group's gas assets and performed certain procedures on key areas, such as the NGED goodwill impairment and environmental provisions, where audit work is performed by both the Group and component audit teams.

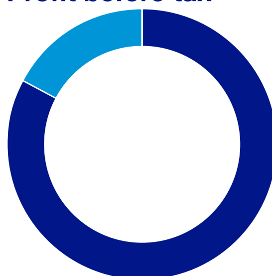
The scope and risk assessment of our audit is broadly consistent with the prior year and our audit coverage of 'Revenue', 'Profit before tax' and 'Net assets' is materially the same as in the prior year.

Revenue



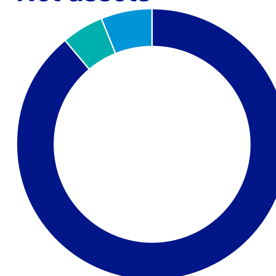
- Full audit scope **92%**
- Specified audit procedures **1%**
- Review at Group level **7%**

Profit before tax



- Full audit scope **83%**
- Specified audit procedures **0%**
- Review at Group level **17%**

Net assets



- Full audit scope **89%**
- Specified audit procedures **5%**
- Review at Group level **6%**

7.2 Our consideration of the control environment

Our audit approach was generally to place reliance on management's relevant controls of overall business cycles affecting in scope financial statement line items. We tested controls through a combination of tests of inquiry, observation, inspection and re-performance.

In some circumstances where controls were deficient and there were not sufficient mitigating or alternative controls we could rely on, we adopted a non-control reliance approach. All control deficiencies which we considered to be significant were communicated to the Audit & Risk Committee. All other deficiencies were communicated to management. For all deficiencies identified, we considered the impact and updated our audit plan accordingly.

The Group's financial systems environment relies on a high number of UK and US applications. In the current year, we identified 45 IT systems as relevant to the audit. These systems are all directly or indirectly relevant to the entity's financial reporting process.

We planned to rely on the General IT Controls (GITCs) associated with these systems, where the GITCs were appropriately designed and implemented, and these were operating effectively. To assess the operating effectiveness of GITCs, our IT audit specialists performed testing on access security, change management, data centre operations and network operations.

7.3 Our consideration of climate-related risks

Climate change impacts National Grid's business in several ways as set out in the Strategic Report on page 21 of the annual report and note 1 of the financial statements on page 129. It represents a key strategic consideration of management.

We reviewed management's climate change risk assessment and evaluated the completeness of identified risks and the impact on the financial statements. We also considered the impact of climate change in our risk assessment procedures. Management's assessment included an overview of the legislative changes in the US, key developments post COP26 and an evaluation of the possible future use of National Grid's US gas assets in a net zero carbon energy system. Both management's and our risk assessment identified the useful economic lives of the gas assets in the US, as the key risk as described in note 13 to the financial statements and in the Audit & Risk Committee report (page 84). Our response to this risk is documented in our Key Audit Matter on pages 110 – 114.

In addition to the procedures in respect of the Key Audit Matter mentioned above, with the involvement of our climate change specialists we:

- made enquiries to senior management to understand the potential impact of climate change risk including physical risks to producing network assets, the potential changes to the macro-economic environment and the potential for the transition to a low carbon environment to occur quicker than anticipated;
- read the climate-related statements made by management (as disclosed in 'The Environment' section of the 'Our commitment to being a responsible leader' in the Strategic Report) and considered whether these were in line with our understanding of managements approach to climate change and the narrative reporting was in line with financial statements and the knowledge obtained throughout the audit;
- read the Task Force on Climate-related Financial Disclosures (TCFD) and considered if any of the information disclosed was inconsistent with the information we obtained through our audit; and
- read and considered external publications by recognised authorities on climate change such as the International Energy Agency's World Energy Outlook amongst others.

7.4 Working with other auditors

The Group audit team are responsible for the scope and direction of the audit process and provide direct oversight, review and coordination of our component audit teams.

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.

We interacted regularly with the component Deloitte teams during each stage of the audit and reviewed key working papers. We maintained continuous and open dialogue with our component teams in addition to holding formal meetings to ensure that we were fully aware of their progress and the results of their procedures.

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 estimates and judgements made by management. As part of our monitoring of component auditors, we participated in key local audit meetings.

The senior statutory auditor and other Group audit partners conducted visits to meet in person with the component teams responsible for the full scope locations, which was supplemented by procedures performed remotely throughout the year. Their involvement included attending planning meetings, discussing the audit approach and any issues arising from the component team's work, meetings with local management and reviewing key audit working papers on higher and significant-risk areas to drive a consistent and high-quality audit. The level of involvement of the lead audit partner and the Group audit team in the component audits has been extensive and we are satisfied that it has enabled us to conclude that sufficient appropriate audit evidence has been obtained in support of our opinion on the Group financial statements as a whole.

8. Other information

We have nothing to report in this regard.

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

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.

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 course of 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 this gives rise to a material misstatement in the financial statements themselves. 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.

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 based on these financial statements.

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

Irregularities, including fraud, are instances of non-compliance with laws and regulations. We design procedures in line with our responsibilities, outlined above, to detect material misstatements in respect of irregularities, including fraud. The extent to which our procedures are capable of detecting irregularities, including fraud is detailed below.

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;
- the Group's own assessment of the risks that irregularities may occur either as a result of fraud or error that was approved by the Audit & Risk Committee on 21 March 2023;
- results of our enquiries of management, internal audit, and the Audit & Risk 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; and
  - the internal controls established to mitigate risks of fraud or non-compliance with laws and regulations.
- the matters discussed among the engagement team and our specialists regarding how and where fraud might occur in the financial statements and any potential indicators of fraud. The engagement team includes partners and staff who have extensive experience 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. Fraud specialists also advised the engagement team of fraud schemes that had arisen in similar sectors and industries and they participated in the initial fraud risk assessment discussions.

11.1 Identifying and assessing potential risks related to irregularities continued

In common with all audits under ISAs (UK), we are also required to perform specific procedures to respond to the risk of management override of controls.

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, Listing Rules, pensions legislation, tax legislation, UK Corporate Governance Code, IFRS as issued by the IASB, United Kingdom adopted international accounting standards, FRS 101, as well as the US Securities Exchange Act 1934 and relevant SEC regulations, as well as laws and regulations prevailing in each country which we identified a full scope component.

In addition, we considered provisions of other laws and regulations that do not have a direct effect on the financial statements but compliance 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 the 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 & Risk Committee and in-house legal counsel concerning actual and potential litigation and claims;
- obtaining confirmations from external legal counsel concerning open litigation and claims;
- reading minutes of meetings of those charged with governance, reviewing internal audit reports and reviewing correspondence with relevant regulatory authorities; and
- testing the design of the entity-level controls, particularly in respect of the whistleblowing process.

In addressing the risk of fraud through management override of controls our procedures included:

- working with our forensic specialists to perform detailed audit procedures on business transactions with high-risk individuals and companies;
- making enquiries of individuals involved in the financial reporting process about inappropriate or unusual activity relating to the processing of journal entries and other adjustments;
- using our data analytics tools, we selected and tested journal entries and other adjustments which were either made at the end of a reporting period or which identified activity that exhibited certain characteristics of audit interest;
- assessing whether the judgements made in making accounting estimates are indicative of a potential bias;
- performing analytical procedures to identify any unusual or unexpected relationships that may indicate risks of material misstatement due to fraud; and
- considering whether any significant transactions are outside the normal course of business, or that otherwise appear to be unusual due to their nature, timing or size.

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. We remained alert to any indications of fraud or non-compliance with laws and regulations throughout the audit.

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 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. Corporate Governance Statement

The Listing Rules require us to review the Directors' statement in relation to going concern, longer-term viability and that part of the Corporate Governance Statement relating to the Group's compliance with the provisions of the UK Corporate Governance Code specified for our review.

Based on the work undertaken as part of our audit, we have concluded that each of the following elements of the Corporate Governance Statement is materially consistent with the financial statements and our knowledge obtained during the audit:

- the Directors' statement with regards to the appropriateness of adopting the going concern basis of accounting and any material uncertainties identified set out on page 127;
- the directors' explanation as to its assessment of the Group's prospects, the period this assessment covers and why the period is appropriate set out on pages 25 – 27;
- the directors' statement concluding that the Annual Report & Accounts are fair, balanced and understandable set out on pages 83 and 108;
- the Board's confirmation that it has carried out a robust assessment of the emerging and principal risks set out on pages 18 – 24 and 73;
- the section of the Annual Report that describes the review of the effectiveness of risk management and internal control systems set out on pages 18 – 24; and
- the section describing the work of the Audit & Risk Committee set out on pages 83 – 87.

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

14.1 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.

14.2 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.

15. Other matters which we are required to address

15.1 Auditor tenure

We became independent and commenced our audit transition on 1 January 2017. Following the recommendation of the Audit & Risk 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 six years, covering the years ending 31 March 2018 to 31 March 2023.

15.2 Consistency of the audit report with the additional report to the Audit & Risk Committee

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

16. 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.

As required by the Financial Conduct Authority (FCA) Disclosure Guidance and Transparency Rule (DTR) 4.1.14R, these financial statements will form part of the European Single Electronic Format (ESEF) prepared Annual Financial Report filed on the National Storage Mechanism of the UK FCA in accordance with the ESEF Regulatory Technical Standard (ESEF RTS). This auditor's report provides no assurance over whether the annual financial report has been prepared using the single electronic format specified in the ESEF RTS.

Christopher Thomas FCA (Senior statutory auditor)
For and on behalf of Deloitte LLP
Statutory Auditor
London, United Kingdom
17 May 2023

Consolidated income statement

for the years ended 31 March

2023	Notes	Before exceptional items and remeasurements £m	Exceptional items and remeasurements (note 5) £m	Total £m
Continuing operations				
Revenue	2(a),3	**21,659**	**—**	**21,659**
Provision for bad and doubtful debts	4	**(220)**	**—**	**(220)**
Other operating costs	4,5	**(17,158)**	**(391)**	**(17,549)**
Other operating income	5	**13**	**976**	**989**
Operating profit	2(b)	**4,294**	**585**	**4,879**
Finance income	5,6	**166**	**(28)**	**138**
Finance costs	5,6	**(1,680)**	**82**	**(1,598)**
Share of post-tax results of joint ventures and associates	5,16	**190**	**(19)**	**171**
Profit before tax	2(b),5	**2,970**	**620**	**3,590**
Tax	5,7	**(635)**	**(241)**	**(876)**
Profit after tax from continuing operations		**2,335**	**379**	**2,714**
Profit after tax from discontinued operations	10	**320**	**4,763**	**5,083**
Total profit for the year (continuing and discontinued)		**2,655**	**5,142**	**7,797**
Attributable to:				
Equity shareholders of the parent		**2,655**	**5,142**	**7,797**
Non-controlling interests from continuing operations		**—**	**—**	**—**
Earnings per share (pence)				
Basic earnings per share (continuing)	8			**74.2**
Diluted earnings per share (continuing)	8			**73.8**
Basic earnings per share (continuing and discontinued)	8			**213.1**
Diluted earnings per share (continuing and discontinued)	8			**212.1**

2022	Notes	Before exceptional items and remeasurements £m	Exceptional items and remeasurements (note 5) £m	Total £m
Continuing operations				
Revenue	2(a),3,5	18,260	189	18,449
Provision for bad and doubtful debts	4	(167)	—	(167)
Other operating costs[1]	4,5	(14,280)	141	(14,139)
Other operating income[1]	5	—	228	228
Operating profit	2(b)	3,813	558	4,371
Finance income	5,6	65	(15)	50
Finance costs	5,6	(1,146)	74	(1,072)
Share of post-tax results of joint ventures and associates	5,16	148	(56)	92
Profit before tax	2(b),5	2,880	561	3,441
Tax	5,7	(669)	(589)	(1,258)
Profit after tax from continuing operations		2,211	(28)	2,183
Profit after tax from discontinued operations	10	344	(173)	171
Total profit for the year (continuing and discontinued)		2,555	(201)	2,354
Attributable to:				
Equity shareholders of the parent		2,554	(201)	2,353
Non-controlling interests from continuing operations		1	—	1
Earnings per share (pence)				
Basic earnings per share (continuing)	8			60.6
Diluted earnings per share (continuing)	8			60.3
Basic earnings per share (continuing and discontinued)	8			65.4
Diluted earnings per share (continuing and discontinued)	8			65.0

1. Comparatives have been re-presented to disclose other operating income separately from other operating costs.

Consolidated income statement
for the years ended 31 March continued

2021	Notes	Before exceptional items and remeasurements £m	Exceptional items and remeasurements (note 5) £m	Total £m
Continuing operations				
Revenue	2(a),3	13,665	—	13,665
Provision for bad and doubtful debts	4	(325)	—	(325)
Other operating costs	4,5	(10,913)	(26)	(10,939)
Operating profit	2(b)	2,427	(26)	2,401
Finance income	5,6	35	23	58
Finance costs	5,6	(900)	47	(853)
Share of post-tax results of joint ventures and associates	5	66	(8)	58
Profit before tax	2(b),5	1,628	36	1,664
Tax	5,7	(334)	(26)	(360)
Profit after tax from continuing operations		1,294	10	1,304
Profit after tax from discontinued operations	10	340	(3)	337
Total profit for the year (continuing and discontinued)		1,634	7	1,641
Attributable to:				
Equity shareholders of the parent		1,633	7	1,640
Non-controlling interests from continuing operations		1	—	1
Earnings per share (pence)				
Basic earnings per share (continuing)	8			37.0
Diluted earnings per share (continuing)	8			36.8
Basic earnings per share (continuing and discontinued)	8			46.6
Diluted earnings per share (continuing and discontinued)	8			46.3

Consolidated statement of comprehensive income

for the years ended 31 March

	Notes	2023 £m	2022 £m	2021 £m
Profit after tax from continuing operations		**2,714**	2,183	1,304
Profit after tax from discontinued operations		**5,083**	171	337
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	**(1,362)**	2,172	1,658
Net gains on equity instruments designated at fair value through other comprehensive income		**—**	12	46
Net gains/(losses) in respect of cash flow hedging of capital expenditure		**10**	(1)	(12)
Tax on items that will never be reclassified to profit or loss	7	**341**	(496)	(472)
Total items from continuing operations that will never be reclassified to profit or loss		**(1,011)**	1,687	1,220
Items from continuing operations that may be reclassified subsequently to profit or loss:				
Retranslation of net assets offset by net investment hedge		**883**	630	(1,347)
Exchange differences reclassified to the consolidated income statement on disposal	10,16	**(170)**	—	—
Net (losses)/gains in respect of cash flow hedges		**—**	(57)	67
Net (losses)/gains in respect of cost of hedging		**(16)**	1	20
Net (losses)/gains on investment in debt instruments measured at fair value through other comprehensive income		**(25)**	(11)	80
Share of other comprehensive income of associates, net of tax		**1**	1	1
Tax on items that may be reclassified subsequently to profit or loss	7	**11**	15	(8)
Total items from continuing operations that may be reclassified subsequently to profit or loss		**684**	579	(1,187)
Other comprehensive (loss)/income for the year, net of tax from continuing operations		**(327)**	2,266	33
Other comprehensive (loss)/income for the year, net of tax from discontinued operations	10	**(227)**	211	(216)
Other comprehensive (loss)/income for the year, net of tax		**(554)**	2,477	(183)
Total comprehensive income for the year from continuing operations		**2,387**	4,449	1,337
Total comprehensive income for the year from discontinued operations	10	**4,856**	382	121
Total comprehensive income for the year		**7,243**	4,831	1,458
Attributable to:				
Equity shareholders of the parent				
From continuing operations		**2,386**	4,447	1,338
From discontinued operations		**4,856**	382	121
		7,242	4,829	1,459
Non-controlling interests				
From continuing operations		**1**	2	(1)

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 2020	470	1,301	21,895	(3,895)	19,771	22	19,793
Profit for the year	—	—	1,640	—	1,640	1	1,641
Other comprehensive income/(loss) for the year	—	—	1,001	(1,182)	(181)	(2)	(183)
Total comprehensive income/(loss) for the year	—	—	2,641	(1,182)	1,459	(1)	1,458
Equity dividends	—	—	(1,413)	—	(1,413)	—	(1,413)
Scrip dividend-related share issue[2]	4	(5)	—	—	(1)	—	(1)
Issue of treasury shares	—	—	17	—	17	—	17
Purchase of own shares	—	—	(2)	—	(2)	—	(2)
Share-based payments	—	—	27	—	27	—	27
Tax on share-based payments	—	—	(2)	—	(2)	—	(2)
Cash flow hedges transferred to the statement of financial position, net of tax	—	—	—	(17)	(17)	—	(17)
At 1 April 2021	474	1,296	23,163	(5,094)	19,839	21	19,860
Profit for the year	—	—	2,353	—	2,353	1	2,354
Other comprehensive income for the year	—	—	1,871	605	2,476	1	2,477
Total comprehensive income for the year	—	—	4,224	605	4,829	2	4,831
Equity dividends	—	—	(922)	—	(922)	—	(922)
Scrip dividend-related share issue[2]	11	(12)	—	—	(1)	—	(1)
Issue of treasury shares	—	—	17	—	17	—	17
Transactions in own shares	—	16	(3)	—	13	—	13
Share-based payments	—	—	43	—	43	—	43
Tax on share-based payments	—	—	7	—	7	—	7
Transfer of accumulated gains and losses on sale of equity investments[3]	—	—	82	(82)	—	—	—
Cash flow hedges transferred to the statement of financial position, net of tax	—	—	—	8	8	—	8
At 1 April 2022	485	1,300	26,611	(4,563)	23,833	23	23,856
Profit for the year	—	—	7,797	—	7,797	—	7,797
Other comprehensive (loss)/income for the year	—	—	(1,253)	698	(555)	1	(554)
Total comprehensive income for the year	—	—	6,544	698	7,242	1	7,243
Equity dividends	—	—	(1,607)	—	(1,607)	—	(1,607)
Scrip dividend-related share issue[2]	3	(3)	—	—	—	—	—
Issue of treasury shares	—	—	16	—	16	—	16
Transactions in own shares	—	5	(4)	—	1	—	1
Share-based payments	—	—	48	—	48	—	48
Cash flow hedges transferred to the statement of financial position, net of tax	—	—	—	5	5	—	5
At 31 March 2023	**488**	**1,302**	**31,608**	**(3,860)**	**29,538**	**24**	**29,562**

1. For further details of other equity reserves, see note 28.
2. Included within the share premium account are costs associated with scrip dividends.
3. In the year ended 31 March 2022, the Group disposed of its equity instruments related to shares held as part of a portfolio of financial instruments which back some long-term employee liabilities. The equity instruments were previously measured at FVOCI and prior to the disposal the Group recognised a gain of £12 million. The accumulated gain of £82 million recognised in other comprehensive income was transferred to retained earnings on disposal.

Consolidated statement of financial position

as at 31 March

	Notes	2023 £m	2022 £m
Non-current assets			
Goodwill	11	**9,847**	9,532
Other intangible assets	12	**3,604**	3,272
Property, plant and equipment	13	**64,433**	57,532
Other non-current assets	14	**567**	303
Pension assets	25	**2,645**	3,885
Financial and other investments	15	**859**	830
Investments in joint ventures and associates	16	**1,300**	1,238
Derivative financial assets	17	**276**	305
Total non-current assets		**83,531**	76,897
Current assets			
Inventories and current intangible assets	18	**876**	511
Trade and other receivables	19	**3,883**	3,715
Current tax assets		**43**	106
Financial and other investments	15	**2,605**	3,145
Derivative financial assets	17	**153**	282
Cash and cash equivalents	20	**163**	204
Assets held for sale	10	**1,443**	10,000
Total current assets		**9,166**	17,963
Total assets		**92,697**	94,860
Current liabilities			
Borrowings	21	**(2,955)**	(12,121)
Derivative financial liabilities	17	**(222)**	(144)
Trade and other payables	22	**(5,068)**	(4,915)
Contract liabilities	23	**(252)**	(130)
Current tax liabilities		**(236)**	(32)
Provisions	26	**(288)**	(240)
Liabilities held for sale	10	**(109)**	(7,188)
Total current liabilities		**(9,130)**	(24,770)
Non-current liabilities			
Borrowings	21	**(40,030)**	(33,344)
Derivative financial liabilities	17	**(1,071)**	(869)
Other non-current liabilities	24	**(921)**	(805)
Contract liabilities	23	**(1,754)**	(1,342)
Deferred tax liabilities	7	**(7,181)**	(6,765)
Pensions and other post-retirement benefit obligations	25	**(694)**	(810)
Provisions	26	**(2,354)**	(2,299)
Total non-current liabilities		**(54,005)**	(46,234)
Total liabilities		**(63,135)**	(71,004)
Net assets		**29,562**	23,856
Equity			
Share capital	27	**488**	485
Share premium account		**1,302**	1,300
Retained earnings		**31,608**	26,611
Other equity reserves	28	**(3,860)**	(4,563)
Total shareholders' equity		**29,538**	23,833
Non-controlling interests		**24**	23
Total equity		**29,562**	23,856

The consolidated financial statements set out on pages 121 – 210 were approved by the Board of Directors on 17 May 2023 and were signed on its behalf by:

John Pettigrew Chief Executive
Andy Agg Chief Financial Officer

National Grid plc
Registered number: 4031152

Consolidated cash flow statement

for the years ended 31 March

	Notes	2023 £m	2022 £m	2021 £m
Cash flows from operating activities				
Total operating profit from continuing operations	2(b)	**4,879**	4,371	2,401
Adjustments for:				
Exceptional items and remeasurements	5	**(585)**	(558)	26
Other fair value movements		**21**	(65)	(22)
Depreciation, amortisation and impairment		**1,984**	1,830	1,485
Share-based payments		**48**	38	23
Changes in working capital		**286**	361	279
Changes in provisions		**23**	140	(167)
Changes in pensions and other post-retirement benefit obligations		**(46)**	(76)	(16)
Cash flows relating to exceptional items		**(178)**	(253)	(42)
Cash generated from operations – continuing operations		**6,432**	5,788	3,967
Tax paid		**(89)**	(298)	(91)
Net cash inflow from operating activities – continuing operations		**6,343**	5,490	3,876
Net cash inflow from operating activities – discontinued operations		**555**	782	585
Cash flows from investing activities				
Purchases of intangible assets		**(567)**	(446)	(399)
Purchases of property, plant and equipment		**(6,325)**	(5,098)	(4,209)
Disposals of property, plant and equipment		**87**	26	7
Investments in joint ventures and associates		**(443)**	(265)	(81)
Dividends received from joint ventures, associates and other investments		**190**	166	80
Acquisition of National Grid Electricity Distribution[1]	37	**—**	(7,837)	—
Disposal of interest in the UK Gas Transmission business[2]	10	**4,027**	—	—
Disposal of interest in The Narragansett Electric Company[2]	10	**2,968**	—	—
Disposal of interest in Millennium Pipeline Company LLC	16	**497**	—	—
Disposal of interest in St William Homes LLP	16	**—**	413	—
Disposal of financial and other investments		**116**	215	66
Acquisition of financial investments		**(95)**	(197)	(99)
Contributions to National Grid Renewables and Emerald Energy Venture LLC		**(19)**	(16)	(26)
Net movements in short-term financial investments		**586**	(781)	(438)
Interest received		**65**	40	16
Cash inflows on derivatives	29(c)	**—**	17	225
Cash outflows on derivatives	29(c)	**(362)**	(122)	(81)
Cash flows relating to exceptional items		**79**	—	—
Net cash flow from/(used in) investing activities – continuing operations		**804**	(13,885)	(4,939)
Net cash flow used in investing activities – discontinued operations		**(564)**	(125)	(177)
Cash flows from financing activities				
Proceeds from issue of treasury shares		**16**	33	16
Transactions in own shares		**1**	(3)	(2)
Proceeds received from loans	29(c)	**11,908**	12,347	5,150
Repayment of loans	29(c)	**(15,260)**	(1,261)	(1,654)
Payments of lease liabilities	29(c)	**(155)**	(117)	(107)
Net movements in short-term borrowings	29(c)	**(511)**	(11)	(619)
Cash inflows on derivatives	29(c)	**190**	20	17
Cash outflows on derivatives	29(c)	**(118)**	(114)	(183)
Interest paid	29(c)	**(1,430)**	(1,053)	(753)
Dividends paid to shareholders	9	**(1,607)**	(922)	(1,413)
Net cash flow (used in)/from financing activities – continuing operations		**(6,966)**	8,919	452
Net cash flow (used in)/from financing activities – discontinued operations		**(207)**	(1,150)	298
Net (decrease)/increase in cash and cash equivalents	29(b)	**(35)**	31	95
Reclassification to held for sale	10,29(b)	**9**	(11)	(4)
Exchange movements	29(b)	**7**	5	(7)
Cash and cash equivalents at start of year		**182**	157	73
Cash and cash equivalents at end of year[3]	20	**163**	182	157

1. Balance consists of cash consideration paid and cash acquired from National Grid Electricity Distribution (NGED, formerly known as Western Power Distribution).
2. The balance for the year ended 31 March 2023 consists of cash proceeds received, net of cash disposed.
3. Cash and cash equivalents at end of year are shown net of the Group's bank overdraft as at 31 March 2023 of £nil (2022: £22 million; 2021: £nil).

Notes to the consolidated financial 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 UK 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 in Great Britain and of electricity and gas in 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 May 2023.

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 UK. They are prepared on the basis of all IFRS accounting standards and interpretations that are mandatory for the period ended 31 March 2023 and in accordance with the Companies Act 2006. 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, is consistent with the way that financial performance is measured by management and reported to the Board and the 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 is used to derive 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 with our results on a statutory basis and period on period.

A. Going concern

As part of the Directors' consideration of the appropriateness of adopting the going concern basis of accounting in preparing these financial statements, the Directors have assessed the principal risks discussed on pages 20 – 24 alongside potential downside business cash flow scenarios impacting the Group's operations. The Directors specifically considered both a base case and reasonable worst-case scenario for business cash flows. The assessment is prepared on the conservative assumption that the Group has no access to the debt capital markets.

The main cash flow impacts identified in the reasonable worst-case scenario are:

- the timing of the sale of assets classified as held for sale (see note 10);
- additional potential working capital requirements in response to energy price increases driven by an under-recovery of higher Balancing Services Use of System (BSUoS) energy costs in UK Electricity System Operator;
- adverse impacts of inflation on our capital expenditure programme;
- adverse impact from timing across the Group (i.e. a net under-recovery of allowed revenues or reductions in over-collections);
- a significant reduction in cash collections driven by lower customer demand and increased bad debt in our US businesses and potential supplier defaults in our UK businesses;
- higher operating and financing costs than expected, or non-delivery of planned efficiencies across the Group; and
- the potential impact of further significant storms in the US.

As part of their analysis, the Board also considered the following potential levers at their discretion to improve the position identified by the analysis if the debt capital markets are not accessible:

- the payment of dividends to shareholders;
- significant changes in the phasing of the Group's capital expenditure programme, with elements of non-essential works and programmes delayed; and
- a number of further reductions in operating expenditure across the Group.

Having considered the reasonable worst-case scenario and the 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 and extend existing financing was separately included in the analysis, and the Directors noted over £7.0 billion of new long-term senior debt issued in the period from 1 April 2022 to 31 March 2023 as evidence of the Group's ability to continue to have access to the debt capital markets if needed.

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.

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 ability 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. 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 date 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).

D. Disposal of The Narragansett Electric Company

As described further in note 10, on 17 March 2021, the Group signed an agreement to sell 100% of the share capital of a wholly owned subsidiary, The Narragansett Electric Company (NECO), to PPL Rhode Island Holdings, LLC. On 25 May 2022, the Group completed the disposal for cash consideration of £3.1 billion, recognising a post-tax gain on disposal of £280 million which has been classified as exceptional (see note 10). NECO did not meet the criteria for classification as a discontinued operation and therefore its results have not been separately disclosed on the face of the income statement, and are instead included within the results from continuing operations.

E. Disposal of the UK Gas Transmission business

As described further in note 10, on 27 March 2022, the Group entered into a sale and purchase agreement to dispose of a 100% controlling stake in the UK Gas Transmission business. The disposal completed on 31 January 2023 for cash consideration of £4.0 billion and a 40% interest in a newly incorporated UK limited company, GasT TopCo Limited, as further described below. Proceeds received have been classified in the consolidated cash flow statement within continuing operations. As a result, the Group derecognised all of the assets and liabilities of the UK Gas Transmission business and recognised the 40% interest acquired in GasT TopCo Limited. The 40% interest is classified as an investment in an associate on the basis that the Group has a significant influence over the business. The Group has the ability to appoint two out of the five Directors to the Board of GasT Topco Limited.

On 27 March 2022, the Group also entered into a Further Acquisition Agreement (FAA) over its 40% interest in GasT TopCo Limited. The FAA became binding following the settlement of the Acquisition Agreement and is exercisable in the period between 1 May and 31 July 2023. The window can further be deferred at the Group's discretion by three months. Taking into consideration the timing of the FAA exercise window, the Group has classified its interest in GasT TopCo Limited as held for sale with effect from 31 January 2023 and has not equity accounted for its share of the associate's results. The disposal group comprises our equity investment in GasT TopCo Limited and the FAA derivative. Refer to note 10 for further details.

The results of the UK Gas Transmission business were treated as a discontinued operation during the year ended 31 March 2022, with comparatives restated accordingly. Remeasurements in relation to the FAA derivative were also recorded within discontinued operations for the year ended 31 March 2023. The classification impacts the consolidated income statement, the consolidated statement of comprehensive income and consolidated cash flow statement, as well as earnings per share (EPS) split between continuing and discontinued operations.

1. Basis of preparation and recent accounting developments continued

F. 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 it is appropriate to classify our 40% equity investment in GasT TopCo Limited, together with the FAA derivative, as held for sale with effect from 31 January 2023, as detailed in note 10;
- in performing the NGED goodwill and indefinite-lived licence intangible assets impairment assessment, judgement has been applied over the forecast cash flow duration used in the value-in-use calculations (see note 11); and
- the judgement that, notwithstanding legislation enacted and targets committing the states of New York and Massachusetts to achieving net zero greenhouse gas emissions by 2050, these do not trigger a reassessment of the remaining useful economic lives (UELs) of our US gas network assets (see key sources of estimation uncertainty below and note 13).

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 value attributable to GasT TopCo Limited following disposal of our controlling stake in the UK Gas Transmission business and in determining the fair value of the written option over the Group's 40% equity interest (see note 10);
- the valuation of liabilities for pensions and other post-retirement benefits (see note 25);
- the cash flows and real discount rates applied in determining the environmental provisions, in particular relating to three US Superfund sites (see note 26); and
- the estimates made regarding the UELs 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 performing our impairment assessment of goodwill and indefinite-lived licence intangible assets, we have sensitised our forecasts to factor in adjustments to key inputs to each model (see note 11).

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 analysis in note 35.

G. Impact of climate change and the transition to net zero – areas of judgement and key sources of estimation uncertainty

In preparing these financial statements for the year ended 31 March 2023, management has taken into account the Group's commitments regarding its transition to net zero and the impact of climate change. The Group has a published climate transition plan which sets out its targets to achieve this commitment by 2050, in line with the Paris Agreement. Management has also identified a number of significant climate-related risks and opportunities, as set out within the Task Force on Climate-related Financial Disclosures (TCFD) on pages 38 – 51. Changes to the Group's commitments and the impact of climate change may have a material impact on the currently reported amounts of the Group's assets and liabilities and on similar assets and liabilities that may be recognised in future reporting periods, as set out above with respect to the judgement and key source of estimation uncertainty regarding the UELs of our US gas network assets, and as further detailed below.

Repairs to property, plant and equipment

The Group's network assets recorded within property, plant and equipment (PP&E) are at risk of physical impacts from extreme weather events such as major storms which may be accentuated by increased frequency of weather incidents and changing long-term climate trends, thereby leading to asset damage. As set out in the Financial review on pages 53 – 65, major storm costs, net of deductibles and disallowances, incurred by the Group are recoverable as revenue in future periods under our rate plans but the associated repair costs are expensed as incurred as other operating costs under IFRS.

Impairment of property, plant and equipment and goodwill

Included within the Group's PP&E (see note 13) are £333 million of oil- and gas-fired electricity generation units with approximately 3,800 MW of electric generation capacity located in Long Island, New York. Whilst the Group retains ownership of these assets, it sells all of the capacity, energy in response to dispatch requests, and any related ancillary services provided by the generating facilities to the Long Island Power Authority (LIPA) via a Power Supply Agreement running until 2028.

The maximum UEL for these units ends in 2040, which aligns to the target set by the state of New York to achieve decarbonised power generation by 2040. However, there is a risk that the UEL of certain, or all, of the units may be shortened, depending on the progress of decarbonisation activities in Long Island. The Group believes there are no material accounting judgements in respect of the generation assets and the UELs have not been accelerated in the year.

The assets related to the Group's liquefied natural gas (LNG) storage facility have a maximum UEL to 2045, which is in line with the current commercial contracts. Accordingly, the Group believes there are no material accounting judgements in respect of the UELs of the storage assets as of 31 March 2023.

The net zero pathway may also impact our US gas networks which in turn may affect the recoverable amount of our New York and New England cash-generating units (CGUs). In assessing the recoverability of our CGUs (see note 11), we calculate the value-in-use based on projections that incorporate our best estimates of future cash flows and assumptions pertaining to the net zero plans of the jurisdictions that we operate in. In respect of our New York and New England CGUs, our forecast cash flow duration used in our impairment testing is five years and we continue to have sufficient headroom. Accordingly, the impacts of certain variables that will play out in the medium to long term as a result of the anticipated transition to decarbonised power generation do not currently affect the carrying value of our New York and New England CGUs.

1. Basis of preparation and recent accounting developments continued

G. Impact of climate change and the transition to net zero – areas of judgement and key sources of estimation uncertainty continued

Decommissioning provisions

Provisions to decommission significant portions of our regulated transmission and distribution assets are not recognised where no legal obligations exist, and a realistic alternative exists to incurring costs to decommission assets at the end of their life. Included within the Group's decommissioning provisions as at 31 March 2023 (see note 26) is £57 million relating to legal requirements to remove asbestos upon major renovation or demolition of our oil- and gas-fired electricity generation structures and facilities located in Long Island, New York. As noted above, the progress of decarbonisation activities in Long Island may bring forward the decommissioning of these assets, thereby increasing the present value of associated decommissioning provisions. Currently, the expected timing of decommissioning expenditures has not materially been brought forward but management will continue to review the facts and circumstances.

Sensitivity to commodity contract derivatives

The Group has contracts associated with the forward purchase of gas and enters into derivative financial instruments linked to commodity prices, including gas options and swaps which are used to manage market price volatility (see note 17). As at 31 March 2023, the Group's gas commodity contract derivatives are primarily short-term and accordingly we do not anticipate a risk as a result of the transition to net zero.

H. 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)).
- Gains and losses arising from the sale of a subsidiary: in accounting for the gain on sale of the UK Gas Transmission business, we have considered the conflicts in guidance between IAS 28 'Investments in Associates and Joint Ventures' and IFRS 10 'Consolidated Financial Statements'. We have elected to apply the full gain recognition approach in accordance with IFRS 10.

I. New IFRS accounting standards and interpretations effective for the year ended 31 March 2023

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

- amendments to IFRS 3 'Business Combinations';
- amendments to IAS 16 'Property, Plant and Equipment';
- amendments to IAS 37 'Provisions, Contingent Liabilities and Contingent Assets'; and
- annual improvements to IFRS standards 2018–2020.

J. 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 UK:

- IFRS 17 'Insurance Contracts';
- amendments to IAS 12 'Deferred Tax Related to Assets and Liabilities Arising from a Single Transaction';
- amendments to IAS 1 'Presentation of Financial Statements' on classification of liabilities as current or non-current;
- amendments to IAS 8 'Accounting Policies, Changes in Accounting Estimates and Errors'; and
- amendments to IAS 1 and IFRS Practice Statement 2 – making materiality judgements.

Effective dates will be subject to the UK 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.

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 a profit measure that excludes certain income and expenses. We call that measure 'adjusted profit'. Adjusted profit excludes exceptional items and remeasurements (as defined in note 5) and 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. As a matter of course, the Board also considers profitability by segment, excluding the effects of timing and major storms. 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.

In the year ended 31 March 2023, the National Grid Ventures (NGV) operating segment met the quantitative thresholds set out in IFRS 8 to be identified as the Group's sixth separate reportable segment. Accordingly, the Group's operating segments have been modified and the data relating to previous periods has been restated to reflect this change. The results of our six principal businesses are reported to the Board of Directors and are accordingly treated as reportable operating segments. All other operating segments are reported to the Board of Directors on an aggregated basis. 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.
UK Electricity Distribution	The electricity distribution networks of NGED in the East Midlands, West Midlands and South West of England and South Wales.
UK Electricity System Operator	The Great Britain system operator. As announced in April 2022, the entirety of the UK Electricity System Operator is expected to transfer out of the Group to become part an independent system operator public body, following the Future System Operator (FSO) consultation. The FSO is subject to legislative approval and accordingly the held for sale criteria have not been met as at 31 March 2023.
New England	Gas distribution networks, electricity distribution networks and high-voltage electricity transmission networks in New England.
New York	Gas distribution networks, electricity distribution networks and high-voltage electricity transmission networks in New York.
National Grid Ventures	Comprises all commercial operations in LNG at the Isle of Grain in the UK, our electricity generation business in the US, our electricity interconnectors in the UK and our investment in National Grid Renewables Development LLC, our renewables business in the US. NGV operates outside our regulated core business.

Other activities that do not form part of any of the segments in the above table 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.

(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.

	2023			2022[1]			2021[1]		
	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	**1,987**	**(41)**	**1,946**	2,035	(7)	2,028	1,974	(10)	1,964
UK Electricity Distribution	**2,045**	**(12)**	**2,033**	1,482	(14)	1,468	—	—	—
UK Electricity System Operator	**4,690**	**(31)**	**4,659**	3,455	(18)	3,437	2,018	—	2,018
New England	**4,427**	**—**	**4,427**	4,550	—	4,550	4,214	—	4,214
New York	**6,994**	**—**	**6,994**	5,561	—	5,561	4,605	—	4,605
National Grid Ventures	**1,341**	**(58)**	**1,283**	1,024	—	1,024	786	—	786
Other	**317**	**—**	**317**	192	—	192	78	—	78
Total revenue before exceptional items and remeasurements	**21,801**	**(142)**	**21,659**	18,299	(39)	18,260	13,675	(10)	13,665
Exceptional items and remeasurements[2]	**—**	**—**	**—**	189	—	189	—	—	—
Total revenue from continuing operations	**21,801**	**(142)**	**21,659**	18,488	(39)	18,449	13,675	(10)	13,665
Split by geographical areas – continuing operations:									
UK			**9,611**			7,803			4,368
US			**12,048**			10,646			9,297
Total revenue from continuing operations			**21,659**			18,449			13,665

1. Comparative amounts have been re-presented to reflect NGV as a separate operating segment.
2. In connection with the disposal of St William Homes LLP in the year ended 31 March 2022 the Group released deferred income within Other of £189 million related to deferred profits from previous property sales (see note 5).

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			Exceptional items and remeasurements			After exceptional items and remeasurements		
	2023 £m	2022[1] £m	2021[1] £m	**2023 £m**	2022[1] £m	2021[1] £m	**2023 £m**	2022[1] £m	2021[1] £m
Operating segments – continuing operations:									
UK Electricity Transmission	**995**	1,067	1,094	**(2)**	(12)	(14)	**993**	1,055	1,080
UK Electricity Distribution	**1,091**	909	—	**(22)**	—	—	**1,069**	909	—
UK Electricity System Operator	**238**	7	(60)	**(1)**	(2)	7	**237**	5	(53)
New England	**708**	743	611	**424**	21	3	**1,132**	764	614
New York	**741**	780	665	**(200)**	315	30	**541**	1,095	695
National Grid Ventures	**490**	286	185	**467**	(3)	(4)	**957**	283	181
Other	**31**	21	(68)	**(81)**	239	(48)	**(50)**	260	(116)
Total operating profit from continuing operations	**4,294**	3,813	2,427	**585**	558	(26)	**4,879**	4,371	2,401
Split by geographical area – continuing operations:									
UK	**2,825**	2,234	1,113	**26**	224	(57)	**2,851**	2,458	1,056
US	**1,469**	1,579	1,314	**559**	334	31	**2,028**	1,913	1,345
Total operating profit from continuing operations	**4,294**	3,813	2,427	**585**	558	(26)	**4,879**	4,371	2,401

1. Comparative amounts have been re-presented to reflect NGV as a separate operating segment.

	Before exceptional items and remeasurements			Exceptional items and remeasurements			After exceptional items and remeasurements		
	2023 £m	2022 £m	2021 £m	**2023 £m**	2022 £m	2021 £m	**2023 £m**	2022 £m	2021 £m
Reconciliation to profit before tax:									
Operating profit from continuing operations	**4,294**	3,813	2,427	**585**	558	(26)	**4,879**	4,371	2,401
Share of post-tax results of joint ventures and associates	**190**	148	66	**(19)**	(56)	(8)	**171**	92	58
Finance income	**166**	65	35	**(28)**	(15)	23	**138**	50	58
Finance costs	**(1,680)**	(1,146)	(900)	**82**	74	47	**(1,598)**	(1,072)	(853)
Profit before tax from continuing operations	**2,970**	2,880	1,628	**620**	561	36	**3,590**	3,441	1,664

(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.

	Net book value of property, plant and equipment and other intangible assets			Capital expenditure			Depreciation, amortisation and impairment		
	2023 £m	2022[1] £m	2021[1] £m	**2023 £m**	2022[1] £m	2021[1] £m	**2023 £m**	2022[1] £m	2021[1] £m
Operating segments:									
UK Electricity Transmission	**15,483**	14,678	14,000	**1,303**	1,195	984	**(484)**	(508)	(460)
UK Electricity Distribution	**13,462**	12,522	—	**1,220**	899	—	**(223)**	(158)	—
UK Electricity System Operator	**411**	404	379	**108**	108	88	**(101)**	(83)	(47)
New England	**13,406**	11,485	10,165	**1,624**	1,561	1,437	**(393)**	(364)	(389)
New York	**21,730**	18,676	16,467	**2,454**	1,960	1,738	**(620)**	(537)	(453)
National Grid Ventures	**3,507**	3,009	2,693	**709**	452	451	**(149)**	(156)	(116)
Other	**38**	30	57	**13**	10	29	**(14)**	(24)	(20)
Total	**68,037**	60,804	43,761	**7,431**	6,185	4,727	**(1,984)**	(1,830)	(1,485)
Split by geographical area – continuing operations:									
UK	**32,343**	30,131	16,627	**3,259**	2,546	1,504	**(921)**	(879)	(596)
US	**35,694**	30,673	27,134	**4,172**	3,639	3,223	**(1,063)**	(951)	(889)
Total	**68,037**	60,804	43,761	**7,431**	6,185	4,727	**(1,984)**	(1,830)	(1,485)
Asset type:									
Property, plant and equipment	**64,433**	57,532	42,424	**6,853**	5,714	4,335	**(1,700)**	(1,544)	(1,317)
Non-current intangible assets	**3,604**	3,272	1,337	**578**	471	392	**(284)**	(286)	(168)
Total	**68,037**	60,804	43,761	**7,431**	6,185	4,727	**(1,984)**	(1,830)	(1,485)

1. Comparative amounts have been re-presented to reflect NGV as a separate operating segment.

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) fall within the scope of IFRS 15 'Revenue from Contracts with Customers', whereas generation services (which solely relate to the contract with LIPA in the US) are accounted for under IFRS 16 'Leases' as rental income, also presented within revenue. Revenue is recognised to reflect the transfer of goods or services to customers at an amount that reflects the consideration to which the Group expects to be entitled to in exchange for those goods or services 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.

Revenue in respect of regulated activities is determined by regulatory agreements that set the price to be charged for services in a given period based on pre-determined allowed revenues. Variances in service usage can result in actual revenue collected exceeding (over-recoveries) or falling short (under-recoveries) of allowed revenues. Where regulatory agreements allow the recovery of under-recoveries or require the return of over-recoveries, the allowed revenue for future periods is typically adjusted. In these instances, no assets or liabilities are recognised for under- or over-recoveries respectively, because the adjustment relates to future customers and services that have not yet been delivered.

Revenue in respect of non-regulated activities primarily relates to the sale of capacity on our interconnectors, which is determined at auctions. Capacity is sold in either day, month, quarter or year-ahead tranches. The price charged is determined by market fundamentals rather than regulatory agreement. The interconnectors are subject to indirect regulation with regard to the levels of returns they are allowed to earn. Where amounts fall below this range they receive top-up revenues and where amounts exceed this range they must pass back the excess. In these instances, assets or liabilities are recognised for the top-up or pass-back respectively.

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 in England and Wales. 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 transmission of electricity encompasses the following principal services:

- the supply of high-voltage electricity – revenue is recognised based on usage. 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. Price is determined prior to our financial year end with reference to the regulated allowed returns and estimated annual volumes; and
- construction work (principally for connections) – revenue is recognised over time, as we provide access to our network. Customers can either pay over the useful life of the connection or upfront. Where the customer pays upfront, revenues are deferred as a contract liability and released over the life of the asset.

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

(b) UK Electricity Distribution

The UK Electricity Distribution segment principally generates revenue by providing electricity distribution services in the Midlands and South West of England and South Wales. Similar to UK Electricity Transmission, UK Electricity Distribution operates as a monopoly in the jurisdictions that it operates in and is regulated by Ofgem.

The distribution of electricity encompasses the following principal services:

- electricity distribution – revenue is recognised based on usage by customers (over time), based upon volumes and price. The price control mechanism that determines our annual allowances is similar to UK Electricity Transmission. Revenues are billed monthly and payment terms are typically within 14 days; and
- construction work (principally for connections) – revenue is recognised over time as we provide access to our network. Where the customer pays upfront, revenues are deferred as a contract liability and released over the life of the asset.

For other construction where there is no consideration for any future services, revenues are recognised as the construction is completed.

(c) UK Electricity System Operator

The UK Electricity System Operator earns revenue for balancing supply and demand of electricity on Great Britain's electricity transmission system, where it acts as principal. Balancing services are regulated by Ofgem and revenue, which is payable by generators and suppliers of electricity, is recognised as the service is provided.

The UK Electricity System Operator also collects revenues on behalf of transmission operators, principally National Grid Electricity Transmission plc and the Scottish and Offshore transmission operators, from users (electricity suppliers) who connect to or use the transmission system. As the UK Electricity System Operator acts as an agent in this capacity, it records transmission network revenues net of payments to transmission operators.

(d) New England

The New England segment principally generates revenue by providing electricity and gas supply and distribution services and high-voltage electricity transmission services in New England. Supply and distribution services are regulated by the Massachusetts Department of Public Utilities (MADPU) and transmission services are regulated by the Federal Energy Regulatory Commission (FERC), both of whom regulate the rates that can be charged to customers.

3. Revenue continued

(d) New England continued

The supply and distribution of electricity and gas and the provision of electricity transmission facilities encompasses the following principal services:

- electricity and gas supply and distribution and electricity transmission – revenue is recognised based on usage by customers (over time). Revenues are billed monthly and payment terms are 30 days; and
- construction work (principally for connections) – revenue is recognised over time as we provide access to our network. Where the customer pays upfront, revenues are deferred as a contract liability or customer contributions (where they relate to government entities) and released over the life of the connection.

(e) New York

The New York segment principally generates revenue by providing electricity and gas supply and distribution services and high-voltage electricity transmission services in New York. Supply and distribution services are regulated by the New York Public Service Commission (NYPSC) and transmission services are regulated by the FERC, both of which regulate the rates that can be charged to customers.

The supply and distribution of electricity and gas and the provision of electricity transmission facilities encompasses the following principal services:

- electricity and gas supply and distribution and electricity transmission – revenue is recognised based on usage by customers (over time). Revenues are billed monthly and payment terms are 30 days; and
- construction work (principally for connections) – revenue is recognised over time as we provide access to our network. Where the customer pays upfront, revenues are deferred as a contract liability or customer contributions (where they relate to government entities) and released over the life of the connection.

(f) National Grid Ventures

National Grid Ventures generates revenue from electricity interconnectors, LNG at the Isle of Grain, National Grid Renewables and rental income.

The Group recognises revenue from transmission services through interconnectors and LNG importation 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 60 days.

Electricity generation revenue is earned from the provision of energy services and supply capacity to produce energy for the use of customers of LIPA through a power supply agreement, where LIPA receives all of the energy and capacity from the asset until at least 2028. The arrangement is treated as an operating lease within the scope of the leasing standard where we act as lessor, with rental income being recorded as other revenue, which forms part of total revenue. Lease payments (capacity payments) are recognised on a straight-line basis and variable lease payments are recognised as the energy is generated.

Other revenue in the scope of IFRS 15 principally includes sales of renewables projects from National Grid Renewables to Emerald Energy Venture LLC (Emerald), which is jointly controlled by National Grid and Washington State Investment Board (WSIB) (see note 16). National Grid Renewables develops wind and solar generation assets in the US, whilst Emerald has a right of first refusal to buy, build and operate those assets. Revenue is recognised as it is earned.

Other revenue, recognised in accordance with standards other than IFRS 15, primarily comprises adjustments in respect of the interconnector cap and floor regime constructed by Ofgem for certain wholly owned interconnector subsidiaries. Where an interconnector expects to exceed its total five-year cap, a provision and reduction in revenue is recognised in the current reporting period (see note 26). Where an interconnector does not expect to reach its five-year floor, either an asset will be recognised where a future inflow of economic benefits is considered virtually certain, or a contingent asset will be disclosed where the future inflow is concluded to be probable.

(g) Other

Revenue in Other relates to our UK commercial property business and insurance. Revenue is predominantly recognised in accordance with standards other than IFRS 15 and comprises property sales by our UK commercial property business (including sales to our 50% share in the St William joint venture which was disposed of in the prior year). Property sales are recorded when the sale is legally completed.

(h) Disaggregation of revenue

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

Revenue for the year ended 31 March 2023	UK Electricity Transmission £m	UK Electricity Distribution £m	UK Electricity System Operator £m	New England £m	New York £m	National Grid Ventures £m	Other £m	Total £m
Revenue under IFRS 15								
Transmission	1,868	—	126	52	567	791	—	3,404
Distribution	—	1,951	—	4,314	6,373	—	—	12,638
System Operator	—	—	4,533	—	—	—	—	4,533
Other[1]	31	77	—	8	13	131	—	260
Total IFRS 15 revenue	**1,899**	**2,028**	**4,659**	**4,374**	**6,953**	**922**	**—**	**20,835**
Other revenue								
Generation	—	—	—	—	—	394	—	394
Other[2]	47	5	—	53	41	(33)	317	430
Total other revenue	**47**	**5**	**—**	**53**	**41**	**361**	**317**	**824**
Total revenue from continuing operations	**1,946**	**2,033**	**4,659**	**4,427**	**6,994**	**1,283**	**317**	**21,659**

1. The UK Electricity Transmission and UK Electricity Distribution other IFRS 15 revenue principally relates to engineering recharges, which are the recovery of costs incurred for construction work requested by customers, such as the rerouting of existing network assets. Within NGV, the other IFRS 15 revenue principally relates to revenue generated from our National Grid Renewables business.
2. Other revenue, recognised in accordance with accounting standards other than IFRS 15, includes property sales by our UK commercial property business, rental income, income arising in connection with the Transition Services Agreements following the sales of NECO and the UK Gas Transmission business in the year, and a provision and adjustment to NGV revenue in respect of the interconnector cap and floor regime constructed by Ofgem. In the year ended 31 March 2023 the Group also recognised other income relating to an insurance claim.

3. Revenue continued

(h) Disaggregation of revenue continued

Geographical split for the year ended 31 March 2023	UK Electricity Transmission £m	UK Electricity Distribution £m	UK Electricity System Operator £m	New England £m	New York £m	National Grid Ventures £m	Other £m	Total £m
Revenue under IFRS 15								
UK	1,899	2,028	4,659	—	—	799	—	9,385
US	—	—	—	4,374	6,953	123	—	11,450
Total IFRS 15 revenue	1,899	2,028	4,659	4,374	6,953	922	—	20,835
Other revenue								
UK	47	5	—	—	—	(31)	205	226
US	—	—	—	53	41	392	112	598
Total other revenue	47	5	—	53	41	361	317	824
Total revenue from continuing operations	1,946	2,033	4,659	4,427	6,994	1,283	317	21,659

Revenue for the year ended 31 March 2022	UK Electricity Transmission £m	UK Electricity Distribution £m	UK Electricity System Operator £m	New England £m	New York £m	National Grid Ventures[1] £m	Other[1] £m	Total £m
Revenue under IFRS 15								
Transmission	1,983	—	—	52	405	627	—	3,067
Distribution	—	1,375	—	4,434	5,110	—	—	10,919
System Operator	—	—	3,418	—	—	—	—	3,418
Other[2]	35	89	19	10	10	147	—	310
Total IFRS 15 revenue	2,018	1,464	3,437	4,496	5,525	774	—	17,714
Other revenue								
Generation	—	—	—	—	—	373	—	373
Other[3]	10	4	—	54	36	(123)	192	173
Total other revenue	10	4	—	54	36	250	192	546
Total revenue before exceptional items and remeasurements	2,028	1,468	3,437	4,550	5,561	1,024	192	18,260
Exceptional items and remeasurements	—	—	—	—	—	—	189	189
Total revenue from continuing operations	2,028	1,468	3,437	4,550	5,561	1,024	381	18,449

Geographical split for the year ended 31 March 2022	UK Electricity Transmission £m	UK Electricity Distribution £m	UK Electricity System Operator £m	New England £m	New York £m	National Grid Ventures[1] £m	Other[1] £m	Total £m
Revenue under IFRS 15								
UK	2,018	1,464	3,437	—	—	646	—	7,565
US	—	—	—	4,496	5,525	128	—	10,149
Total IFRS 15 revenue	2,018	1,464	3,437	4,496	5,525	774	—	17,714
Other revenue								
UK	10	4	—	—	—	(132)	167	49
US	—	—	—	54	36	382	25	497
Total other revenue	10	4	—	54	36	250	192	546
Total revenue before exceptional items and remeasurements	2,028	1,468	3,437	4,550	5,561	1,024	192	18,260
Exceptional items and remeasurements	—	—	—	—	—	—	189	189
Total revenue from continuing operations	2,028	1,468	3,437	4,550	5,561	1,024	381	18,449

1. Comparative amounts have been re-presented to reflect NGV as a separate operating segment.
2. The UK Electricity Transmission and UK Electricity Distribution other IFRS 15 revenue principally relates to engineering recharges, which are the recovery of costs incurred for construction work requested by customers, such as the rerouting of existing network assets. UK Electricity System Operator other IFRS 15 revenue reflects the net income from its role as agent in respect of transmission network revenues. Within NGV, the other IFRS 15 revenue principally relates to revenue generated from our National Grid Renewables business.
3. Other revenue, recognised in accordance with accounting standards other than IFRS 15, includes property sales by our UK commercial property business and rental income. Included within NGV is a provision and adjustment to NGV revenue in respect of the interconnector cap and floor regime constructed by Ofgem.

3. Revenue continued

(h) Disaggregation of revenue continued

Revenue for the year ended 31 March 2021	UK Electricity Transmission £m	UK Electricity Distribution £m	UK Electricity System Operator £m	New England £m	New York £m	National Grid Ventures[1] £m	Other[1] £m	Total £m
Revenue under IFRS 15								
Transmission	1,875	—	—	74	329	316	—	2,594
Distribution	—	—	—	4,091	4,226	—	—	8,317
System Operator	—	—	2,076	—	—	—	—	2,076
Other[2]	67	—	(61)	8	7	76	—	97
Total IFRS 15 revenue	1,942	—	2,015	4,173	4,562	392	—	13,084
Other revenue								
Generation	—	—	—	—	—	376	—	376
Other[3]	22	—	3	41	43	18	78	205
Total other revenue	22	—	3	41	43	394	78	581
Total revenue from continuing operations	1,964	—	2,018	4,214	4,605	786	78	13,665

Geographical split for the year ended 31 March 2021	UK Electricity Transmission £m	UK Electricity Distribution £m	UK Electricity System Operator £m	New England £m	New York £m	National Grid Ventures[1] £m	Other[1] £m	Total £m
Revenue under IFRS 15								
UK	1,942	—	2,015	—	—	327	—	4,284
US	—	—	—	4,173	4,562	65	—	8,800
Total IFRS 15 revenue	1,942	—	2,015	4,173	4,562	392	—	13,084
Other revenue								
UK	22	—	3	—	—	3	56	84
US	—	—	—	41	43	391	22	497
Total other revenue	22	—	3	41	43	394	78	581
Total revenue from continuing operations	1,964	—	2,018	4,214	4,605	786	78	13,665

1. Comparative amounts have been re-presented to reflect NGV as a separate operating segment.
2. The UK Electricity Transmission other IFRS 15 revenue principally relates to engineering recharges, which are the recovery of costs incurred for construction work requested by customers, such as the rerouting of existing network assets. UK Electricity System Operator other IFRS 15 revenue reflects the net income from its role as agent in respect of transmission network revenues. Within NGV, the other IFRS 15 revenue principally relates to revenue generated from our National Grid Renewables business.
3. Other revenue, recognised in accordance with accounting standards other than IFRS 15, principally includes property sales by our UK commercial property business reported in Other.

Contract liabilities (see note 23) represent revenue to be recognised in future periods relating to contributions in aid of construction of £2,006 million (2022: £1,472 million; 2021: £1,160 million). Contract liabilities in the year ended 31 March 2021 included amounts in respect of the UK Gas Transmission business of £136 million. Revenue is recognised over the life of the asset. The asset lives for connections in UK Electricity Transmission, UK Electricity Distribution, New England and New York are 40 years, 69 years, 51 years and up to 51 years respectively. The weighted average amortisation period is 27 years.

Future revenues in relation to unfulfilled performance obligations not yet received in cash amount to £5.0 billion (2022: £5.2 billion; 2021: £4.8 billion). £1.8 billion (2022: £1.7 billion; 2021: £1.6 billion) relates to connection contracts in UK Electricity Transmission which will be recognised as revenue over 24 years and £2.7 billion (2022: £3.0 billion; 2021: £3.0 billion) relates to revenues to be earned under Grain LNG contracts until 2045. The remaining amount will be recognised as revenue over two years.

The amount of revenue recognised for the year ended 31 March 2023 from performance obligations satisfied (or partially satisfied) in previous periods, mainly due to changes in the estimate of the stage of completion, is £nil (2022: £nil; 2021: £nil).

4. Other 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		
	2023 £m	2022[1] £m	2021 £m	**2023 £m**	2022[1] £m	2021 £m	**2023 £m**	2022[1] £m	2021 £m
Depreciation, amortisation and impairment	**1,984**	1,830	1,485	**–**	–	–	**1,984**	1,830	1,485
Payroll costs	**1,929**	1,770	1,622	**29**	24	16	**1,958**	1,794	1,638
Purchases of electricity	**1,808**	1,487	1,181	**247**	(207)	(51)	**2,055**	1,280	1,130
Purchases of gas	**2,413**	1,851	1,233	**103**	(185)	17	**2,516**	1,666	1,250
Property and other taxes	**1,302**	1,202	1,105	**–**	–	–	**1,302**	1,202	1,105
UK Electricity Balancing costs	**4,052**	3,152	1,875	**–**	–	–	**4,052**	3,152	1,875
Other	**3,670**	2,988	2,412	**12**	227	44	**3,682**	3,215	2,456
Other operating costs	**17,158**	14,280	10,913	**391**	(141)	26	**17,549**	14,139	10,939
Provision for bad and doubtful debts	**220**	167	325	**–**	–	–	**220**	167	325
Total operating costs from continuing operations	**17,378**	14,447	11,238	**391**	(141)	26	**17,769**	14,306	11,264
Operating costs from continuing operations include:									
Inventory consumed							**723**	436	312
Research and development expenditure							**23**	11	12

1. Amounts in the year ended 31 March 2022 have been re-presented to disclose other operating income separately from other operating costs.

(a) Payroll costs

	2023 £m	2022 £m	2021 £m
Wages and salaries[1]	**2,971**	2,563	2,170
Social security costs	**244**	201	156
Defined contribution scheme costs	**98**	81	67
Defined benefit pension costs	**121**	185	126
Share-based payments	**46**	38	23
Severance costs (excluding pension costs)	**3**	5	9
	3,483	3,073	2,551
Less: payroll costs capitalised	**(1,525)**	(1,279)	(913)
Total payroll costs from continuing operations	**1,958**	1,794	1,638

1. Included within wages and salaries are US other post-retirement benefit costs of £37 million (2022: £39 million; 2021: £43 million). For further information refer to note 25.

(b) Number of employees

	31 March 2023	**Monthly average 2023**	31 March 2022	Monthly average 2022	31 March 2021	Monthly average 2021
UK	**12,572**	**12,024**	11,960	11,393	4,468	4,333
US	**16,878**	**16,539**	17,332	17,314	17,026	16,821
Total number of employees (continuing operations)	**29,450**	**28,563**	29,292	28,707	21,494	21,154

4. Other operating costs continued

(c) Key management compensation

	2023 £m	2022 £m	2021 £m
Short-term employee benefits	**7**	7	7
Compensation for loss of office	**–**	–	–
Post-employment benefits	**–**	1	1
Share-based payments	**6**	5	4
Total key management compensation	**13**	13	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 95 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:

	2023 £m	2022 £m	2021 £m
Audit fees payable to the Parent Company's auditor and their associates in respect of:			
Audit of the Parent Company's individual and consolidated financial statements[1]	**2.9**	2.7	2.5
The auditing of accounts of any associate of the Company	**9.0**	8.9	8.1
Other services supplied[2]	**7.4**	7.3	6.4
	19.3	18.9	17.0
Total other services[3]			
All other fees:			
Other assurance services[4]	**1.4**	0.9	0.8
Other non-audit services not covered above[5]	**0.2**	0.1	2.0
	1.6	1.0	2.8
Total auditor's remuneration	**20.9**	19.9	19.8

1. Audit fees in each year represent fees for the audit of the Company's financial statements for the years ended 31 March 2023, 2022 and 2021.
2. 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 auditor. 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 Act), audit reports on regulatory returns and the review of interim financial statements for the six-month periods ended 30 September 2022, 2021 and 2020 respectively.
3. There were no tax compliance or tax advisory fees and no audit-related fees as described in Item 16C(b) of Form 20-F.
4. In all years, principally relates to assurance services provided in relation to comfort letters for debt issuances and, in 2021, also includes amounts related to capacity market auction monitoring services.
5. For 2021, includes the class 1 Circular in respect of the acquisition of NGED.

The Audit & Risk Committee considers and makes recommendations to the Board, to be put to shareholders for approval at each AGM, in relation to the appointment, reappointment, removal and oversight of the Company's independent auditor. The Committee, under authority granted at the AGM, also considers and approves the audit fees on behalf of the Board in accordance with the Competition and Markets Authority Audit Order 2014. Details of our policies and procedures in relation to non-audit services to be provided by the independent auditor are set out on page 87 of the Corporate Governance Report.

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

5. Exceptional items and remeasurements

To monitor our financial performance, we use an adjusted consolidated profit measure that excludes certain income and expenses. We exclude items from adjusted profit 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 adjusted profit.

Exceptional items and remeasurements from continuing operations

	2023 £m	2022 £m	2021 £m
Included within operating profit			
Exceptional items:			
Net gain on disposal of NECO	**511**	–	–
Net gain on disposal of Millennium Pipeline Company LLC	**335**	–	–
IFA fire	**130**	–	–
Transaction, separation and integration costs[1]	**(117)**	(223)	(24)
Changes in environmental provisions	**176**	–	14
Cost efficiency programme	**(100)**	(42)	–
New operating model implementation costs	**–**	(24)	(50)
Release of St William Homes LLP deferred income	**–**	189	–
Net gain on disposal of St William Homes LLP	**–**	228	–
Environmental insurance recovery	**–**	38	–
	935	166	(60)
Remeasurements – commodity contract derivatives	**(350)**	392	34
	585	558	(26)
Included within finance income and costs			
Remeasurements:			
Net gains on financing derivatives	**82**	74	47
Net (losses)/gains on financial assets at fair value through profit and loss	**(28)**	(15)	23
	54	59	70
Included within share of post-tax results of joint ventures and associates			
Remeasurements:			
Remeasurements – net losses on financial instruments	**(19)**	(56)	(8)
Total included within profit before tax	**620**	561	36
Included within tax			
Exceptional items – movements arising on items not included in profit before tax:			
Deferred tax charge arising as a result of UK tax rate change	**–**	(458)	–
Tax on exceptional items	**(316)**	(28)	8
Tax on remeasurements	**75**	(103)	(34)
	(241)	(589)	(26)
Total exceptional items and remeasurements after tax	**379**	(28)	10
Analysis of total exceptional items and remeasurements after tax			
Exceptional items after tax	**619**	(320)	(52)
Remeasurements after tax	**(240)**	292	62
Total exceptional items and remeasurements after tax	**379**	(28)	10

1. Transaction, separation and integration costs represent the aggregate of distinct activities undertaken by the Group in the years presented.

5. Exceptional items and remeasurements continued

Exceptional items

Management uses an exceptional items framework that has been discussed and approved by the Audit & Risk 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. With respect to restructuring costs, these represent additional expenses incurred that are not related to the normal business and day-to-day activities. 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. The exceptional items framework was last updated in March 2022.

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 efficiency and transformation 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. No COVID-19 related costs incurred have been recognised as exceptional in any of the years presented.

2023

Net gain on disposal of NECO

During the year, the Group recognised a gain of £511 million on the disposal of 100% of the share capital of NECO to PPL Rhode Island Holdings, LLC for cash consideration of £3.1 billion ($3.9 billion) (see note 10). The receipt of cash has been recognised within net cash used in investing activities within the consolidated cash flow statement.

Net gain on disposal of Millennium Pipeline Company LLC

During the year, the Group recognised a gain of £335 million on the disposal of its entire 26.25% equity interest in the Millennium Pipeline Company LLC associate to DT Midstream for cash consideration of £497 million. The receipt of cash has been recognised within net cash used in investing activities within the consolidated cash flow statement.

Fire at IFA converter station

In September 2021, a fire at the IFA converter station in Sellindge, Kent caused significant damage to infrastructure on site. In the year, the Group recognised £130 million of insurance claims (net of asset write-offs) which have been recognised as exceptional in line with our exceptional items policy. The total cash inflow for the period was £79 million.

Transaction, separation and integration costs

During the year, separation costs of £39 million were incurred in relation to the disposal of NECO, £38 million in relation to the disposal of a majority stake in our UK Gas Transmission business (see note 10) and £40 million in connection with the integration of NGED. The costs incurred primarily relate to legal fees, bankers' fees, professional fees and employee costs. The costs have been classified as exceptional, consistent with similar costs for the years ended 31 March 2022 and 2021 and in line with the exceptional items policy. The total cash outflow for the period in relation to these costs was £84 million.

Changes in environmental provisions

The real discount rate applied to the Group's environmental provisions was revised to 1.5% in the year (2022: 0.5%) to reflect the substantial and sustained change in United States government bond yield curves (see note 26). The principal impact of this rate increase was a £165 million decrease in our US environmental provisions and a £11 million decrease in our UK environmental provision. The weighted average remaining duration of our cash flows is now around 10.5 years.

Cost efficiency programme

During the year, the Group incurred a further £100 million of costs in relation to the major cost efficiency programme announced in November 2021, that is targeting at least £400 million savings per annum across the Group by the end of three years. The costs recognised in the period primarily relate to property costs, employee costs and professional fees incurred in delivering the programme. Whilst the costs incurred during the period do not meet the quantitative threshold to be classified as exceptional on a standalone basis, when taken in aggregate with the £42 million of costs incurred in the year ended 31 March 2022, the costs qualify for exceptional treatment in line with our exceptional items policy. Estimated costs expected to be incurred in future years are disclosed in the Financial review on page 59. The total cash outflow for the period in relation to these costs was £85 million.

5. Exceptional items and remeasurements continued

Exceptional items continued

2022

Net gain on disposal of St William Homes LLP and release of deferred income

The Group recognised a gain of £228 million on the disposal of its entire 50% equity interest in the St William Homes LLP joint venture to The Berkeley Group plc for cash consideration of £413 million (see note 16). In connection with the disposal, the Group also released deferred income of £189 million which related to deferred profits from previous property sales to St William Homes LLP. We concluded that the release of the deferred income should be classified as exceptional given the crystallisation event for the release is the sale of the Group's equity interest in St William Homes LLP.

New operating model implementation costs and cost efficiency programme

The Group incurred a further £24 million of costs in relation to the design and implementation of our new operating model and £42 million in relation to the major cost efficiency programme announced in November 2021. The costs recognised primarily related to professional fees incurred and redundancy provisions.

Whilst the costs incurred did not meet the quantitative threshold to be classified as exceptional on a standalone basis, when taken in aggregate with the costs expected to be incurred over the duration of the cost efficiency programme, we concluded that the costs should be classified as exceptional in line with our exceptional items policy. The total cash outflow for the period was £48 million.

Transaction and separation costs

£223 million of transaction and separation costs were incurred in relation to the acquisition of NGED (see note 37), the planned disposal of NECO (see note 10) and the planned disposal of our UK Gas Transmission business (see note 10). The costs related to legal fees, bankers' fees and other professional fees. The costs were classified as exceptional, consistent with similar costs for the year ended 31 March 2021. The total cash outflow for the year was £196 million.

Environmental insurance recovery

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, previously owned or operated by the Group or its predecessor companies. 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. In the year ended 31 March 2022, we recognised an exceptional gain of £38 million relating to an insurance receivable for site remediation costs included in our Superfund sites environmental provision. The insurance receipts were recorded as an exceptional item in line with the treatment of the related costs.

2021

New operating model implementation costs

The Group incurred £50 million of costs in relation to the design and implementation of our new operating model that is built on a foundation of six business units. The costs recognised in the year ended 31 March 2021 primarily related to professional fees incurred and redundancy provisions. In evaluating the costs incurred against the quantitative thresholds in our exceptional items framework we considered the total costs to be incurred over the duration of the programme. Whilst the costs incurred did not meet the quantitative threshold to be classified as exceptional on a standalone basis, we concluded that the costs should be classified as exceptional in line with our exceptional items policy, in order to ensure that the costs are treated in a consistent manner with similar costs incurred previously. The total cash outflow for the year was £33 million.

Transaction and separation costs

£24 million of transaction and separation costs were incurred in relation to the acquisition of NGED (see note 37) and the planned sale of NECO (see note 10). The costs related to legal fees, bankers' fees and professional fees. Whilst the costs incurred in isolation were not sufficiently material to warrant classification as an exceptional item, we expected further costs to be incurred in the next year, for example in regard to success fees on completion of the acquisition. When taken in aggregate, the costs incurred over both years will be sufficiently material to be classified as exceptional in line with our policy. The total cash outflow for the year was £14 million.

Changes in environmental provision

We recognised an exceptional gain of £14 million relating to the release of environmental provisions relating to one of our US Superfund sites, for which the original provision was treated as an exceptional item. The reduction in the provision arose as a result of the re-evaluation of the Group's share of estimated costs following the finalisation of discussions on the scope of certain remediation work with government authorities. The release was recorded as an exceptional item in line with the treatment of the original provision.

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). Once the fair value movements are realised (for example when the derivative matures), the previously recognised fair value movements are then reversed through remeasurements and recognised within earnings before exceptional items and remeasurements. These assets and liabilities include commodity contract derivatives and financing derivatives to the extent that hedge accounting is not available or is not fully effective.

The unrealised gains or losses reported in profit and loss on certain additional assets and liabilities 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 the net foreign exchange gains and losses on borrowing activities. These are offset by foreign exchange gains and losses on financing derivatives measured at fair value. 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 adjusted profit. 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 National Grid Renewables (all within NGV). The performance of these assets (including changes in fair value) is included in our assessment of adjusted profit for the relevant business units.

Remeasurements excluded from adjusted profit 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 derivatives comprise gains and losses arising on derivative financial instruments used for the risk management of interest rate and foreign exchange exposures and the offsetting foreign exchange losses and gains on the associated borrowing activities. 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). Net foreign exchange gains and losses on financing derivatives used for the risk management of foreign exchange exposures are offset by foreign exchange losses and gains on borrowing activities;

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); and

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

Items included within tax

2022

Change in UK corporation tax rate

In the Spring Budget 2021, the UK government announced that from 1 April 2023 the UK corporation tax rate will increase to 25%, and this was substantively enacted on 24 May 2021. Deferred tax balances at 31 March 2022 were remeasured at the enacted rate, with £458 million recognised as exceptional, in line with previous periods.

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 adjusted profit, we adjust net financing costs to exclude any net gains or losses on financial instruments included in remeasurements (see note 5).

Finance income and costs remeasurements include unrealised gains and losses on certain assets 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	**2023 £m**	2022 £m	2021 £m
Finance income				
Net interest income on pensions and other post-retirement benefit obligations	25	**85**	–	–
Interest income on financial instruments:				
Bank deposits and other financial assets		**80**	32	33
Dividends received on equities held at fair value through other comprehensive income (FVOCI)		**1**	3	2
Other income		**–**	30	–
		166	65	35
Finance costs				
Net interest expense on pensions and other post-retirement benefit obligations	25	**–**	–	(51)
Interest expense on financial liabilities held at amortised cost:				
Bank loans and overdrafts		**(328)**	(216)	(53)
Other borrowings[1]		**(1,330)**	(961)	(741)
Interest on derivatives		**(170)**	(59)	(47)
Unwinding of discount on provisions	26	**(88)**	(73)	(77)
Other interest		**(13)**	11	(51)
Less: interest capitalised[2]		**249**	152	120
		(1,680)	(1,146)	(900)
Remeasurements – Finance income				
Net (losses)/gains on FVTPL financial assets		**(28)**	(15)	23
		(28)	(15)	23
Remeasurements – Finance costs				
Net gains on financing derivatives[3]:				
Derivatives designated as hedges for hedge accounting		**22**	45	30
Derivatives not designated as hedges for hedge accounting		**60**	29	17
		82	74	47
Total remeasurements – Finance income and costs		**54**	59	70
Finance income		**138**	50	58
Finance costs[4]		**(1,598)**	(1,072)	(853)
Net finance costs from continuing operations		**(1,460)**	(1,022)	(795)

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 4.7% (2022: 3.2%; 2021: 3.1%). In the UK, capitalised interest qualifies for a current year tax deduction with tax relief claimed of £30 million (2022: £16 million; 2021: £11 million). In the US, capitalised interest is added to the cost of property, plant and equipment and qualifies for tax depreciation allowances.
3. Includes a net foreign exchange loss on borrowing activities of £86 million (2022: £110 million gain; 2021: £73 million gain) offset by foreign exchange gains and losses on financing derivatives measured at fair value.
4. Finance costs include principal accretion on inflation-linked liabilities of £483 million (2022: £241 million; 2021: £46 million).

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 the statement of changes 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 to the consolidated income statement – continuing operations

	2023 £m	2022 £m	2021 £m
Tax before exceptional items and remeasurements	**635**	669	334
Exceptional tax on items not included in profit before tax (note 5)	**—**	458	—
Tax on other exceptional items and remeasurements	**241**	131	26
Total tax reported within exceptional items and remeasurements	**241**	589	26
Total tax charge from continuing operations	**876**	1,258	360

Tax as a percentage of profit before tax

	2023 %	2022 %	2021 %
Before exceptional items and remeasurements – continuing operations	**21.4**	23.2	20.5
After exceptional items and remeasurements – continuing operations	**24.4**	36.6	21.6

7. Tax continued

The tax charge for the year can be analysed as follows:

	2023 £m	2022 £m	2021 £m
Current tax:			
UK corporation tax at 19% (2022: 19%; 2021: 19%)	**161**	255	157
UK corporation tax adjustment in respect of prior years	**—**	(9)	15
	161	246	172
Overseas corporation tax	**225**	6	3
Overseas corporation tax adjustment in respect of prior years	**(16)**	(26)	(15)
	209	(20)	(12)
Total current tax from continuing operations	**370**	226	160
Deferred tax:			
UK deferred tax	**255**	605	39
UK deferred tax adjustment in respect of prior years	**13**	(5)	(20)
	268	600	19
Overseas deferred tax	**233**	425	174
Overseas deferred tax adjustment in respect of prior years	**5**	7	7
	238	432	181
Total deferred tax from continuing operations	**506**	1,032	200
Total tax charge from continuing operations	**876**	1,258	360

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

	2023 £m	2022 £m	2021 £m
Current tax:			
Share-based payments	**(1)**	—	—
Deferred tax:			
Investments at fair value through other comprehensive income	**(1)**	—	12
Cash flow hedges, cost of hedging and own credit reserve	**(7)**	(12)	6
Remeasurements of pension assets and post-retirement benefit obligations	**(344)**	493	462
Share-based payments	**1**	(4)	1
	(352)	477	481
Total tax recognised in the statements of comprehensive income from continuing operations	**(352)**	481	480
Total tax relating to share-based payments recognised directly in equity from continuing operations	**—**	(4)	1
	(352)	477	481

7. Tax continued

The tax charge for the year after exceptional items and remeasurements, for the continuing business, is higher (2022: higher tax charge; 2021: higher tax charge) than the standard rate of corporation tax in the UK of 19% (2022: 19%; 2021: 19%):

	Before exceptional items and remeasurements 2023 £m	After exceptional items and remeasurements 2023 £m	Before exceptional items and remeasurements 2022 £m	After exceptional items and remeasurements 2022 £m	Before exceptional items and remeasurements 2021 £m	After exceptional items and remeasurements 2021 £m
Profit before tax from continuing operations						
Before exceptional items and remeasurements	**2,970**	**2,970**	2,880	2,880	1,628	1,628
Exceptional items and remeasurements	**—**	**620**	—	561	—	36
Profit before tax from continuing operations	**2,970**	**3,590**	2,880	3,441	1,628	1,664
Profit before tax from continuing operations multiplied by UK corporation tax rate of 19% (2022: 19%; 2021: 19%)	**564**	**682**	547	654	309	316
Effect of:						
Adjustments in respect of prior years[1]	**2**	**2**	(28)	(33)	(10)	(12)
Expenses not deductible for tax purposes	**28**	**92**	13	47	18	29
Non-taxable income[2]	**(47)**	**(75)**	(19)	(49)	(7)	(7)
Adjustment in respect of foreign tax rates[3]	**73**	**147**	143	170	42	42
Deferred tax impact of change in UK tax rate	**62**	**66**	43	501	—	—
Adjustment in respect of post-tax profits of joint ventures and associates included within profit before tax	**(36)**	**(27)**	(28)	(17)	(15)	(12)
Other[4]	**(11)**	**(11)**	(2)	(15)	(3)	4
Total tax charge from continuing operations	**635**	**876**	669	1,258	334	360
	%	**%**	%	%	%	%
Effective tax rate – continuing operations	**21.4**	**24.4**	23.2	36.6	20.5	21.6

1. The prior year adjustments are primarily due to agreement of prior period tax returns.
2. Includes tax on chargeable disposals after the offset of capital losses.
3. Includes remeasurement of US closing state deferred tax balances as a result of expected increase in the blended state tax rate following the disposal of NECO.
4. Other primarily comprises the movement in the deferred tax asset on previously unrecognised capital losses, claims for land remediation relief and claims for Research & Development credit.

Factors that may affect future tax charges

In the Spring Budget 2021, the UK Government announced an increase in the main corporation tax rate from 19% to 25% with effect from 1 April 2023. This was substantively enacted on 24 May 2021. Deferred tax balances as at 31 March 2023 have been calculated at 25%.

The US Government continues to consider changes to federal tax legislation, but as no changes have been substantively enacted at the balance sheet date, deferred tax balances as at 31 March 2023 have been calculated at the prevailing tax rates based on the current tax laws.

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 stimuli/reliefs for businesses to cope with the impact of the COVID-19 pandemic, from which we do not currently expect there to be a material impact on our future tax charges.

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:

	Regulatory licences £m	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 1 April 2021	—	6,434	(42)	93	(44)	(1,626)	4,815
Exchange adjustments and other[2]	—	247	(1)	1	1	(85)	163
Charged/(credited) to income statement	—	1,050	26	118	153	(117)	1,230
Charged/(credited) to other comprehensive income and equity	—	—	(6)	587	(10)	—	571
Reclassification to held for sale (note 10)	—	(643)	5	(166)	2	(1)	(803)
Acquisition of NGED (note 37)	429	622	—	142	(403)	(1)	789
At 1 April 2022	429	7,710	(18)	775	(301)	(1,830)	6,765
Exchange adjustments and other[2]	—	357	(2)	8	8	(116)	255
Charged/(credited) to income statement	—	145	(2)	51	(71)	386	509
Charged/(credited) to other comprehensive income and equity	—	—	1	(344)	(6)	—	(349)
Disposals	—	1	—	—	—	—	1
At 31 March 2023	**429**	**8,213**	**(21)**	**490**	**(370)**	**(1,560)**	**7,181**

1. The deferred tax asset of £1,560 million as at 31 March 2023 (2022: £1,830 million) in respect of other net temporary differences primarily relates to losses of £47 million (2022: £428 million), US contract and lease liabilities £511 million (2022: £450 million), US environmental provisions of £503 million (2022: £511 million) and US bad debt provision of £148 million (2022: £201 million).
2. Exchange adjustments and other primarily comprises foreign exchange arising on translation of the US dollar deferred tax balances.

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 £7,181 million (2022: £6,765 million). This balance is after offset of a deferred tax asset of £47 million (2022: £428 million) which has been recognised in respect of net operating losses (£39 million) and capital losses (£8 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 total deferred tax assets not recognised are as follows:

	2023 £m	2022 £m
Capital losses	**2,367**	2,363
Non-trade deficits	**—**	1
Trading losses	**4**	7

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 2023 and 31 March 2022, 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 profit after tax attributable to each ordinary share. Basic EPS is calculated on profit after tax 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 adjusted profit subtotals 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.

(a) Basic EPS

	Earnings 2023 £m	**EPS 2023 pence**	Earnings 2022 £m	EPS 2022 pence	Earnings 2021 £m	EPS 2021 pence
Adjusted earnings from continuing operations	**2,335**	**63.8**	2,210	61.4	1,293	36.7
Exceptional items and remeasurements after tax from continuing operations (see note 5)	**379**	**10.4**	(28)	(0.8)	10	0.3
Earnings from continuing operations	**2,714**	**74.2**	2,182	60.6	1,303	37.0
Adjusted earnings from discontinued operations (see note 10)	**320**	**8.7**	344	9.6	340	9.7
Exceptional items and remeasurements after tax from discontinued operations	**4,763**	**130.2**	(173)	(4.8)	(3)	(0.1)
Earnings from discontinued operations	**5,083**	**138.9**	171	4.8	337	9.6
Total adjusted earnings	**2,655**	**72.5**	2,554	71.0	1,633	46.4
Total exceptional items and remeasurements after tax (including discontinued operations)	**5,142**	**140.6**	(201)	(5.6)	7	0.2
Total earnings	**7,797**	**213.1**	2,353	65.4	1,640	46.6

	2023 millions	2022 millions	2021 millions
Weighted average number of ordinary shares – basic	**3,659**	3,599	3,523

(b) Diluted EPS

	Earnings 2023 £m	**EPS 2023 pence**	Earnings 2022 £m	EPS 2022 pence	Earnings 2021 £m	EPS 2021 pence
Adjusted earnings from continuing operations	**2,335**	**63.5**	2,210	61.1	1,293	36.5
Exceptional items and remeasurements after tax from continuing operations (see note 5)	**379**	**10.3**	(28)	(0.8)	10	0.3
Earnings from continuing operations	**2,714**	**73.8**	2,182	60.3	1,303	36.8
Adjusted earnings from discontinued operations	**320**	**8.7**	344	9.5	340	9.6
Exceptional items and remeasurements after tax from discontinued operations (see note 10)	**4,763**	**129.6**	(173)	(4.8)	(3)	(0.1)
Earnings from discontinued operations	**5,083**	**138.3**	171	4.7	337	9.5
Total adjusted earnings	**2,655**	**72.2**	2,554	70.6	1,633	46.1
Total exceptional items and remeasurements after tax (including discontinued operations)	**5,142**	**139.9**	(201)	(5.6)	7	0.2
Total earnings	**7,797**	**212.1**	2,353	65.0	1,640	46.3

	2023 millions	2022 millions	2021 millions
Weighted average number of ordinary shares – diluted	**3,676**	3,616	3,540

(c) Reconciliation of basic to diluted average number of shares

	2023 millions	2022 millions	2021 millions
Weighted average number of ordinary shares – basic	**3,659**	3,599	3,523
Effect of dilutive potential ordinary shares – employee share plans	**17**	17	17
Weighted average number of ordinary shares – diluted	**3,676**	3,616	3,540

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.

	2023			2022			2021		
	Pence per share	Cash dividend £m	Scrip dividend £m	Pence per share	Cash dividend £m	Scrip dividend £m	Pence per share	Cash dividend £m	Scrip dividend £m
Interim dividend in respect of the current year	**17.84**	**488**	**163**	17.21	339	282	17.00	348	249
Final dividend in respect of the prior year	**33.76**	**1,119**	**114**	32.16	583	562	32.00	1,065	54
	51.60	**1,607**	**277**	49.37	922	844	49.00	1,413	303

The Directors are proposing a final dividend for the year ended 31 March 2023 of 37.60p per share that would absorb approximately £1,383 million of shareholders' equity (assuming all amounts are settled in cash). It will be paid on 9 August 2023 to shareholders who are on the register of members at 2 June 2023 (subject to shareholders' approval at the AGM). A scrip dividend will be offered as an alternative.

10. Assets held for sale and discontinued operations

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.

(a) Assets held for sale

The following assets and liabilities were classified as held for sale:

	2023			2022		
	Total assets held for sale £m	Total liabilities held for sale £m	Net assets held for sale £m	Total assets held for sale £m	Total liabilities held for sale £m	Net assets held for sale £m
Investment in GasT TopCo Limited	**1,443**	**—**	**1,443**	—	—	—
FAA derivative	**—**	**(109)**	**(109)**	—	—	—
The Narragansett Electric Company	**—**	**—**	**—**	4,129	(1,658)	2,471
UK Gas Transmission	**—**	**—**	**—**	5,871	(5,530)	341
Net assets held for sale	**1,443**	**(109)**	**1,334**	10,000	(7,188)	2,812

Gain on disposal of The Narragansett Electric Company

On 17 March 2021, the Group signed an agreement to sell 100% of the share capital of a wholly owned subsidiary, The Narragansett Electric Company (NECO). The Group subsequently completed the NECO Sale to PPL Rhode Island Holdings, LLC on 25 May 2022 for cash consideration of £3.1 billion ($3.9 billion). NECO was part of our New England operating segment and is a retail distribution company providing electricity and gas to customers in Rhode Island. The associated assets and liabilities were presented as held for sale in the consolidated financial statements with effect from the year ended 31 March 2021.

10. Assets held for sale and discontinued operations continued

(a) Assets held for sale continued

As NECO did not represent a separate major line of business or geographical area of operation, it did not meet the criteria for classification as a discontinued operation and therefore its results are not separately disclosed on the face of the income statement. Financial information relating to the gain arising on the disposal of NECO is set out below:

	£m
Goodwill	616
Intangible assets	4
Property, plant and equipment	3,363
Trade and other receivables	215
Cash and cash equivalents	113
Other assets	165
Total assets on disposal	4,476
Borrowings	(1,230)
Pension liabilities	(19)
Other liabilities	(552)
Total liabilities on disposal	(1,801)
Net assets on disposal	2,675
Satisfied by:	
Cash proceeds	3,081
Total consideration received	3,081
Less:	
Financing costs[1]	(40)
Gain on sale before tax and reclassification of foreign currency translation reserve	366
Reclassification of foreign currency translation reserve[2]	145
Tax[3]	(231)
Post-tax gain on disposal	280

1. Relates to the transfer of hedge losses previously deferred within equity in respect of foreign exchange forward contracts which the Group entered into in order to manage its exposure to the foreign currency cash proceeds due from PPL Rhode Island Holdings, LLC.
2. The reclassification of the foreign currency translation reserve attributable to NECO comprises a gain of £496 million relating to the retranslation of NECO's operations offset by a loss of £351 million relating to borrowings, cross-currency swaps and foreign exchange forward contracts used to hedge the Group's net investment in NECO.
3. The high effective tax rate arising on the gain on sale is primarily a result of the tax base of the assets being significantly lower than the accounting base which includes non-deductible goodwill.

No impairment losses were recognised upon remeasurement of the assets and liabilities prior to classification as held for sale. NECO generated profit after tax of £84 million for the period until 25 May 2022 (2022: £237 million; 2021: £104 million) which was recognised within continuing operations.

10. Assets held for sale and discontinued operations continued

(a) Assets held for sale continued

Gain on disposal of the UK Gas Transmission business

On 27 March 2022, the Group entered into an Acquisition Agreement to sell 100% of the UK Gas Transmission business in exchange for £4.0 billion of cash consideration and a 40% interest in a newly incorporated company, GasT TopCo Limited. The Group subsequently completed the sale on 31 January 2023. The other 60% interest in GasT TopCo Limited is owned by Macquarie Infrastructure and Real Assets (MIRA) and British Columbia Investment Management Corporation (BCI) (together, the 'Consortium').

The Group classified the associated assets and liabilities of the business as held for sale in the consolidated statement of financial position as at 31 August 2021, when the sale was considered to be highly probable following management approval of the sale timetable and communication thereof to potential buyers. Accordingly, the UK Gas Transmission business was also reported as held for sale in the consolidated statement of financial position as at 31 March 2022.

Financial information relating to the gain arising on the disposal of the UK Gas Transmission business is set out below:

	£m
Intangible assets	180
Property, plant and equipment	4,981
Trade and other receivables	458
Pension assets	341
Cash and cash equivalents	5
Financing derivatives	96
Other assets	338
Total assets	6,399
Borrowings	(4,276)
Deferred tax liabilities	(800)
Other liabilities	(711)
Total liabilities	(5,787)
Net assets on disposal	612
Satisfied by:	
Cash proceeds	4,032
Associate at fair value	1,443
Total consideration received	5,475
Less:	
Transaction costs	(60)
Gain on disposal	4,803

No impairment losses were recognised upon remeasurement of the assets and liabilities prior to classification as held for sale. The portion of the gain on disposal related to the remeasurement of the Group's retained non-controlling investment to fair value is £1,198 million.

GasT TopCo Limited is an unlisted entity, and so no quoted price exists. The fair value has been determined with reference to the equity value of GasT TopCo Limited, derived through a valuation exercise performed under the discount dividend model (DDM) methodology. The DDM methodology involves estimating the future cash flows expected to be generated by the associate and discounting those back to their present value using an appropriate discount rate. Management has determined that the DDM methodology provides a reasonable estimate of the fair value of the associate interest at the date of acquisition.

On 27 March 2022, the Group also entered into an FAA with the Consortium. The FAA gives the Consortium the option to purchase the Group's 40% equity interest in GasT TopCo Limited for £1.4 billion plus an annualised escalation factor. The FAA became binding following the settlement of the Acquisition Agreement and is exercisable in the period between 1 May and 31 July 2023. The window can further be deferred at the Group's discretion by three months.

The FAA is a Level 3 derivative, which is accounted for at fair value, and the assumptions which are used to determine fair value are specific to the contract and not readily observable in active markets. Significant unobservable inputs include the valuation and volatility of GasT TopCo Limited's unlisted equity. These inputs are used as part of a Black-Scholes option pricing model to produce the reported valuation. The fair value of the option as at 31 March 2023 is £109 million (31 March 2022: £nil). The FAA derivative will be extinguished when the option is either exercised or lapses. The option cannot be cash settled.

The Group's interest in GasT TopCo Limited was immediately classified as held for sale with effect from 31 January 2023 together with the FAA derivative. The Group has not applied equity accounting in relation to its investment in GasT TopCo Limited.

10. Assets held for sale and discontinued operations continued

(b) Discontinued operations

UK Gas Transmission

As UK Gas Transmission represented a major separate line of business, the business was also classified as a discontinued operation in the prior year. The results of the business are shown separately from the continuing business for all periods presented on the face of the income statement as a discontinued operation. This is also reflected in the statement of comprehensive income, as well as earnings per share (EPS) being shown split between continuing and discontinued operations.

The summary income statement for the UK Gas Transmission business for the period until 31 January 2023 and the years ended 31 March 2022 and 2021 is as follows:

	Before exceptional items and remeasurements			Exceptional items and remeasurements			Total		
	2023 £m	2022 £m	2021 £m	**2023 £m**	2022 £m	2021 £m	**2023 £m**	2022 £m	2021 £m
Discontinued operations									
Revenue	**1,604**	1,362	1,114	**—**	—	—	**1,604**	1,362	1,114
Other operating costs	**(890)**	(708)	(615)	**1**	(17)	(5)	**(889)**	(725)	(620)
Operating profit	**714**	654	499	**1**	(17)	(5)	**715**	637	494
Finance income	**15**	—	—	**6**	—	—	**21**	—	—
Finance costs[1]	**(310)**	(218)	(77)	**(53)**	(12)	2	**(363)**	(230)	(75)
Profit before tax	**419**	436	422	**(46)**	(29)	(3)	**373**	407	419
Tax[2]	**(99)**	(92)	(82)	**6**	(144)	—	**(93)**	(236)	(82)
Profit after tax from discontinued operations	**320**	344	340	**(40)**	(173)	(3)	**280**	171	337
Gain on disposal	**—**	—	—	**4,803**	—	—	**4,803**	—	—
Total profit after tax from discontinued operations	**320**	344	340	**4,763**	(173)	(3)	**5,083**	171	337

1. Finance costs from discontinued operations include principal accretion of inflation-linked liabilities in the UK Gas Transmission business of £268 million (2022: £158 million; 2021: £38 million). Exceptional finance costs in the current year relate to the remeasurement of the FAA derivative.
2. Of the £144 million exceptional tax charge in the year ended 31 March 2022, £145 million relates to an increase in deferred tax liability due to the change in the UK corporation tax rate.

The summary statement of comprehensive income for discontinued operations for the period until 31 January 2023 and the years ended 31 March 2022 and 2021 is as follows:

	2023 £m	2022 £m	2021 £m
Profit after tax from discontinued operations	**5,083**	171	337
Other comprehensive (loss)/income from discontinued operations			
Items from discontinued operations that will never be reclassified to profit or loss:			
Remeasurement (losses)/gains on pension assets and post-retirement benefit obligations	**(313)**	309	(250)
Net losses on financial liability designated at fair value through profit and loss attributable to changes in own credit risk	**—**	(1)	(11)
Net losses in respect of cash flow hedging of capital expenditure	**—**	—	(2)
Tax on items that will never be reclassified to profit or loss	**78**	(94)	50
Total (losses)/gains from discontinued operations that will never be reclassified to profit or loss	**(235)**	214	(213)
Items from discontinued operations that may be reclassified subsequently to profit or loss:			
Net gains in respect of cash flow hedges	**6**	1	3
Net gains/(losses) in respect of cost of hedging	**4**	(4)	(6)
Tax on items that may be reclassified subsequently to profit or loss	**(2)**	—	—
Total gains/(losses) from discontinued operations that may be reclassified subsequently to profit or loss	**8**	(3)	(3)
Other comprehensive (loss)/income for the year, net of tax from discontinued operations	**(227)**	211	(216)
Total comprehensive income for the year from discontinued operations	**4,856**	382	121

Details of the cash flows relating to discontinued operations are set out within the consolidated cash flow statement.

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 by performing an impairment review annually or more frequently if events or changes in circumstances indicate a potential impairment.

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 (CGUs) and this allocation is made to those CGUs that are expected to benefit from the acquisition in which the goodwill arose.

Impairment is recognised where there is a difference between the carrying value of the CGU and the estimated recoverable amount of the CGU to which that goodwill has been allocated. Any impairment is recognised immediately in the income statement and is not subsequently reversed. Any impairment loss is first allocated to the carrying value of the goodwill and then to the other assets within the CGU. 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.

	Total £m
Net book value at 1 April 2021	4,588
Exchange adjustments	223
Acquisition of NGED (note 37)	4,721
Net book value at 1 April 2022	9,532
Exchange adjustments	315
Net book value at 31 March 2023	**9,847**

There was no significant accumulated impairment charge as at 31 March 2023 or 31 March 2022.

Impairment review of goodwill and indefinite-lived intangibles

Goodwill and indefinite-lived intangibles (see note 12) are reviewed annually for impairment and the recoverability is assessed by comparing the carrying amount of our operations with the expected recoverable amount on a value-in-use basis which uses pre-financing and pre-tax cash flow projections based on the Group's financial plans, approved by the Directors, as a starting point. See below for a summary of which operations our goodwill and indefinite-lived intangibles are allocated to:

CGU or group of CGUs	2023 £m	2022 £m
Goodwill:		
National Grid Ventures Renewables	**163**	150
New England	**1,609**	1,510
New York	**3,354**	3,151
UK Electricity Distribution[1]	**4,721**	4,721
Total goodwill	**9,847**	9,532
Indefinite-lived intangibles (regulatory licences related to UK Electricity Distribution):		
West Midlands	**518**	518
East Midlands	**519**	519
South Wales	**257**	257
South West	**420**	420
Total indefinite-lived intangibles	**1,714**	1,714

1. This is a combination of the West Midlands, East Midlands, South Wales and South West CGUs, reflecting the level at which the goodwill is monitored.

In each assessment, the value-in-use has been calculated assuming a stable regulatory framework and is based on projections that incorporate our best estimates of future cash flows, including costs, changes in commodity prices, future rates and growth. Such projections reflect our current regulatory agreements and allow for future agreements and recovery of investment, including those related to achieving the net zero plans of the jurisdictions that we operate in. Our plans have proved to be reliable guides in the past and the Directors believe the estimates are appropriate.

11. Goodwill continued

(a) Cash flow periods, terminal value and discount rate assumptions

We select cash flow durations longer than five years, when our forecasts are considered reliable. The cash flow durations selected reflect our knowledge and understanding of the regulatory environments in which we operate, and most significantly, where markets have legislated decarbonisation commitments by 2050 we may utilise longer cash flow forecasts that reflect the investment required to deliver those commitments before applying a terminal value at the point those commitments are due to be fulfilled and market growth is expected to stabilise. For our regulated UK ED operations, we consider cash flow durations that run until 2050, reflecting the expected investment required in the network, in excess of economy-wide long-term growth rates in order to deliver the energy transition. Total expenditure forecasts, comprising capital and operating expenditure, are estimated with reference to the Group's strategic modelling and expectations around a reasonable energy transition based upon the policies and commitments in place today. Cash flows related to uncommitted future restructurings and enhancement capital expenditure (beyond activity to reinforce the network and build new connections) are excluded from the projections. For our regulated US operations (New York and New England CGUs), we use a five-year cash flow forecast.

For our UK ED business, a nominal terminal growth rate of 2.6% (2022: 2.5%) is assumed upon the terminal year cash flows, reflecting management's best view, based on market and operational experience, of the expected long-term growth in the relevant market. For our regulated US operations, due to differences in the regulatory framework and the combination of gas and electricity networks, we apply a growth rate of 2.5% (2022: 2.3%). This has been determined with regard to data on industry growth projections, specifically related to the energy transition, and projected growth in real Gross Domestic Product (GDP) for the territory within which the CGU is based.

Pre-tax cash flows are discounted by applying a pre-tax discount rate reflecting the time value of money and the risks specific to the group of assets. In practice, the post-tax discount rate for the group of assets in question is derived from a post-tax weighted average cost of capital. The assumptions used in the calculation of the weighted average cost of capital are benchmarked to externally available data. The determined discount rate is independent of the entity's capital structure and reflects a market participant's view of a risk adjusted discount rate specific to the CGU or group of CGUs. The post-tax discount rate is then grossed up to a pre-tax discount rate that is applied to pre-tax cash flows. The pre-tax discount rates used for the year ended 31 March 2023 were as follows: UK ED Group 5.6% (2022: 5.2%); UK ED DNOs 5.6% (2022: 4.9%); New York 6.4% (2022: 5.5%); New England 6.6% (2022: 5.6%); and NGV Renewables 8.6% (2022: 7.5%).

(b) Key inputs and sensitivity analysis

In assessing the carrying value of goodwill and licences, we have sensitised our forecasts to factor in adjustments to key inputs to each model. Whilst regulatory licences are tested for impairment before we test goodwill, we consider the sensitivity for goodwill attributable to UK ED and our regulated US operations and those related to licences separately below.

Goodwill – UK ED, regulated US operations (New York and New England) and NGV Renewables

While key assumptions underpinning the goodwill valuations will change over time, the Directors consider that no reasonably foreseeable change would result in an impairment of goodwill. This is in view of the long-term nature of the key assumptions, including those used in determining an appropriate discount rate, and specifically the risk-free rate and total market return, the margin by which the estimated value-in-use exceeds the carrying amount and the nature of the regulatory regimes that UK ED and our regulated US businesses operate under. This remains the case even after taking into account the short-term effects of the volatility in wider macroeconomic factors. No reasonably possible changes to inputs to the impairment test performed over goodwill attributable to NGV Renewables were identified as resulting in an impairment.

Indefinite-lived regulatory licences – UK ED

No reasonably possible changes to inputs to the impairment test performed over the South West, East Midlands, West Midlands and South Wales Distribution Network Operator CGUs were identified as resulting in an impairment.

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. An amortisation expense is charged to the income statement to reflect the reduced value of the asset over time. Amortisation 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.

Indefinite-lived intangibles comprise regulatory licences for which there is no foreseeable limit to the period over which they are expected to generate net cash inflows. These assets are considered to have an indefinite life and are not amortised but are subject to a review for impairment annually, or more frequently if events or circumstances indicate a potential impairment. Any impairment is charged to the income statement as it arises.

Identifiable intangible assets are recorded at cost less accumulated amortisation and any provision for impairment, with the exception of regulatory licences that are assessed to have indefinite lives and are therefore tested annually for impairment (see note 11 for details of impairment tests performed over indefinite-lived intangible assets). 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 CGU to which that asset belongs is estimated. Impairments are recognised in the consolidated income statement within other operating costs. Any assets which suffered impairment in a previous period are reviewed for possible reversal of the impairment at each reporting date.

The Group's regulatory licences relate to electricity distribution licences acquired following the Group's acquisition of NGED in the prior year (see note 37). The licences provide the right to operate and invest in the relevant network that operates as a monopoly in the licensed geographical area. Once granted by Ofgem, the licence is issued to a licensee on the basis that it remains active into perpetuity. On that basis, the value attributed to the electricity distribution network licence assets is considered to have an indefinite useful life.

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.

Cloud computing arrangements are reviewed to determine if the Group has control of the software intangible asset. Control is considered to exist where the Group has the right to take possession of the software and run it on its own or a third party's computer infrastructure or if the Group has exclusive rights to use the software such that the supplier is unable to make the software available to other customers.

Costs relating to configuring or customising the software in a cloud computing arrangement are assessed to determine if there is a separate intangible asset over which the Group has control. If an asset is identified, it is capitalised and amortised over the useful economic life of the asset. To the extent that no separate intangible asset is identified, then the costs are either expensed when incurred or recognised as a prepayment and spread over the term of the arrangement if the costs are concluded to not be distinct.

The accounting for costs incurred in cloud computing arrangements represented the application of new accounting guidance for the Group for the year ended 31 March 2022. Accordingly, certain costs which were previously capitalised in respect of the Group's cloud computing arrangements were expensed in the prior year.

12. Other intangible assets continued

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

	Years
Software	3 to 10
Regulatory licences	Indefinite

	Regulatory licences[1] £m	Software £m	Assets in the course of construction £m	Total £m
Cost at 1 April 2021	—	2,120	686	2,806
Exchange adjustments	—	69	11	80
Additions	—	15	513	528
Acquisition of NGED (note 37)	1,714	49	—	1,763
Disposals	—	(7)	—	(7)
Reclassifications[2]	—	260	(302)	(42)
Reclassification to held for sale (note 10)	—	(431)	(38)	(469)
Cost at 1 April 2022	1,714	2,075	870	4,659
Exchange adjustments	—	79	32	111
Additions	—	34	544	578
Disposals	—	(17)	—	(17)
Reclassifications[2,3]	—	895	(885)	10
Cost at 31 March 2023	1,714	3,066	561	5,341
Accumulated amortisation at 1 April 2021	—	(1,363)	—	(1,363)
Exchange adjustments	—	(33)	—	(33)
Amortisation charge for the year	—	(297)	—	(297)
Impairment[4]	—	—	(10)	(10)
Accumulated amortisation of disposals	—	7	—	7
Reclassification to held for sale (note 10)	—	309	—	309
Accumulated amortisation at 1 April 2022	—	(1,377)	(10)	(1,387)
Exchange adjustments	—	(51)	—	(51)
Amortisation charge for the year	—	(291)	—	(291)
Accumulated amortisation of disposals	—	15	—	15
Reclassifications[3]	—	(23)	—	(23)
Accumulated amortisation at 31 March 2023	—	(1,727)	(10)	(1,737)
Net book value at 31 March 2023[5]	**1,714**	**1,339**	**551**	**3,604**
Net book value at 31 March 2022	1,714	698	860	3,272

1. Relates to the licence intangibles acquired as part of the acquisition of NGED in the prior year (see note 37). The Group assesses its indefinite-lived intangible assets for impairment annually (see note 11).
2. Reclassifications includes amounts transferred to property, plant and equipment (see note 13).
3. Amounts recognised in the year include adjustments relating to a misclassification between cost and accumulated depreciation in the prior year.
4. Depreciation of assets in the course of construction relate to impairment provision adjustments recognised in the prior year.
5. The Group has capitalised £370 million (2022: £366 million) in relation to the Gas Business Enablement system in the US, of which £369 million (2022: £152 million) is in service and is being amortised over 10 years, with the remainder included within assets in the course of construction. A further £87 million (2022: £103 million) relates to our new UK general ledger system within software and is being amortised over 10 years, having been reclassified from assets in the course of construction to software assets in the prior year.

13. Property, plant and equipment

Property, plant and equipment are the physical assets controlled by us. The cost of these assets primarily represents the amount initially paid for them or the fair value on the date of acquisition of a business. Cost 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, resilient and prepared for the transition to net zero. 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 together with an appropriate portion of overheads which are directly linked to the capital work performed; 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.

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.

(a) Analysis of property, plant and equipment

	Land and buildings £m	Plant and machinery £m	Assets in the course of construction £m	Motor vehicles and office equipment £m	Total £m
Cost at 1 April 2021	3,752	56,061	5,221	1,018	66,052
Exchange adjustments	97	1,627	111	37	1,872
Additions	22	926	4,843	129	5,920
Acquisition of NGED (note 37)	200	9,512	185	154	10,051
Disposals	(165)	(367)	—	(88)	(620)
Reclassifications[1]	62	4,063	(4,133)	89	81
Reclassification to held for sale (note 10)	(309)	(8,800)	(640)	(267)	(10,016)
Cost at 1 April 2022	3,659	63,022	5,587	1,072	73,340
Exchange adjustments	126	2,073	156	50	2,405
Additions	158	1,196	5,345	154	6,853
Disposals	(163)	(331)	(4)	(156)	(654)
Adjustment for change in discount rate on decommissioning provisions (note 26)	—	(36)	(12)	—	(48)
Reclassifications[1,2]	286	3,841	(4,312)	102	(83)
Cost at 31 March 2023	4,066	69,765	6,760	1,222	81,813
Accumulated depreciation at 1 April 2021	(876)	(17,482)	—	(651)	(19,009)
Exchange adjustments	(20)	(351)	—	(23)	(394)
Depreciation charge for the year[3]	(114)	(1,300)	(48)	(167)	(1,629)
Disposals	29	311	—	88	428
Reclassifications[1]	15	(40)	(18)	2	(41)
Reclassification to held for sale (note 10)	193	4,421	6	217	4,837
Accumulated depreciation at 1 April 2022	(773)	(14,441)	(60)	(534)	(15,808)
Exchange adjustments	(30)	(444)	—	(32)	(506)
Depreciation charge for the year[3]	(122)	(1,459)	(1)	(183)	(1,765)
Disposals	127	311	2	152	592
Reclassifications[1,2]	4	107	4	(8)	107
Accumulated depreciation at 31 March 2023	(794)	(15,926)	(55)	(605)	(17,380)
Net book value at 31 March 2023	**3,272**	**53,839**	**6,705**	**617**	**64,433**
Net book value at 31 March 2022	2,886	48,581	5,527	538	57,532

1. Represents amounts transferred between categories, (to)/from other intangible assets (see note 12), from inventories and reclassifications between cost and accumulated depreciation.
2. Amounts recognised in the year include adjustments relating to prior year misclassifications between cost and accumulated depreciation.
3. Depreciation of assets in the course of construction relates to impairment provision adjustments.

13. Property, plant and equipment continued

(b) Asset useful economic lives

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 UELs. In assessing UELs, consideration is given to any contractual arrangements and operational requirements relating to particular assets. The assessments of estimated UELs 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 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 to 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	40
Plant and machinery:			
Electricity transmission plant and wires	up to 100	22 to 85	31
Electricity distribution plant	14 to 99	5 to 85	45
Electricity generation plant	n/a	12 to 93	10
Interconnector plant and other	5 to 70	5 to 60	25
Gas plant – mains, services and regulating equipment	n/a	25 to 95	52
Gas plant – storage	5 to 25	5 to 65	11
Gas plant – meters	15	14 to 36	22
Motor vehicles and office equipment	up to 30	up to 32	3

(c) Gas asset lives

The role that our US 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. In the year, policymakers in New York and Massachusetts have indicated an increase in electrification and a strategic downsizing of gas networks in their formal plans to meet their respective decarbonisation targets. As a result, there is a risk that the UELs of certain elements of our gas networks may be shortened in line with future legislation.

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, legal and regulatory developments.

In the US, our gas distribution 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 52 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 gain more certainty about policy-driven legislation. We continue to actively engage and support our regulators to enable the clean energy transition in a safe, reliable and affordable way.

Asset depreciation lives feed directly into our US regulatory recovery mechanisms, such that any shortening of asset lives and regulatory 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.

Given the uncertainty described relating to the UELs of our gas assets, below we provide a sensitivity on the depreciation charge for our New York and New England segments were a shorter UEL presumed. It should be noted that all net zero pathways suggest some role of gas in heating buildings beyond 2050, so our sensitivity analysis for 2050 illustrates an unlikely worst-case scenario:

	Increase in depreciation expense for the year ended 31 March 2023		Increase in depreciation expense for the year ended 31 March 2022	
	New York £m	**New England £m**	New York £m	New England £m
UELs limited to 2050	**185**	**54**	140	40
UELs limited to 2060	**90**	**21**	67	15
UELs limited to 2070	**42**	**3**	31	1

Note that this sensitivity calculation excludes any assumptions regarding the residual value for our asset base and the effect that shortening asset depreciation lives would be expected to have on our regulatory recovery mechanisms. In the event that any of the US gas distribution assets are stranded, the Group would expect to recover the associated costs. While recovery is not guaranteed and is determined by regulators in the US, there are precedents for stranded asset cost recovery for US utility companies.

13. Property, plant and equipment continued

(d) Right-of-use assets

The Group leases various properties, land, equipment and cars. 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. The lease payments include fixed payments, any variable lease payments dependent on an index or a rate, and any break fees or renewal option costs that we are reasonably certain to incur. The discount rate applied is the rate implicit in the lease or, if that is not available, the incremental rate of borrowing for a similar term and similar security. This is determined based on observable data for borrowing rates for the specific Group entity that has entered into the lease, with specific adjustments for the term of the lease and any lease-specific risk premium. The lease term takes account of 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.

The table below shows the movements in the net book value of right-of-use assets included within property, plant and equipment at 31 March 2023 and 31 March 2022, split by category. The associated lease liabilities are disclosed in note 21.

	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 1 April 2021	365	81	—	184	630
Exchange adjustments	10	1	—	10	21
Additions	14	2	—	88	104
Acquisition of NGED (note 37)	7	2	—	—	9
Reclassification to held for sale (note 10)	(7)	—	—	(4)	(11)
Modifications of leases[1]	(122)	—	—	—	(122)
Disposals	(2)	—	—	(1)	(3)
Depreciation charge for the year	(40)	(16)	—	(67)	(123)
Net book value at 31 March 2022	225	70	—	210	505
Exchange adjustments	10	1	—	13	24
Additions	101	97	—	88	286
Disposals	(13)	—	—	(1)	(14)
Depreciation charge for the year	(42)	(18)	—	(70)	(130)
Net book value at 31 March 2023	**281**	**150**	**—**	**240**	**671**

1. The Group entered into an agreement to reduce the lease term of its New England corporate office, Reservoir Woods, with effect from October 2021. The existing lease liability and right-of-use asset were remeasured based on the terms of the modified lease in the year ended 31 March 2022.

The following balances have been included in the income statement for the years ended 31 March 2023 and 31 March 2022 in respect of right-of-use assets:

	2023 £m	2022 £m
Included within net finance income and costs:		
Interest expense on lease liabilities	**(24)**	(18)
Included within revenue:		
Lease income[1]	**409**	385
Included within operating expenses:		
Expense relating to short-term and low-value leases	**(19)**	(14)

1. Included within lease income is £394 million (2022: £374 million) of variable lease payments, the majority of which relates to the power supply arrangement entered into with LIPA (see note 3).

14. Other non-current assets

Other non-current assets include assets that do not fall into specific non-current asset categories (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 2023.

	2023 £m	2022 £m
Other receivables[1]	**496**	297
Non-current tax assets	**—**	6
Prepayments	**71**	—
	567	303

1. Primarily comprises amounts due in relation to property sales to The Berkeley Group which will be received until 2031.

15. Financial and other investments

The Group holds a range of financial and other investments. These investments include short-term money market funds, quoted investments in equities or bonds of other companies, investments in our venture capital portfolio (National Grid Partners), bank deposits with a maturity of greater than three months, and investments that can not be readily used in operations, principally collateral deposited in relation to derivatives.

The classification of each investment held by the Group is determined based on two main factors:

- its contractual cash flows – whether the asset's cash flows are solely payments of the principal and interest on the financial asset on pre-determined dates or whether the cash flows are determined by other factors such as the performance of a company; and
- the business model for holding the investments – whether the intention is to hold onto the investment for the longer term (collect the contractual cash flows) or to sell the asset with the intention of managing any gain or loss on sale or to manage any liquidity requirements.

The three categories of financial and other investments are as follows:

- Financial assets at amortised cost – 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 receivables in relation to deposits and collateral;
- FVOCI debt and other investments – debt investments, such as bonds, 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 (FVOCI), with gains or losses recognised in the consolidated statement of comprehensive income instead of through the income statement. On disposal, any gains or losses are recognised within finance income in the income statement (see note 6). Other investments include insurance contracts which are held to back the present value of unfunded pension liabilities (see note 25); and
- FVTPL investments – other financial investments are subsequently measured at fair value with any gains or losses recognised in the income statement (FVTPL). 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 by applying valuation techniques used by the relevant markets including observable market data where possible (see note 32(g) for further details).

15. Financial and other investments continued

	2023 £m	2022 £m
Non-current		
FVOCI debt and other investments	**407**	413
FVTPL investments	**452**	417
	859	830
Current		
FVTPL investments	**1,764**	2,292
Financial assets at amortised cost	**841**	853
	2,605	3,145
	3,464	3,975
Financial and other investments include the following:		
Investments in short-term money market funds	**1,449**	1,936
Investments held by National Grid Partners	**346**	309
Investments in Sunrun	**106**	109
Balances that are restricted or not readily used in operations:		
Collateral[1]	**764**	806
Insurance company and non-qualified plan investments	**490**	534
Cash surrender value of life insurance policies	**232**	234
Other investments	**77**	47
	3,464	3,975

1. The collateral balance includes £734 million (2022: £802 million) of collateral placed with counterparties with whom we have entered into a credit support annex to the International Swaps and Derivatives Association (ISDA) Master Agreement, £25 million (2022: £4 million) of restricted amounts allocated for specific projects within National Grid Electricity System Operator and National Grid Electricity Transmission plc and £5 million (2022: £5 million) insurance captive letters of credit.

FVTPL and FVOCI 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 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 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 FVOCI or amortised cost are therefore considered to have low credit risk and have an immaterial impairment 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 FVOCI 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 a share of 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.

	2023			2022		
	Associates £m	**Joint ventures £m**	**Total £m**	Associates £m	Joint ventures £m	Total £m
Share of net assets at 1 April	**277**	**961**	**1,238**	229	638	867
Exchange adjustments	**20**	**52**	**72**	6	19	25
Additions	**40**	**157**	**197**	17	469	486
Share of post-tax results for the year	**9**	**162**	**171**	43	49	92
Share of other comprehensive income of associates, net of tax	**1**	**—**	**1**	1	—	1
Dividends received	**(30)**	**(152)**	**(182)**	(35)	(123)	(158)
Disposals	**(167)**	**—**	**(167)**	—	(50)	(50)
Other movements[1]	**4**	**(34)**	**(30)**	16	(41)	(25)
Share of net assets at 31 March	**154**	**1,146**	**1,300**	277	961	1,238

1. Other movements relate to tax liabilities for US and certain UK associates and joint ventures which are borne by the Group and the elimination of profits arising from sales to the Group's share of joint ventures.

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 £412 million (2022: £714 million) in relation to joint ventures and associates.

On 7 October 2022, the Group disposed of its 26.25% minority ownership interest in the Millennium Pipeline Company LLC to DT Midstream, an existing owner, in exchange for £497 million ($552 million) cash consideration. The receipt of cash has been recognised within net cash used in investing activities within the cash flow statement. The Group recognised a gain on disposal of £335 million within other operating income and this has been classified as exceptional in the year (see note 5). The gain on disposal includes a gain of £47 million attributable to foreign currency exchange differences, offset by a loss of £22 million relating to net investment hedge reserves, which were recycled to the income statement.

On 15 March 2022, the Group disposed of its entire 50% interest in St William Homes LLP to The Berkeley Group for cash consideration of £413 million. The receipt of cash was recognised within net cash used in investing activities within the cash flow statement. In the prior year the Group recognised a gain on disposal of £228 million within other operating income and released to revenue deferred income of £189 million which related to deferred profits on previous property sales to St William Homes LLP. The gain on disposal and the release of deferred income were both classified as exceptional (see note 5).

The following table describes the Group's material joint ventures and associates at 31 March 2023:

Joint venture	% stake	
BritNed Development Limited[1]	50%	BritNed is a joint venture with the Dutch transmission system operator, TenneT, and operates the subsea electricity interconnector between Great Britain and the Netherlands, commissioned in 2011.
Nemo Link Limited[1]	50%	Nemo is a joint venture with the Belgian transmission operator, Elia, and is a subsea electricity interconnector between Great Britain and Belgium, which became operational on 31 January 2019.
Emerald Energy Venture LLC	51%	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.
Community Offshore Wind, LLC	27.3%	Community Offshore Wind (formerly known as Bight Wind Holdings LLC) is a joint venture with RWE Renewables. Following the successful win at auction of six seabed leases in northeastern US in the prior year, Community Offshore Wind commenced the development of an offshore wind project which will play a key role in supplying clean energy to customers in New York.

1. BritNed and Nemo have reporting periods ending on 31 December with monthly management reporting information provided to the Group.

16. Investments in joint ventures and associates continued

Summarised financial information as at 31 March, together with the carrying amount of material investments, is as follows:

	BritNed Development Limited		Nemo Link Limited		Emerald Energy Venture LLC		Community Offshore Wind LLC	
	2023 £m	2022 £m	**2023 £m**	2022 £m	**2023 £m**	2022 £m	**2023 £m**	2022 £m
Statement of financial position								
Non-current assets	**397**	390	**514**	515	**1,598**	1,070	**925**	7
Cash and cash equivalents	**208**	77	**77**	7	**169**	134	**19**	3
All other current assets	**29**	10	**8**	7	**14**	8	**—**	835
Non-current liabilities	**(55)**	(52)	**(3)**	(34)	**(244)**	(182)	**(19)**	(1)
Non-current financial liabilities	**(31)**	(29)	**(32)**	—	**(398)**	(310)		
Current liabilities	**(34)**	(15)	**(131)**	(33)	**(131)**	(66)	**(3)**	(2)
Current financial liabilities	**—**	—	**—**	—	**(95)**	(23)	**—**	—
Net assets	**514**	381	**433**	462	**913**	631	**922**	842
Group's ownership interest in joint venture/associate	**257**	191	**217**	231	**466**	322	**251**	230
Group adjustment: elimination of profits on sales to joint venture	**—**	—	**—**	—	**(85)**	(49)	**—**	(1)
Carrying amount of the Group's investment	**257**	191	**217**	231	**381**	273	**251**	229

	BritNed Development Limited		Nemo Link Limited		Emerald Energy Venture LLC		Community Offshore Wind LLC	
	2023 £m	2022 £m	**2023 £m**	2022 £m	**2023 £m**	2022 £m	**2023 £m**	2022 £m
Income statement								
Revenue	**358**	131	**88**	148	**75**	25	**—**	—
Depreciation and amortisation	**(16)**	(15)	**(23)**	(23)	**(29)**	(17)	**—**	—
Other income/(costs)	**22**	(9)	**(1)**	(6)	**(46)**	(145)	**1**	(1)
Operating profit/(loss)	**364**	107	**64**	119	**—**	(137)	**1**	(1)
Net interest expense	**(2)**	(2)	**(7)**	(1)	**(6)**	(5)	**—**	—
Profit/(loss) before tax	**362**	105	**57**	118	**(6)**	(142)	**1**	(1)
Income tax expense	**(82)**	(20)	**(11)**	(22)	**—**	—	**—**	—
Profit/(loss) for the year	**280**	85	**46**	96	**(6)**	(142)	**1**	(1)
Group's share of profit/(loss)	**140**	43	**23**	48	**(3)**	(72)	**—**	—
Group adjustment: tax credit	**—**	—	**—**	—	**1**	19	**—**	—
Group's share of post-tax results for the year	**140**	43	**23**	48	**(2)**	(53)	**—**	—

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 – these are used to manage 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 – these are used to manage our US customers' exposure to price and supply risks. Some forward contracts for the purchase of commodities meet the definition of derivatives. We also enter into derivative financial instruments linked to commodity prices, including index futures, options and swaps, which 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. 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.

The fair value of derivative financial instruments is calculated 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:

	2023			2022		
	Assets £m	**Liabilities £m**	**Total £m**	Assets £m	Liabilities £m	Total £m
Current	**153**	**(222)**	**(69)**	282	(144)	138
Non-current	**276**	**(1,071)**	**(795)**	305	(869)	(564)
	429	**(1,293)**	**(864)**	587	(1,013)	(426)
Financing derivatives	**363**	**(1,119)**	**(756)**	298	(991)	(693)
Commodity contract derivatives	**66**	**(174)**	**(108)**	289	(22)	267
	429	**(1,293)**	**(864)**	587	(1,013)	(426)

(a) Financing derivatives

The fair values of financing derivatives by type are as follows:

	2023			2022		
	Assets £m	**Liabilities £m**	**Total £m**	Assets £m	Liabilities £m	Total £m
Interest rate swaps	**49**	**(98)**	**(49)**	89	(97)	(8)
Cross-currency interest rate swaps	**192**	**(888)**	**(696)**	174	(642)	(468)
Foreign exchange forward contracts[1]	**100**	**(11)**	**89**	35	(65)	(30)
Inflation-linked swaps	**22**	**(122)**	**(100)**	—	(187)	(187)
	363	**(1,119)**	**(756)**	298	(991)	(693)

1. Included within the foreign exchange forward contracts balance are £4 million (2022: £21 million) of derivative liabilities in relation to the hedging of capital expenditure.

17. Derivative financial instruments continued

(a) Financing derivatives continued

The maturity profile of financing derivatives is as follows:

	2023			2022		
	Assets £m	**Liabilities £m**	**Total £m**	Assets £m	Liabilities £m	Total £m
Current						
Less than 1 year	**100**	**(93)**	**7**	34	(136)	(102)
	100	**(93)**	**7**	34	(136)	(102)
Non-current						
In 1 to 2 years	**13**	**(100)**	**(87)**	6	(29)	(23)
In 2 to 3 years	**15**	**(96)**	**(81)**	28	(39)	(11)
In 3 to 4 years	**32**	**(11)**	**21**	—	(26)	(26)
In 4 to 5 years	**14**	**(107)**	**(93)**	12	(16)	(4)
More than 5 years	**189**	**(712)**	**(523)**	218	(745)	(527)
	263	**(1,026)**	**(763)**	264	(855)	(591)
	363	**(1,119)**	**(756)**	298	(991)	(693)

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

	2023 £m	2022 £m
Interest rate swaps	**(1,727)**	(1,607)
Cross-currency interest rate swaps	**(15,025)**	(10,397)
Foreign exchange forward contracts	**(5,263)**	(6,371)
Inflation-linked swaps	**(2,387)**	(500)
	(24,402)	(18,875)

London Inter-bank Offered Rate (LIBOR) is being replaced as an interest rate benchmark by alternative reference rates and therefore we are transitioning LIBOR cash flows on our affected contracts in line with the relevant jurisdictions. In the prior year we transitioned all derivatives which pay or receive cash flows that reference GBP LIBOR (maturing between 2023 and 2040) to alternative reference rates. Derivatives with a notional value of £859 million that reference USD LIBOR (maturing between 2023 and 2026) were present at 31 March 2023 (2022: £806 million, maturing between 2023 and 2026).

(b) Commodity contract derivatives

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

	2023			2022		
	Assets £m	**Liabilities £m**	**Total £m**	Assets £m	Liabilities £m	Total £m
Commodity purchase contracts accounted for as derivative contracts						
Forward purchases of gas	**2**	**(6)**	**(4)**	11	(6)	5
Derivative financial instruments linked to commodity prices						
Electricity capacity	**1**	**—**	**1**	1	—	1
Electricity swaps	**53**	**(92)**	**(39)**	208	(10)	198
Electricity options	**—**	**(3)**	**(3)**	5	—	5
Gas swaps	**9**	**(42)**	**(33)**	29	(6)	23
Gas options	**1**	**(31)**	**(30)**	35	—	35
	66	**(174)**	**(108)**	289	(22)	267

17. Derivative financial instruments continued

(b) Commodity contract derivatives continued

The maturity profile of commodity contract derivatives is as follows:

	2023			2022		
	Assets £m	**Liabilities £m**	**Total £m**	Assets £m	Liabilities £m	Total £m
Current						
Less than one year	**53**	**(129)**	**(76)**	248	(8)	240
	53	**(129)**	**(76)**	248	(8)	240
Non-current						
In 1 to 2 years	**11**	**(29)**	**(18)**	34	(6)	28
In 2 to 3 years	**2**	**(15)**	**(13)**	5	(5)	—
In 3 to 4 years	**—**	**(1)**	**(1)**	2	(2)	—
In 4 to 5 years	**—**	**—**	**—**	—	(1)	(1)
	13	**(45)**	**(32)**	41	(14)	27
	66	**(174)**	**(108)**	289	(22)	267

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

	2023	2022
Forward purchases of gas[1]	**22m Dth**	28m Dth
Electricity swaps	**14,076 GWh**	13,458 GWh
Gas swaps	**50m Dth**	39m Dth
Gas options	**57m Dth**	59m Dth

1. Forward gas purchases have terms up to three years (2022: one year). The contractual obligations under these contracts are £24 million (2022: £86 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 directly 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. 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.

	2023 £m	2022 £m
Fuel stocks	**280**	96
Raw materials and consumables	**460**	297
Current intangible assets – emission allowances	**136**	118
	876	511

There is a provision for obsolescence of £6 million against inventories as at 31 March 2023 (2022: £7 million).

19. Trade and other receivables

Trade and other receivables include amounts which are due from our customers for services we have provided, accrued income which has not yet been billed, prepayments, contract assets where certain milestones are required to be fulfilled and other receivables that are expected to be settled within 12 months.

Trade and other receivables are initially recognised at fair value, except for trade receivables that do not have a significant financing component which are measured at transaction price, and are subsequently measured at amortised cost, less any appropriate allowances for estimated irrecoverable amounts.

	2023 £m	2022 £m
Trade receivables	**2,583**	2,661
Accrued income	**1,126**	1,110
Provision for impairment of receivables and accrued income	**(560)**	(741)
Trade receivables and accrued income, net	**3,149**	3,030
Prepayments	**442**	429
Contract assets	**49**	33
Other receivables	**243**	223
	3,883	3,715

Trade receivables are non-interest-bearing and generally have a term of up to 60 days. Due to their short maturities, the fair value of trade and other receivables approximates their carrying value. The maximum exposure of trade and other receivables to credit risk is the carrying amount reported on the balance sheet.

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.

	2023 £m	2022 £m
At 1 April	**741**	672
Exchange adjustments	**51**	31
Charge for the year, net of recoveries	**220**	167
Uncollectible amounts written off	**(452)**	(124)
Reclassification to held for sale (note 10)	**—**	(5)
At 31 March	**560**	741

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

	As at 31 March 2023			As at 31 March 2022		
	UK £m	US £m	Total £m	UK £m	US £m	Total £m
Trade receivables	**223**	**2,360**	**2,583**	352	2,309	2,661
Accrued income	**650**	**476**	**1,126**	715	395	1,110
Provision for impairment of receivables and accrued income	**(11)**	**(549)**	**(560)**	(43)	(698)	(741)
	862	**2,287**	**3,149**	1,024	2,006	3,030

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, £2,325 million (2022: £2,243 million) of the trade receivables and accrued income 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 forecast economic conditions at the balance sheet date. The inclusion of forward-looking information in the provision matrix-setting process under IFRS 9 results 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 business temporarily 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 as a result of COVID-19. At that time, the Group also ceased customer termination activities as requested by relevant local authorities and this resulted in the recognition of additional expected credit losses. Cash collection and customer termination activities subsequently resumed in New England and New York during the year ended 31 March 2022.

In the years ended 31 March 2023 and 2022, the Group's US distribution businesses have also been supported by certain government and state COVID-19 funding programmes, including the Arrears Management Program in New York aimed to provide low-income customers with COVID-19 relief via one-time bill credits. This year, in connection with the Arrears Management Program, the Group has written off £270 million ($333 million) of COVID-19-related trade receivables. This has been funded via the receipt of £44 million ($51 million) of government funding in the year, with the remainder to be recovered through future rates over future periods.

19. Trade and other receivables continued

Provision for impairment of receivables continued

In calculating our provision for impairment of receivables at 31 March 2023, we were able to incorporate the actual cash collection levels experienced for the three years since the start of the pandemic to determine the expected loss rates per category of outstanding receivable by operating company. These were benchmarked against provision matrices run on pre-COVID-19 behaviour and data. Factored into our analysis are expected cash collections based on the resumed collection activities in New England and New York, as well as the impacts of government and state funding programmes and the outlook for the wider macroeconomic environment. The resulting rates are summarised in the provision matrix shown below.

Based on our review, we recognised a charge of £215 million (2022: £139 million) which represents our best estimate based on the information available. We based our review on certain macroeconomic factors, including unemployment levels, inflation, average commodity rate changes and our experience regarding debtor recoverability since the start of the COVID-19 pandemic. In performing our review of actual cash collection levels, we also factored in the impacts of government and state COVID-19 funding programmes in order to reflect an expected collection rate.

The average expected loss rates and gross balances for the retail customer receivables in our US operations are set out below. The decreases in expected loss rates applied to amounts less than 12 months past due are primarily attributable to the resumption of cash collection activities since the prior year, while the increase in the average loss rate applied to amounts over 12 months reflects the increased risk of non-collection in light of wider macroeconomic factors, as well as the reduced likelihood of recoverability given the significant ageing of the amounts within this category.

	2023		2022	
	%	**£m**	%	£m
Accrued income	**3**	**462**	5	382
0 – 30 days past due	**3**	**838**	5	731
30 – 60 days past due	**13**	**235**	20	213
60 – 90 days past due	**23**	**139**	32	123
3 – 6 months past due	**32**	**189**	41	161
6 – 12 months past due	**43**	**178**	56	177
Over 12 months past due	**88**	**284**	71	456
		2,325		2,243

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. 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).

Cash and cash equivalents at 31 March 2023 include £37 million (2022: £14 million) that is restricted. The restricted cash balances include amounts required to be maintained for insurance purposes and cash balances that can only be used for low-carbon network fund projects.

	2023 £m	2022 £m
Cash at bank	**163**	204
Cash and cash equivalents	**163**	204

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 inflation indices. We use derivatives to manage risks associated with interest rates, inflation rates and foreign exchange. Lease liabilities are also included within borrowings.

Our price controls and rate plans lead us to fund our networks within a certain ratio of debt to equity or regulatory asset value 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.

Borrowings, which include interest-bearing 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 within equity (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).

	2023 £m	2022 £m
Current		
Bank loans[1]	**381**	8,976
Bonds	**1,638**	1,735
Commercial paper	**840**	1,303
Lease liabilities	**96**	107
	2,955	12,121
Non-current		
Bank loans	**2,557**	2,211
Bonds	**36,855**	30,682
Lease liabilities	**618**	451
	40,030	33,344
Total borrowings	**42,985**	45,465

1. Current bank loans in the year ended 31 March 2022 included £8,179 million of borrowings under a bridge facility related to the acquisition of NGED. The bridge facility included a requirement that the proceeds of the sales of NECO and the UK Gas Transmission business were applied to repay the facility. The bridge facility was subsequently settled in full during the year ended 31 March 2023.

21. Borrowings continued

Total borrowings are repayable as follows:

	2023 £m	2022 £m
Less than 1 year	**2,955**	12,121
In 1 to 2 years	**2,799**	1,410
In 2 to 3 years	**2,689**	2,544
In 3 to 4 years	**3,129**	2,580
In 4 to 5 years	**2,505**	2,493
More than 5 years:		
By instalments	**922**	869
Other than by instalments	**27,986**	23,448
	42,985	45,465

The fair value of borrowings, excluding lease liabilities, at 31 March 2023 was £38,219 million (2022: £45,066 million). Where market values were available, the fair value of borrowings (Level 1) was £31,710 million (2022: £24,454 million). Where market values were not available, the fair value of borrowings (Level 2) was £6,509 million (2022: £20,612 million) and calculated by discounting cash flows at prevailing interest rates. The notional amount outstanding of the debt portfolio at 31 March 2023 was £42,353 million (2022: £44,055 million). There have been no new issuances since the year end.

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 £111 million (2022: £60 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.

Certain borrowings, primarily some of our USD denominated bank loans and company car lease contracts, have payments that are linked to LIBOR. LIBOR is being replaced as an interest rate benchmark by alternative reference rates and therefore we are transitioning LIBOR cash flows on our affected contracts in line with the relevant jurisdictions. The migration project is under way, with all affected contracts where we previously paid or received GBP LIBOR amended in the prior year. £314 million of bank loans affected by GBP LIBOR were transitioned to alternative reference rates in the year ended 31 March 2022. £227 million (2022: £181 million) of lease liabilities affected by USD LIBOR have been transitioned to alternative rates and £120 million (2022: £110 million) of bank loans affected by USD LIBOR have yet to be amended.

21. Borrowings continued

Lease liabilities

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, 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 as well as 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.

	2023 £m	2022 £m
Gross lease liabilities are repayable as follows:		
Less than 1 year	118	132
1 to 5 years	318	282
More than 5 years	480	259
	916	673
Less: finance charges allocated to future periods	(202)	(115)
	714	558
The present value of lease liabilities are as follows:		
Less than 1 year	96	107
1 to 5 years	269	247
More than 5 years	349	204
	714	558

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, with the exception of contingent consideration, which is subsequently measured at fair value.

	2023 £m	2022 £m
Trade payables	3,249	3,113
Deferred payables	404	487
Customer contributions[1]	171	137
Social security and other taxes	240	278
Contingent consideration	19	34
Other payables[2]	985	866
	5,068	4,915

1. Relates to amounts received from government-related entities for connecting to our networks, where we have obligations remaining under the contract.
2. Included within other payables are payments due in respect of interconnector excess revenues in accordance with the cap and floor regime constructed by Ofgem (see note 3).

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

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.

	2023 £m	2022 £m
Current	**252**	130
Non-current	**1,754**	1,342
	2,006	1,472

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

	2023 £m	2022 £m
As at 1 April	**1,472**	1,160
Exchange adjustments	**54**	29
Revenue recognised that was included in the contract liability balance at the beginning of the period	**(292)**	(53)
Increases due to cash received, excluding amounts recognised as revenue during the period	**772**	510
Reclassification to held for sale (note 10)	**—**	(174)
At 31 March	**2,006**	1,472

24. Other non-current liabilities

Other non-current liabilities include deferred income and customer contributions which will not be recognised as income until after 31 March 2024. It also includes contingent consideration and other payables that are not due until after that date.

Other non-current liabilities are initially recognised at fair value and subsequently measured at amortised cost, with the exception of contingent consideration, which is subsequently measured at fair value.

	2023 £m	2022 £m
Deferred income	**84**	41
Customer contributions[1]	**421**	421
Contingent consideration	**—**	7
Other payables[2]	**416**	336
	921	805

1. Relates to amounts received from government-related entities for connecting to our networks, where we have obligations remaining under the contract.
2. Included within other payables are payments due in respect of the IFA1 interconnector in accordance with the Use of Revenue regime constructed by Ofgem.

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 contribution (DC) and defined benefit (DB) 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 'Employee Benefits'. We separately present our UK and US pension plans to show the 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.

UK pension plans

Defined contribution plan

Employees of National Grid's legacy UK businesses are eligible to join the National Grid UK Retirement Plan (NGUKRP), a section of a Master Trust arrangement managed by Legal & General. Separately, DC pension benefits are provided to NGED employees through the Western Power Pension Scheme (WPPS), which comprises four sections, each containing an element of DC pension provision. Of the four sections, it is only the '2010 Section' which is open to new NGED employees. National Grid pays contributions into the NGUKRP and WPPS 2010 Section to provide DC benefits on behalf of its employees, generally providing a double match of member contributions (up to a maximum Company contribution of 12% of salary in NGUKRP and 10% of salary in WPPS 2010 Section, increasing to 12% for future years on 1 April 2023).

Investment risks are borne by the member and there is no legal or constructive obligation on National Grid to pay additional contributions in the instance that investment performance is poor. Payments to these DC plans are charged as an expense as they fall due.

Defined benefit plans

National Grid operates various DB pension arrangements in the UK. These include Section A of the National Grid UK Pension Scheme (NGUKPS), three sections of the industry-wide Electricity Supply Pension Scheme (ESPS) and a legacy scheme (WPUPS), DB sections within WPPS and some unfunded pension obligations. Each of these plans holds assets in separate Trustee administered funds. The arrangements are managed by Trustee companies with boards consisting of company and member appointed Directors. These plans are all closed to new members, except for the ESPS schemes in very rare circumstances.

The Group became responsible for four of these pension schemes following the acquisition of NGED in the prior year. At the date of acquisition these schemes had combined assets of £7,662 million and the Group recognised a net pension asset on the balance sheet of £566 million (see note 37). This net pension asset was assessed consistently with the valuation of National Grid's existing defined benefit pension schemes but reflecting market conditions at the date of acquisition. In addition, the Group also became responsible for some smaller unfunded obligations relating to previous executives at NGED East Midlands and NGED West Midlands.

Following the sale of the UK Gas Transmission business in January 2023, the Group is no longer responsible for Section B of the NGUKPS. During the year, the Group carried out an exercise to align each employee's pension scheme with their future employer, enabling them to continue to earn DB benefits after the closing of the sale. These employees were then offered the chance to transfer their accrued pension benefits into their new pension scheme, with the transfers completing in January 2023.

The arrangements are subject to independent actuarial funding valuations every three years and, following consultation and agreement with the Company, 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 Company is in the process of agreeing actuarial valuations as at 31 March 2022 for each of the DB plans. This will involve implementing revised deficit recovery plans for any schemes where there is an assessed funding shortfall. The existing recovery plans agreed as part of the 31 March 2019 actuarial valuations are due to finish in November 2024, or earlier, with payments of approximately £60 million across all plans still due to be paid. Separately, National Grid continues to fund the cost of future benefit accrual (over and above member contributions) for each of the DB schemes. In the year to March 2023, the aggregate level of ongoing contributions (excluding recovery plan payments) was £74 million (2022: £83 million; 2021: £50 million). National Grid also pays contributions in respect of the costs of plan administration and the Pension Protection Fund (PPF) levies for most of its DB plans.

In addition, for some plans the Company has also agreed to establish security arrangements. This includes £186 million of security for Section A of NGUKPS, all of which is currently provided in the form of surety bonds but may also be provided as letters of credit or cash. This amount will be paid to Section A in the event that the relevant supporting employer is subject to an insolvency event or fails to make required contributions. Contingent security would be provided to National Grid Electricity Group (NGEG) of ESPS, in the form of cash payments of up to a maximum of £500 million, payable if certain trigger events occur in respect of National Grid Electricity Transmission plc.

A guarantee has also been provided to Section A of NGUKPS, with the payment 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.

US pension plans

The US pension plans are governed by a fiduciary committee called 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) and comprises appointed employees of the Company.

Defined contribution plans

National Grid has a DC pension plan which allows employee as well as Company contributions. Non-union employees hired after 1 January 2011, as well as most new hire union employees, receive a core contribution into the DC plan ranging from 3% to 9% of salary, irrespective of the employee's contribution into the plan. Most employees also receive a matching contribution that varies between 25% and 50% of employee contributions up to a maximum of 8% to 10%. The assets of the plans are held in trusts and administered by the RPC.

25. Pensions and other post-retirement benefits continued

US pension plans continued

Defined benefit plans

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 closed group of current and former employees with designated company investments set aside to fund these obligations. 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 £76 million (2022: £116 million).

In May 2022, NECO was sold to PPL Rhode Island Holdings, LLC (see note 10) and a portion of one of the DB pension plans was transferred to PPL Rhode Island Holdings, LLC's successor plan. Both active and inactive participants from NECO were transferred to PPL Rhode Island Holdings, LLC's successor plan with the sale, as well as some active employees from other subsidiaries. The sale required curtailment and settlement accounting, resulting in a remeasurement of the related plan's pension assets and benefit liabilities.

In addition, three of the DB pension plans underwent an annuity buyout transaction in which a portion of existing retiree pension payments were transferred to a reputable insurance company in exchange for a single bulk premium payment. As a result, all associated financial, governance and administrative responsibilities for those payments were transferred to the selected insurer. The annuity buyout required settlement accounting when the single bulk premium payment was paid to the insurer in June 2022.

US other post-retirement benefits

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 £11 million (2022: £17 million).

The sale of NECO to PPL Rhode Island Holdings, LLC in May 2022 resulted in the transfer of a proportional share of the associated union and non-union OPEB assets and benefit liabilities to PPL Rhode Island Holdings, LLC's successor plans.

Actuarial assumptions

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.

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 (see note 35). 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 Company has applied the following financial assumptions in assessing DB liabilities:

	UK pensions			US pensions			US other post-retirement benefits		
	2023 %	2022 %	2021 %	**2023 %**	2022 %	2021 %	**2023 %**	2022 %	2021 %
Discount rate – past service	**4.80**	2.78	2.00	**4.85**	3.65	3.25	**4.85**	3.65	3.25
Discount rate – future service	**4.80**	2.85	2.15	**4.85**	3.65	3.25	**4.85**	3.65	3.25
Rate of increase in RPI – past service	**3.17**	3.60	3.15	**n/a**	n/a	n/a	**n/a**	n/a	n/a
Rate of increase in RPI – future service	**3.07**	3.33	3.00	**n/a**	n/a	n/a	**n/a**	n/a	n/a
Salary increases	**3.11**	3.47	3.40	**4.50**	4.60	4.30	**4.50**	4.60	4.30
Initial healthcare cost trend rate	**n/a**	n/a	n/a	**n/a**	n/a	n/a	**6.80**	6.80	7.10
Ultimate healthcare cost trend rate	**n/a**	n/a	n/a	**n/a**	n/a	n/a	**4.50**	4.50	4.50

For UK pensions, single equivalent financial assumptions are shown above for presentational purposes, although full yield curves have been used in our calculations. 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. Our DB plans in the UK provide for pension increases that are generally linked to Retail Price Index (RPI), subject to relevant caps and floors.

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 2031 (2022: 2031).

25. Pensions and other post-retirement benefits continued

Actuarial assumptions continued

The table below sets out the projected life expectancies adopted for the UK and US pension arrangements:

	UK pensions			US pensions		
	2023 years	2022 years	2021 years	**2023 years**	2022 years	2021 years
Assumed life expectations for a retiree age 65						
Males	**21.9**	22.0	21.8	**21.6**	21.4	21.6
Females	**23.7**	23.8	23.7	**23.8**	23.6	24.0
In 20 years:						
Males	**23.0**	23.2	23.1	**23.2**	23.1	23.2
Females	**25.1**	25.2	25.2	**25.4**	25.3	25.5

The weighted average duration of the DB obligation for each category of plan is 12 years for UK pension plans, 12 years for US pension plans and 13 years for US other post-retirement benefit plans. The table below summarises the split of DB obligations by status for each category of plan:

	UK pensions		US pensions		US other post-retirement benefits	
	2023 %	2022 %	**2023 %**	2022 %	**2023 %**	2022 %
Active members	**14**	16	**37**	36	**33**	34
Deferred members	**9**	10	**9**	9	**—**	—
Pensioner members	**77**	74	**54**	55	**67**	66

Amounts recognised in the consolidated statement of financial position

	2023 £m	2022 £m
Present value of funded obligations	**(18,934)**	(23,541)
Fair value of plan assets	**21,246**	27,013
	2,312	3,472
Present value of unfunded obligations	**(292)**	(326)
Other post-employment liabilities	**(69)**	(71)
Net defined benefit asset	**1,951**	3,075
Represented by:		
Liabilities	**(694)**	(810)
Assets	**2,645**	3,885
	1,951	3,075

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

	UK pensions		US pensions		US other post-retirement benefits		Total	
	2023 £m	2022 £m	**2023 £m**	2022 £m	**2023 £m**	2022 £m	**2023 £m**	2022 £m
Present value of funded obligations	**(10,906)**	(14,197)	**(5,502)**	(6,531)	**(2,526)**	(2,813)	**(18,934)**	(23,541)
Fair value of plan assets	**12,578**	16,865	**6,060**	7,263	**2,608**	2,885	**21,246**	27,013
	1,672	2,668	**558**	732	**82**	72	**2,312**	3,472
Present value of unfunded obligations	**(58)**	(78)	**(234)**	(248)	**—**	—	**(292)**	(326)
Other post-employment liabilities	**—**	—	**—**	—	**(69)**	(71)	**(69)**	(71)
Net defined benefit asset	**1,614**	2,590	**324**	484	**13**	1	**1,951**	3,075
Represented by:								
Liabilities	**(58)**	(78)	**(234)**	(248)	**(402)**	(484)	**(694)**	(810)
Assets	**1,672**	2,668	**558**	732	**415**	485	**2,645**	3,885
	1,614	2,590	**324**	484	**13**	1	**1,951**	3,075

The recognition of the pension assets in the UK and in the US reflects legal and actuarial advice that we have taken regarding recognition of surpluses under IFRIC 14. In the UK, the Group has an unconditional right to a refund in the event of a winding up. In the US, surplus assets of a plan may be used to pay for future benefits expected to be earned under that plan.

25. Pensions and other post-retirement benefits continued

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

The expense or income arising from all Group retirement benefit arrangements recognised in the Group income statements is shown below:

	2023 £m	2022 £m	2021 £m
Included within operating costs			
Administration costs	**19**	20	18
Included within payroll costs			
Defined benefit plan costs:			
Current service cost	**194**	223	175
Past service cost – augmentations	**—**	1	—
Past service cost/(credit) – redundancies	**5**	1	(1)
Special termination benefit cost – redundancies	**3**	9	5
Gains on settlement	**(45)**	—	—
	157	234	179
Included within finance income and costs			
Net interest (income)/cost	**(85)**	(2)	38
Total included in income statement[1]	**91**	252	235
Remeasurement (losses)/gains of pension assets and post-retirement benefit obligations[2]	**(1,364)**	2,481	1,408
Exchange adjustments	**41**	7	186
Total included in the statement of other comprehensive income[3]	**(1,323)**	2,488	1,594

1. Amounts shown in the table above include operating costs of £nil (2022: £4 million; 2021: £3 million); payroll costs of £nil (2022: £10 million; 2021: £10 million); and net interest income of £nil (2022: £2 million; 2021: £13 million) presented within profit from discontinued operations. These amounts all relate to UK pensions.
2. For the year ended 31 March 2021, this included actuarial losses from the purchase of buy-in policies of £0.1 billion.
3. Amounts shown in the table above include remeasurements of pension assets and post-retirement benefit obligations of £nil (2022: £309 million gain; 2021: £250 million loss) presented within discontinued operations. These amounts all relate to UK pensions.

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

	UK pensions			US pensions			US other post-retirement benefits		
	2023 £m	2022 £m	2021 £m	2023 £m	2022 £m	2021 £m	2023 £m	2022 £m	2021 £m
Included within operating costs									
Administration costs	**9**	11	9	**8**	7	7	**2**	2	2
Included within payroll costs									
Defined benefit plan costs:									
Current service cost	**69**	83	28	**88**	101	104	**37**	39	43
Past service cost – augmentations	**—**	1	—	**—**	—	—	**—**	—	—
Past service cost/(credit) – redundancies	**5**	1	(1)	**—**	—	—	**—**	—	—
Special termination benefit cost – redundancies	**3**	9	5	**—**	—	—	**—**	—	—
Gains on settlement	**—**	—	—	**(45)**	—	—	**—**	—	—
	77	94	32	**43**	101	104	**37**	39	43
Included within finance income and costs									
Net interest (income)/cost	**(64)**	(7)	(38)	**(21)**	—	35	**—**	5	41
Total included in income statement	**22**	98	3	**30**	108	146	**39**	46	86
Remeasurement (losses)/gains of pension assets and post-retirement benefit obligations[1]	**(1,183)**	1,577	(622)	**(242)**	532	1,017	**61**	372	1,013
Exchange adjustments	**—**	—	—	**36**	11	83	**5**	(4)	103
Total included in the statement of other comprehensive income	**(1,183)**	1,577	(622)	**(206)**	543	1,100	**66**	368	1,116

1. For the year ended 31 March 2021, UK pensions is stated after actuarial losses from the purchase of buy-in policies of £0.1 billion.

25. Pensions and other post-retirement benefits continued

Reconciliation of the net defined benefit asset

	UK pensions		US pensions		US other post-retirement benefits		Total	
	2023 £m	2022 £m	2023 £m	2022 £m	2023 £m	2022 £m	2023 £m	2022 £m
Opening net defined benefit asset/(liability)	**2,590**	1,035	**484**	(22)	**1**	(298)	**3,075**	715
Cost recognised in the income statement (including discontinued operations)	**(22)**	(98)	**(30)**	(108)	**(39)**	(46)	**(91)**	(252)
Remeasurement and foreign exchange effects recognised in the statement of other comprehensive income	**(1,183)**	1,577	**(206)**	543	**66**	368	**(1,323)**	2,488
Employer contributions	**197**	167	**76**	116	**11**	17	**284**	300
Other movements	**2**	7	**—**	—	**(26)**	(29)	**(24)**	(22)
Acquisition of NGED	**—**	566	**—**	—	**—**	—	**—**	566
Reclassification to held for sale (note 10)	**30**	(664)	**—**	(45)	**—**	(11)	**30**	(720)
Closing net defined benefit asset	**1,614**	2,590	**324**	484	**13**	1	**1,951**	3,075

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

The table below shows the movement in defined benefit obligations across our DB plans over the year.

	UK pensions		US pensions		US other post-retirement benefits		Total	
	2023 £m	2022 £m	2023 £m	2022 £m	2023 £m	2022 £m	2023 £m	2022 £m
Opening defined benefit obligations	**(14,275)**	(13,645)	**(6,779)**	(6,931)	**(2,813)**	(3,031)	**(23,867)**	(23,607)
Current service cost	**(69)**	(83)	**(88)**	(101)	**(37)**	(39)	**(194)**	(223)
Interest cost	**(334)**	(88)	**(252)**	(240)	**(111)**	(100)	**(697)**	(428)
Actuarial (losses)/gains – experience	**(235)**	(627)	**(17)**	(24)	**48**	107	**(204)**	(544)
Actuarial gains – demographic assumptions	**135**	133	**5**	100	**10**	71	**150**	304
Actuarial gains – financial assumptions	**3,167**	1,387	**818**	329	**443**	192	**4,428**	1,908
Past service cost – redundancies	**(5)**	(1)	**—**	—	**—**	—	**(5)**	(1)
Special termination benefit cost – redundancies	**(3)**	(9)	**—**	—	**—**	—	**(3)**	(9)
Past service cost – augmentations	**—**	(1)	**—**	—	**—**	—	**—**	(1)
Liabilities extinguished on settlements	**—**	—	**616**	—	**—**	—	**616**	—
Medicare subsidy received	**—**	—	**—**	—	**(28)**	(24)	**(28)**	(24)
Employee contributions	**(10)**	(8)	**—**	—	**—**	—	**(10)**	(8)
Benefits paid	**711**	919	**426**	403	**153**	159	**1,290**	1,481
Exchange adjustments	**—**	—	**(465)**	(327)	**(191)**	(140)	**(656)**	(467)
Acquisition of NGED	**—**	(7,096)	**—**	—	**—**	—	**—**	(7,096)
Reclassification to held for sale	**(46)**	4,844	**—**	12	**—**	(8)	**(46)**	4,848
Closing defined benefit obligations	**(10,964)**	(14,275)	**(5,736)**	(6,779)	**(2,526)**	(2,813)	**(19,226)**	(23,867)

Changes in the value of plan assets

The table below shows the movement in pension assets across our DB plans over the year.

	UK pensions		US pensions		US other post-retirement benefits		Total	
	2023 £m	2022 £m	2023 £m	2022 £m	2023 £m	2022 £m	2023 £m	2022 £m
Opening fair value of plan assets	**16,865**	14,680	**7,263**	6,909	**2,885**	2,799	**27,013**	24,388
Interest income	**398**	95	**273**	240	**111**	95	**782**	430
Return on plan assets (less than)/in excess of interest	**(4,250)**	684	**(1,048)**	127	**(440)**	2	**(5,738)**	813
Administration costs	**(9)**	(11)	**(8)**	(7)	**(2)**	(2)	**(19)**	(20)
Assets distributed on settlements	**—**	—	**(571)**	—	**—**	—	**(571)**	—
Employer contributions	**197**	167	**76**	116	**11**	17	**284**	300
Employee contributions	**10**	8	**—**	—	**—**	—	**10**	8
Benefits paid	**(709)**	(912)	**(426)**	(403)	**(153)**	(159)	**(1,288)**	(1,474)
Exchange adjustments	**—**	—	**501**	338	**196**	136	**697**	474
Acquisition of NGED	**—**	7,662	**—**	—	**—**	—	**—**	7,662
Reclassification to held for sale	**76**	(5,508)	**—**	(57)	**—**	(3)	**76**	(5,568)
Closing fair value of plan assets	**12,578**	16,865	**6,060**	7,263	**2,608**	2,885	**21,246**	27,013
Actual return on plan assets	**(3,852)**	779	**(775)**	367	**(329)**	97	**(4,956)**	1,243
Expected contributions to plans in the following year	**99**	146	**36**	74	**14**	14	**149**	234

25. Pensions and other post-retirement benefits continued

Asset allocations

The allocation of assets by asset class is set out below. Within these asset allocations there is significant diversification across regions, asset managers, currencies and bond categories.

UK pensions

	2023			2022			2021		
	Quoted £m	**Unquoted £m**	**Total £m**	Quoted £m	Unquoted £m	Total £m	Quoted £m	Unquoted £m	Total £m
Equities	**475**	**179**	**654**	1,458	474	1,932	555	801	1,356
Corporate bonds	**1,956**	**—**	**1,956**	2,741	—	2,741	3,730	37	3,767
Government securities	**762**	**—**	**762**	786	—	786	1,836	—	1,836
Property	**23**	**860[1]**	**883**	122	1,002[1]	1,124	104	565[1]	669
Diversified alternatives	**708**	**680**	**1,388**	1,334	432	1,766	—	712	712
Liability-matching assets	**1,958[2]**	**4,873[3]**	**6,831[4]**	2,023[2]	6,090[3]	8,113[4]	1,731[2]	4,133[3]	5,864[4]
Longevity swap	**—**	**(88)**	**(88)**	—	(80)	(80)	—	(64)	(64)
Cash and cash equivalents	**145**	**—**	**145**	477	—	477	34	250	284
Other (including net current assets and liabilities)	**59**	**(12)**	**47**	16	(10)	6	—	256	256
	6,086	**6,492**	**12,578[5]**	8,957	7,908	16,865[5]	7,990	6,690	14,680[5]

1. Includes £304 million (2022: £283 million; 2021: £nil) of investments in forestry funds.
2. Consists of pooled funds which invest mainly in fixed interest securities.
3. Includes buy-in policies held by NGUKPS with a total value of £2.1 billion (2022: £2.7 billion; 2021: £4.1 billion).
4. Included within liability-matching assets above is £3.4 billion (2022: £6.6 billion; 2021: £2.5 billion) of repurchase agreements. These are used to increase the market exposure of the liability-matching portfolios.
5. The fair value of plan assets for NGUKPS Section A includes employer-related investment exposure of £23 million (2022: £32 million; 2021: £nil).

US pensions

	2023			2022			2021		
	Quoted £m	**Unquoted £m**	**Total £m**	Quoted £m	Unquoted £m	Total £m	Quoted £m	Unquoted £m	Total £m
Equities	**154**	**1,346**	**1,500**	272	1,904	2,176	560	2,359	2,919
Corporate bonds	**2,147**	**528**	**2,675**	2,311	697	3,008	1,547	507	2,054
Government securities	**410**	**514**	**924**	335	715	1,050	354	527	881
Property	**—**	**299**	**299**	—	295	295	—	264	264
Diversified alternatives	**85**	**285**	**370**	142	364	506	167	458	625
Infrastructure	**—**	**265**	**265**	—	182	182	—	130	130
Cash and cash equivalents	**16**	**—**	**16**	31	—	31	24	—	24
Other (including net current assets and liabilities)	**7**	**4**	**11**	12	3	15	12	—	12
	2,819	**3,241**	**6,060**	3,103	4,160	7,263	2,664	4,245	6,909

US other post-retirement benefits

	2023			2022			2021		
	Quoted £m	**Unquoted £m**	**Total £m**	Quoted £m	Unquoted £m	Total £m	Quoted £m	Unquoted £m	Total £m
Equities	**74**	**510**	**584**	185	1,013	1,198	419	1,303	1,722
Corporate bonds	**1,332**	**2**	**1,334**	723	2	725	13	—	13
Government securities	**431**	**2**	**433**	511	2	513	533	3	536
Diversified alternatives	**100**	**9**	**109**	144	120	264	185	172	357
Other[1]	**1**	**147**	**148**	—	185	185	—	171	171
	1,938	**670**	**2,608**	1,563	1,322	2,885	1,150	1,649	2,799

1. Other primarily comprises insurance contracts.

Main defined benefit risks

National Grid underwrites the financial and demographic risks associated with our DB 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.

25. Pensions and other post-retirement benefits continued

Main defined benefit risks continued

The most significant risks associated with the DB plans are:

Main risks	Description and mitigation
Investment risk	The plans invest in a variety of asset classes, with actual returns likely to 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.
Changes in bond yields	Liabilities will fluctuate as yields change. Volatility of the net balance sheet asset or liability is controlled through liability-matching strategies. The investment strategies allow for the use of synthetic as well as physical assets to be used to hedge interest rate risk.
Inflation risk	Changes in inflation will affect 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. The investment strategies allow for the use of synthetic as well as physical assets to be used to hedge inflation risk.
Member longevity	Improvements in life expectancy will lead to pension payments being paid for longer than expected and benefits ultimately being more expensive. This risk has been partly mitigated by scheme investment transactions including a longevity insurance contract (longevity swap) for NGEG of ESPS and two buy-in policies for Section A of NGUKPS.
Counterparty risk	This 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.
Default risk	Debt investments are predominantly made in regulated markets in assets considered to be of investment grade. 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 ranges, to control the risk.
Liquidity risk	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. These could include collateral calls relating to the plans' liability-matching assets which could result from extreme market movements. Should the plans not have sufficient liquidity to meet cash flow requirements, they could be forced to take sub-optimal investment decisions such as selling assets at a reduced price. The plans do not borrow money, or act as guarantor, to provide liquidity to other parties (unless it is temporary).
Currency risk	Fluctuations in the value of foreign denominated assets due to exposure to currency exchange rates are managed through currency hedging overlay and currency hedging carried out by some of the investment managers.

DB plan investment strategies

The Trustees and RPC, after taking advice from professional investment advisors and in consultation with National Grid, set their key principles, including expected returns, risk and liquidity requirements. They formulate an investment strategy to manage risk through diversification, taking into account expected contributions, maturity of the pension liabilities and, in the UK, the strength of the covenant. These strategies allocate investments between return-seeking assets such as equities and property, and liability-matching assets such as buy-in policies, government securities and corporate bonds which are intended to protect the funding position.

The approximate investment allocations for our plans at 31 March 2023 are as follows:

	UK pensions %	US pensions %	US other post-retirement benefits %
Return-seeking assets	24	36	32
Liability-matching assets	76	64	68

The governing bodies 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 in those markets, process and financial security to manage the investments. Their performance is regularly reviewed against measurable objectives, consistent with each pension plan's long-term objectives and accepted risk levels.

The extreme volatility of the UK gilt market during 2022 led to significant liquidity pressures on DB pension schemes, with large collateral calls from Liability-Driven Investment (LDI) fund managers requiring some schemes to either sell illiquid assets at short notice or reduce their level of hedging. Whilst these liquidity calls were met by the schemes, the Company provided Section A of NGUKPS with a short-term loan of £125 million to ensure that any further significant rises in gilt yields would not require a reduction to hedging levels. This loan was repaid in January 2023. Each of our schemes continues to review its strategy for hedging interest rates and inflation, to ensure it is not exposed to undue risk given further future market volatility.

In the UK, each of our pension plans has Responsible Investment (RI) Policies, which take into account Environmental, Social and Governance (ESG) factors and generally incorporate the six UN-backed Principles for Responsible Investment (UNPRI). Each of the Trustee boards believes that ESG factors can be material to financial outcomes and should therefore be considered alongside other factors. They 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, they also recognise the increasing materiality of ESG factors and that they have a fiduciary and regulatory duty to consider RI, including ESG factors and their potential impact on the quality and sustainability of long-term investment returns. The principal defined contribution arrangement in the UK embeds ESG factors in the investment options offered to members. As well as offering a range of self-select ethical funds, it directly incorporates its Climate Impact Pledge into the default investment option, which acts to align the fund to a carbon net zero future.

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

26. Provisions

Provisions are recognised where a legal or constructive obligation exists at the reporting date, as a result of a past event, where the outflow of economic benefit is probable and where the amount of the obligation can be reliably estimated. Provisions are recognised for the costs of environmental remediation; decommissioning costs for certain assets that we are required to remove at the end of their useful economic lives; restructuring costs; and for certain other situations where the above thresholds are met.

Long-term provisions are measured based on management's best estimates of the likely cash flows, discounted at an appropriate discount rate. The unwinding of the discount is included within the income statement within finance costs. Short-term provisions are measured at the expected cash outflow and are not discounted.

	Environmental £m	Decommissioning £m	Other £m	Total provisions £m
At 1 April 2021	1,700	244	283	2,227
Exchange adjustments	82	4	11	97
Additions	158	37	228	423
Acquisition of NGED (note 37)	—	37	29	66
Unused amounts reversed	(25)	(4)	(32)	(61)
Unwinding of discount	64	6	3	73
Utilised	(99)	(26)	(69)	(194)
Reclassification to held for sale (note 10)	(3)	(40)	(49)	(92)
At 31 March 2022	1,877	258	404	2,539
Exchange adjustments	114	5	12	131
Additions	142	91	222	455
Unused amounts reversed	(38)	(10)	(14)	(62)
Adjustment for change in discount rate[1]	(176)	(48)	—	(224)
Unwinding of discount	72	10	6	88
Utilised	(100)	(9)	(176)	(285)
At 31 March 2023	**1,891**	**297**	**454**	**2,642**

	2023 £m	2022 £m
Current	**288**	240
Non-current	**2,354**	2,299
	2,642	2,539

1. In the year, environmental provisions decreased by £176 million as a result of the change in the real discount rate from 0.5% to 1.5% (see note 5 for details). Decommissioning provisions decreased by £48 million with an associated decrease in the carrying amount of property, plant and equipment of £48 million.

26. Provisions continued

Environmental provisions

We recognise environmental provisions for 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:

	2023			2022		
	Discounted £m	**Real undiscounted £m**	**Real discount rate**	Discounted £m	Real undiscounted £m	Real discount rate
UK sites	**123**	**138**	**1.5%**	152	160	0.5%
US sites	**1,768**	**2,006**	**1.5%**	1,725	1,789	0.5%
	1,891	**2,144**		1,877	1,949	

The remediation expenditure in the US is expected to be incurred until 2070, of which the majority relates to three Superfund sites (being sites where hazardous substances are present as a result of the historical operations of manufactured gas plants in Brooklyn, New York). The weighted average duration of the cash flows is 11 years. Under the terms of our rate plans, we are entitled to recovery of environmental clean-up costs from rate payers.

The provision is calculated based on management's best estimate of the real cash flows that will be required discounted at a real discount rate, calculated based on the US government bond yield curve and the weighted average life of the provisions. The undiscounted amount is the best estimate of the actual cash flows that will be required with regard to these uncertainties.

A number of estimation uncertainties affect the calculation of these provisions, including the impact of and possibility of changes to regulations, the accuracy of site surveys, unexpected contaminants, transportation costs, the impact of alternative technologies, the expected timing and duration of cash flows, and changes in the real discount rate. These provisions incorporate 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 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 2069. The uncertainties regarding the calculation of this provision are similar to those considered in respect of US sites.

Changes in the provision arising from revised estimates, discount rates or changes in the expected timing of expenditure are recognised in the income statement. We have included sensitivity analysis in note 35. The cost of remediation may also vary from the amounts provided for as regulations might change or additional work may be required once full site surveys have been conducted. The facts and circumstances relating to particular cases are evaluated regularly in determining whether an environmental provision should be revised (see note 30).

Decommissioning provisions

We recognise provisions for decommissioning costs for various assets we are required to remove at the end of their lives, including the safe removal of asbestos for certain of our generation units and the restoration of seabeds in respect of our interconnectors. Provisions to decommission significant portions of our regulated transmission and distribution assets are not recognised where no legal obligations exist and where a realistic alternative exists to incurring costs to decommission the assets at the end of their lives. In any case, even if a legal or constructive obligation did exist, it is not currently determinable when remediation work would take place and therefore no provision would be recorded at this point.

An initial estimate of decommissioning 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. Expenditure is expected to be incurred until 2108.

Other provisions

Included within other provisions at 31 March 2023 are the following amounts:

- £182 million (2022: £163 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 2037;
- £108 million (2022: £121 million) of estimated liabilities in respect of interconnector excess revenues which will be repayable in future reporting periods in accordance with the cap and floor regime constructed by Ofgem (see note 3). These estimates are based on the respective interconnectors' performance against their cumulative caps and cash outflows will be required to settle these liabilities by the financial year ending 31 March 2028;
- £37 million (2022: £28 million) in respect of onerous lease commitments and rates payable on surplus properties with expenditure expected to be incurred until 2039;
- £48 million (2022: £26 million) in respect of emissions provisions with expenditure expected to be incurred until 2024; and
- £5 million (2022: £17 million) relating to restructuring provisions, which are recognised when a formal restructuring plan is in place and a valid expectation has been raised with those affected by it. In 2023, we continued to undertake design and implementation activities in respect of our cost efficiency programme, which resulted in the recognition of an increased provision of £2 million in the year (2022: £16 million). The income statement expense relating to the provision has been treated as an exceptional item, and details are provided in note 5.

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	
	Shares million	Nominal value £m
At 1 April 2021	3,815	474
Issued during the year in lieu of dividends[1]	89	11
At 31 March 2022	3,904	485
Issued during the year in lieu of dividends[1]	26	3
At 31 March 2023	**3,930**	**488**

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 (each of which represents five ordinary shares) 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.

The Company is conducting a share forfeiture programme following the completion of a tracing and notification exercise to any shareholders who have not had contact with the Company over the past 12 years, in accordance with the provisions set out in the Company's Articles of Association. Under the share forfeiture programme, the shares and dividends associated with shares of untraced members have been forfeited, with the resulting proceeds transferred to the Company to use in line with the Company's strategy in relation to corporate responsibility. During the financial year, the Company received £5 million (2022: £16 million) of proceeds from the sale of untraced shares and derecognised £5 million (2022: £32 million) of liabilities related to unclaimed dividends, which are reflected in share premium and the income statement respectively.

Treasury shares

At 31 March 2023, the Company held 254 million (2022: 259 million) of its own shares. The market value of these shares as at 31 March 2023 was £2,783 million (2022: £3,038 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 2023:

i. During the year, 3 million (2022: 4 million) treasury shares were gifted to National Grid Employee Share Trusts and 2 million (2022: 2 million) treasury shares were reissued in relation to employee share schemes, in total representing approximately 0.1% (2022: 0.2%) of the ordinary shares in issue as at 31 March 2023. The nominal value of these shares was £1 million (2022: £1 million) and the total proceeds received were £16 million (2022: £17 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 £4 million (2022: £3 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 259 million (2022: 266 million) representing approximately 6.6% (2022: 6.8%) of the ordinary shares in issue as at 31 March 2023 and having a nominal value of £32 million (2022: £33 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 or fair value movements on certain financial instruments that the Company holds.

Other equity reserves comprise the translation reserve (see note 1C), cash flow hedge reserve and the cost of hedging reserve (see note 32), 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). See note 15 for further detail on 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	FVOCI equity £m	FVOCI debt £m	Own credit £m	Capital redemption £m	Merger £m	Total £m
At 1 April 2020	1,310	(75)	(50)	25	31	10	19	(5,165)	(3,895)
Exchange adjustments[1]	(1,345)	—	—	—	—	—	—	—	(1,345)
Net gains/(losses) taken to equity	—	14	11	36	80	(11)	—	—	130
Share of net losses of associates taken to equity	—	1	—	—	—	—	—	—	1
Transferred to profit or loss	—	56	3	—	—	—	—	—	59
Net losses in respect of cash flow hedging of capital expenditure	—	(14)	—	—	—	—	—	—	(14)
Tax	—	(13)	8	(10)	—	2	—	—	(13)
Cash flow hedges transferred to the statement of financial position, net of tax	—	(17)	—	—	—	—	—	—	(17)
At 1 April 2021	(35)	(48)	(28)	51	111	1	19	(5,165)	(5,094)
Exchange adjustments[1]	629	—	—	—	—	—	—	—	629
Net losses taken to equity[2]	—	(96)	(2)	(70)	(11)	(1)	—	—	(180)
Share of net gains of associates taken to equity	—	1	—	—	—	—	—	—	1
Transferred to profit or loss	—	40	(1)	—	—	—	—	—	39
Net losses in respect of cash flow hedging of capital expenditure	—	(1)	—	—	—	—	—	—	(1)
Tax	—	11	2	19	3	—	—	—	35
Cash flow hedges transferred to the statement of financial position, net of tax	—	8	—	—	—	—	—	—	8
At 1 April 2022	594	(85)	(29)	—	103	—	19	(5,165)	(4,563)
Exchange adjustments[1]	882	—	—	—	—	—	—	—	882
Exchange differences reclassified to the consolidated income statement on disposal	(170)	—	—	—	—	—	—	—	(170)
Net gains/(losses) taken to equity	—	142	(12)	—	(25)	—	—	—	105
Share of net gains of associates taken to equity	—	1	—	—	—	—	—	—	1
Transferred to profit or loss	—	(136)	—	—	—	—	—	—	(136)
Net gains in respect of cash flow hedging of capital expenditure	—	10	—	—	—	—	—	—	10
Tax	—	2	3	—	1	—	—	—	6
Cash flow hedges transferred to the statement of financial position, net of tax	—	5	—	—	—	—	—	—	5
At 31 March 2023	**1,306**	**(61)**	**(38)**	**—**	**79**	**—**	**19**	**(5,165)**	**(3,860)**

1. The exchange adjustments recorded in the translation reserve comprise a gain of £1,080 million (2022: gain of £754 million; 2021: loss of £1,507 million) relating to the translation of foreign operations offset by a loss of £198 million (2022: loss of £125 million; 2021: gain of £183 million) relating to borrowings, cross-currency swaps and foreign exchange forward contracts used to hedge the net investment in non-sterling denominated subsidiaries.
2. In the year ended 31 March 2022, the Group disposed of its equity instruments related to shares held as part of a portfolio of financial instruments which back some long-term employee liabilities. The equity instruments were previously measured at FVOCI and prior to the disposal the Group recognised a gain of £12 million. The accumulated gain of £82 million recognised in other comprehensive income in the year ended 31 March 2022 was transferred to retained earnings on disposal.

29. Net debt

We define net debt as the amount of borrowings and financing derivatives less cash and current financial investments.

(a) Composition of net debt

Net debt is comprised as follows:

	2023 £m	2022 £m	2021 £m
Cash and cash equivalents (see note 20)	**163**	204	157
Current financial investments (see note 15)	**2,605**	3,145	2,342
Borrowings (see note 21)	**(42,985)**	(45,465)	(31,220)
Financing derivatives[1] (see note 17)	**(756)**	(693)	175
	(40,973)	(42,809)	(28,546)

1. The financing derivatives balance included in net debt excludes the commodity derivatives (see note 17).

(b) Analysis of changes in net debt

	Notes	Cash and cash equivalents £m	Financial investments[1] £m	Borrowings £m	Financing derivatives £m	Total[2] £m
At 1 April 2020		73	1,998	(30,794)	133	(28,590)
Cash flow		95	429	(2,336)	4	(1,808)
Fair value gains and losses		—	14	159	31	204
Foreign exchange movements		(7)	(106)	1,710	—	1,597
Interest income/(charges)	6	—	7	(946)	7	(932)
Other non-cash movements		—	—	(136)	—	(136)
Reclassification to held for sale	10	(4)	—	1,123	—	1,119
At 1 April 2021		157	2,342	(31,220)	175	(28,546)
Cash flow	29(c)	9	752	(9,993)	262	(8,970)
Fair value gains and losses		—	(12)	286	(604)	(330)
Foreign exchange movements		5	53	(652)	—	(594)
Interest income/(charges)	6	—	43	(1,177)	(59)	(1,193)
Other non-cash movements		—	(15)	34	—	19
Acquisition of NGED	37	44	69	(8,286)	26	(8,147)
Reclassification to held for sale[3]	10	(11)	(87)	5,543	(493)	4,952
At 1 April 2022		204	3,145	(45,465)	(693)	(42,809)
Cash flow	29(c)	(48)	(651)	5,268	455	5,024
Fair value gains and losses		—	(18)	367	(348)	1
Foreign exchange movements		7	61	(1,311)	—	(1,243)
Interest income/(charges)	6	—	73	(1,658)	(170)	(1,755)
Other non-cash movements		—	—	(283)	—	(283)
Reclassification to held for sale[3]	10	—	(5)	97	—	92
At 31 March 2023		**163**	**2,605**	**(42,985)**	**(756)**	**(40,973)**
Balances at 31 March 2023 comprise:						
Non-current assets		—	—	—	263	263
Current assets		163	2,605	—	100	2,868
Current liabilities		—	—	(2,955)	(93)	(3,048)
Non-current liabilities		—	—	(40,030)	(1,026)	(41,056)
		163	**2,605**	**(42,985)**	**(756)**	**(40,973)**

1. Cash flows on current financial investments comprise £65 million (2022: £29 million; 2021: £7 million) of interest received and £586 million of cash inflows (2022: £781 million outflows; 2021: £436 million outflows) of net cash flow movements in short-term financial investments, as presented in the consolidated cash flow statement.
2. Includes accrued interest at 31 March 2023 of £401 million (2022: £351 million; 2021: £263 million).
3. Reclassification to held for sale in the year ended 31 March 2022 represented the opening net debt position of the UK Gas Transmission business (see note 10). In the current year the reclassification to held for sale relates to the disposal of NECO which was not classified as a discontinued operation.

29. Net debt continued

(c) Reconciliation of cash flow from liabilities within net debt to cash flow statement

	2023		2022		2021	
	Borrowings and other £m	Financing derivatives £m	Borrowings and other £m	Financing derivatives £m	Borrowings and other £m	Financing derivatives £m
Cash flows per financing activities section of cash flow statement:						
Proceeds received from loans	**11,908**	**—**	12,347	—	5,150	—
Repayment of loans	**(15,260)**	**—**	(1,261)	—	(1,654)	—
Payments of lease liabilities	**(155)**	**—**	(117)	—	(107)	—
Net movements in short-term borrowings	**(511)**	**—**	(11)	—	(619)	—
Cash inflows on derivatives	**—**	**190**	—	20	—	17
Cash outflows on derivatives	**—**	**(118)**	—	(114)	—	(183)
Interest paid	**(1,277)**	**(153)**	(998)	(55)	(711)	(42)
Cash flows per financing activities section of cash flow statement	**(5,295)**	**(81)**	9,960	(149)	2,059	(208)
Adjustments:						
Non-net debt-related items	**27**	**—**	33	—	29	—
Derivative cash (outflow)/inflow in relation to capital expenditure	**—**	**(12)**	—	(8)	—	10
Derivative cash inflows per investing section of cash flow statement	**—**	**—**	—	17	—	225
Derivative cash outflows per investing section of cash flow statement	**—**	**(362)**	—	(122)	—	(81)
Cash flows relating to financing liabilities within net debt	**(5,268)**	**(455)**	9,993	(262)	2,088	(54)
Analysis of changes in net debt:						
Borrowings	**(5,268)**	**—**	9,993	—	2,088	—
Financing derivatives	**—**	**(455)**	—	(262)	—	(54)
Cash flow movements relating to financing liabilities within net debt	**(5,268)**	**(455)**	9,993	(262)	2,088	(54)

(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. For the purposes of this table, the liabilities arising from financing activities are those for which cash flows were, or future cash flows will be, classified in the consolidated cash flow statement within financing activities. As a result we have separately disclosed the reconciliation below, excluding derivatives associated with our net investment hedges and derivatives associated with the hedging of capital expenditure, given that they are both classified in the consolidated cash flow statement within investing activities.

	Notes	Borrowings £m	Financing derivatives £m	Total £m
At 1 April 2020		(30,794)	228	(30,566)
Cash flow[1]		(2,336)	158	(2,178)
Fair value gains and losses		159	(301)	(142)
Foreign exchange movements		1,710	—	1,710
Interest charges	6	(946)	11	(935)
Other non-cash movements		(136)	—	(136)
Reclassification to held for sale	10	1,123	—	1,123
At 1 April 2021		(31,220)	96	(31,124)
Cash flow		(9,993)	149	(9,844)
Fair value gains and losses		286	(472)	(186)
Foreign exchange movements		(652)	—	(652)
Interest charges	6	(1,177)	(54)	(1,231)
Other non-cash movements		34	—	34
Acquisition of NGED	37	(8,286)	26	(8,260)
Reclassification to held for sale[2]	10	5,543	(495)	5,048
At 1 April 2022		(45,465)	(750)	(46,215)
Cash flow		5,268	81	5,349
Fair value gains and losses		367	46	413
Foreign exchange movements		(1,311)	—	(1,311)
Interest charges	6	(1,658)	(170)	(1,828)
Other non-cash movements		(283)	—	(283)
Reclassification to held for sale[2]		97	—	97
At 31 March 2023		**(42,985)**	**(793)**	**(43,778)**

1. Amounts shown for the year ended 31 March 2021 include financing cash flows attributable to the UK Gas Transmission business which was classified as a discontinued operation (see notes 1 and 10). In order to reconcile financing cash flows to the consolidated cash flow statement for the year ended 31 March 2021, cash flows from financing activities for both continuing operations and discontinued operations should be included, along with non-debt related items in note 29(c).
2. Reclassification to held for sale in the year ended 31 March 2022 represented the opening net debt position of the UK Gas Transmission business (see note 10).

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. 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.

Contingent assets are disclosed where the Group concludes that an inflow of economic benefits is probable.

	2023 £m	2022 £m
Future capital expenditure		
Contracted for but not provided[1]	**3,035**	2,881
Energy purchase commitments[2]		
Less than 1 year	**1,391**	1,386
In 1 to 2 years	**985**	1,366
In 2 to 3 years	**1,057**	1,219
In 3 to 4 years	**912**	1,189
In 4 to 5 years	**929**	1,088
More than 5 years	**13,920**	12,266
	19,194	18,514
Guarantees		
Guarantee of subleases for US properties (expire up to 2040)	**219**	149
Guarantees of certain obligations of Grain LNG (expire up to 2025)	**32**	31
Guarantees of certain obligations for construction of HVDC West Coast Link	**—**	84
Guarantees of certain obligations of National Grid North Sea Link Limited (various expiry dates)	**281**	569
Guarantees of certain obligations of St William Homes LLP (various expiry dates)	**44**	44
Guarantees of certain obligations of National Grid IFA 2 Limited (expected expiry 2023)	**144**	130
Guarantees of certain obligations of National Grid Viking Link Limited (expected expiry 2024)	**1,185**	1,177
Other guarantees and letters of credit (various expiry dates)	**321**	380
	2,226	2,564

1. Included within future capital expenditure for the year ended 31 March 2022 was £205 million pertaining to the UK Gas Transmission business.
2. 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).

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.

Contingent liabilities

The Group is subject to national and local laws governing the clean-up of sites used previously in its operations. These laws and associated regulations require the Group to take future actions to remediate the effects on the environment of the release of chemicals and other substances. Such contingencies may exist for various sites including manufactured gas plants, power stations and water courses that were impacted by those activities. The ultimate costs of these clean-ups involve estimation uncertainty as work may be impacted by changing regulations and additional work may be required once sites have been fully surveyed. The estimated clean-up costs have been provided for in note 26 based upon management's best estimate of the likely future cash flows. Whilst the amounts of future possible costs that are not provided for could be material to the Group's results in the period when they are recognised, it is not possible to reliably estimate the amounts involved at this time. As many environmental remediation costs are recoverable through the Group's rate-setting processes, the Group does not expect these costs to have a material impact on its liquidity.

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.

	2023 £m	2022 £m	2021 £m
Sales: Goods and services supplied to a pension plan	**—**	3	3
Sales: Goods and services supplied to joint ventures[1]	**100**	284	79
Sales: Goods and services supplied to associates	**1**	—	1
Sales: Goods and services supplied to subsidiaries of an associate	**6**	—	—
Purchases: Goods and services received from joint ventures[2]	**—**	19	35
Purchases: Goods and services received from associates[2]	**31**	41	43
Receivables from joint ventures[3]	**58**	43	263
Receivables from associates	**—**	1	—
Receivables from subsidiaries of an associate	**8**	—	—
Payables to joint ventures[4]	**19**	247	17
Payables to associates	**1**	4	3
Dividends received from joint ventures[5]	**150**	123	49
Dividends received from associates[6]	**32**	35	32

1. During the year, £76 million of sales were made to Emerald Energy Venture LLC (2022: £74 million; 2021: £50 million) and a further £7 million and £6 million of sales were made to NGET/SPT Upgrades Limited (a joint venture) in 2022 and 2021 respectively. Prior to the Group's disposal of its equity interest in St William Homes LLP in the year ended 31 March 2022, £202 million (2021: £14 million) of property sites were sold to St William Homes LLP.
2. 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 £22 million (2022: £38 million; 2021: £41 million) of purchases from Millennium Pipeline Company LLC in the period up until disposal on 7 October 2022. The Group purchased assets of £nil (2022: £18 million; 2021: £17 million) from BritNed Development Limited. The Group also made purchases of £nil (2022: £0.3 million; 2021: £5 million) from NGET/SPT Upgrades Limited.
3. Amounts receivable from joint ventures include £55 million (2022: £33 million; 2021: £19 million) from Emerald Energy Venture LLC. Amounts receivable in comparative periods include amounts due from St William Homes LLP, which is no longer a related party of the Group (2022: £nil; 2021: £241 million).
4. Amounts payable to joint ventures in the prior year included £223 million due to Community Offshore Wind, LLC, NGV's joint venture with RWE Renewables, in respect of a capital call to NGV following the successful auction of six seabed leases in New York. This was settled in the year ended 31 March 2023.
5. Includes dividends of £84 million (2022: £39 million; 2021: £18 million) received from BritNed Development Limited and £47 million (2022: £77 million; 2021: £25 million) from Nemo Link Limited.
6. Includes dividends of £16 million (2022: £34 million; 2021: £31 million) received from Millennium Pipeline Company LLC in the period up until disposal on 7 October 2022.

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 90 –106 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 89.

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;
- valuation 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. The categories of hedging entered into are as follows:

- currency risk arising from our forecast 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 on 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 2023, the following limits were in place for investments and derivative financial instruments held with banks and financial institutions:

	Maximum limit £m	Utilisation of maximum limit £m	Long-term limit £m	Utilisation of long-term limit £m
Triple 'A' G7 sovereign entities (AAA)	2,502	—	1,877	—
Triple 'A' vehicles (AAA)	500	—	—	—
Triple 'A' range institutions and non-G7 sovereign entities (AAA)	2,275	—	1,706	—
Double 'A+' G7 sovereign entities (AA+)	2,275	—	1,706	—
Double 'A' range institutions (AA)	1,365 to 1,820	27 to 238	1,024 to 1,365	18 to 222
Single 'A' range institutions (A)	455 to 910	8 to 498	341 to 682	6 to 340

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 2023 and 2022, 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 code: Connection and Use of System Code. This sets 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 services have 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 temporarily ceased certain cash collection and termination activities in response to regulatory instructions following the COVID-19 pandemic. At the time this resulted in the recognition of expected credit losses. Cash collection and customer termination activities resumed in New England and New York during the year ended 31 March 2022. In the years ended 31 March 2023 and 2022, the Group's US distribution business has also been supported by certain government and state COVID-19 funding programmes, which has been factored into the assessment of expected credit losses for the year (see note 19 for further details).

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 presented to show National Grid's net exposure.

Financial assets and liabilities on different transactions would only be reported net in the balance sheet if the transactions were with the same counterparty, a currently enforceable legal right of offset exists and the cash flows were 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, there are no 'Gross amounts offset' under cash pooling arrangements (2022: £nil). Our UK bank accounts for National Grid subsidiaries previously participated in GBP, EUR and USD Composite Accounting System overdraft facilities subject to offsetting gross and net overdraft limits. EUR and USD offsetting arrangements were discontinued in the year ended 31 March 2021 and GBP offsetting arrangements have no impact as at 31 March 2023 and 2022. In the US, no offsetting arrangements exist, and cash transactions are settled through National Grid USA Service Company, Inc. (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 2023	**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	**363**	**—**	**363**	**(204)**	**(76)**	**83**
Commodity contract derivatives	**66**	**—**	**66**	**(28)**	**—**	**38**
	429	**—**	**429**	**(232)**	**(76)**	**121**
Liabilities						
Financing derivatives	**(1,119)**	**—**	**(1,119)**	**204**	**681**	**(234)**
Commodity contract derivatives	**(174)**	**—**	**(174)**	**28**	**19**	**(127)**
	(1,293)	**—**	**(1,293)**	**232**	**700**	**(361)**
	(864)	**—**	**(864)**	**—**	**624**	**(240)**

				Related amounts available to be offset but not offset in statement of financial position		
At 31 March 2022	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	298	—	298	(136)	(55)	107
Commodity contract derivatives	289	—	289	(8)	(50)	231
	587	—	587	(144)	(105)	338
Liabilities						
Financing derivatives	(991)	—	(991)	136	771	(84)
Commodity contract derivatives	(22)	—	(22)	8	3	(11)
	(1,013)	—	(1,013)	144	774	(95)
	(426)	—	(426)	—	669	243

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, restrictions on disposals and financial covenants, such as restrictions on the level of subsidiary indebtedness and interest coverage. 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 payment profile of our financial liabilities and derivatives:

At 31 March 2023	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	(2,433)	(2,722)	(2,614)	(33,866)	(41,635)
Interest payments on borrowings[1]	(1,220)	(1,244)	(1,148)	(15,301)	(18,913)
Lease liabilities	(118)	(102)	(86)	(610)	(916)
Other non-interest-bearing liabilities	(4,232)	(416)	–	–	(4,648)
Contingent consideration	(19)	–	–	–	(19)
Derivative financial liabilities					
Financing derivatives – receipts[2]	1,174	2,154	2,381	7,364	13,073
Financing derivatives – payments[2]	(1,461)	(2,483)	(2,705)	(8,335)	(14,984)
Commodity contract derivatives – receipts[2]	11	9	1	–	21
Commodity contract derivatives – payments[2]	(126)	(35)	(11)	(1)	(173)
Derivative financial assets					
Financing derivatives – receipts[2]	4,757	701	745	3,299	9,502
Financing derivatives – payments[2]	(4,679)	(676)	(719)	(3,183)	(9,257)
Commodity contract derivatives – receipts[2]	48	11	–	–	59
Commodity contract derivatives – payments[2]	(11)	(6)	(3)	–	(20)
	(8,309)	(4,809)	(4,159)	(50,633)	(67,910)

At 31 March 2022	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	(11,589)	(1,322)	(2,468)	(28,119)	(43,498)
Interest payments on borrowings[1]	(970)	(928)	(883)	(12,525)	(15,306)
Lease liabilities	(132)	(96)	(79)	(366)	(673)
Other non-interest-bearing liabilities	(3,979)	(336)	–	–	(4,315)
Contingent consideration	(37)	(8)	–	–	(45)
Derivative financial liabilities					
Financing derivatives – receipts[2]	3,149	1,008	2,075	4,726	10,958
Financing derivatives – payments[2]	(3,401)	(1,189)	(2,336)	(5,468)	(12,394)
Commodity contract derivatives – receipts[2]	1	1	–	–	2
Commodity contract derivatives – payments[2]	(29)	2	(1)	–	(28)
Derivative financial assets					
Financing derivatives – receipts[2]	4,512	316	1,427	464	6,719
Financing derivatives – payments[2]	(4,405)	(282)	(1,313)	(405)	(6,405)
Commodity contract derivatives – receipts[2]	234	37	3	–	274
Commodity contract derivatives – payments[2]	(52)	(8)	(3)	–	(63)
	(16,698)	(2,805)	(3,578)	(41,693)	(64,774)

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).

32. Financial risk management continued

(c) Currency risk

National Grid operates internationally with mainly pound sterling as the functional currency for the UK companies and 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:

	2023					2022				
	Sterling £m	**Euro £m**	**Dollar £m**	**Other £m**	**Total £m**	Sterling £m	Euro £m	Dollar £m	Other £m	Total £m
Cash and cash equivalents	**96**	**14**	**53**	**—**	**163**	111	—	93	—	204
Financial investments	**1,031**	**—**	**1,574**	**—**	**2,605**	1,725	—	1,420	—	3,145
Borrowings	**(14,473)**	**(11,045)**	**(15,741)**	**(1,726)**	**(42,985)**	(22,910)	(7,052)	(14,118)	(1,385)	(45,465)
Pre-derivative position	**(13,346)**	**(11,031)**	**(14,114)**	**(1,726)**	**(40,217)**	(21,074)	(7,052)	(12,605)	(1,385)	(42,116)
Derivative effect	**(6,751)**	**10,733**	**(6,476)**	**1,738**	**(756)**	(1,378)	6,849	(7,570)	1,406	(693)
Net debt position	**(20,097)**	**(298)**	**(20,590)**	**12**	**(40,973)**	(22,452)	(203)	(20,175)	21	(42,809)

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

The currency exposure on other financial instruments is as follows:

	2023					2022				
	Sterling £m	**Euro £m**	**Dollar £m**	**Other £m**	**Total £m**	Sterling £m	Euro £m	Dollar £m	Other £m	Total £m
Trade and other receivables	**448**	**—**	**1,881**	**—**	**2,329**	407	—	1,788	—	2,195
Trade and other payables	**(1,624)**	**—**	**(2,629)**	**—**	**(4,253)**	(1,459)	—	(2,554)	—	(4,013)
Other non-current liabilities	**(147)**	**—**	**(269)**	**—**	**(416)**	(90)	—	(253)	—	(343)

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 forecast 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. 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). Gains and losses arising from 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. 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 for USD and Sterling Overnight Index Average (SONIA) for GBP.

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 will impact the valuations of certain liabilities. We have disclosed our exposure to LIBOR on our derivative portfolio in note 17, on our borrowings in note 21 and on our hedging arrangements in note 32(e). We are managing the risk by transitioning LIBOR cash flows to alternative reference rates on our affected contracts in line with the relevant jurisdictions. The migration project is under way, with all affected contracts where we previously paid or received GBP LIBOR amended in the prior year (see note 21). The Finance Committee of the Board has delegated to the treasury department the authority to determine which benchmarks are the most appropriate. A combination of LIBOR and the successor benchmarks, primarily GBP SONIA and USD Secured Overnight Financing Rate (SOFR), will be used in the portfolio during the migration period.

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:

	2023					2022				
	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	**53**	**110**	**—**	**—**	**163**	82	118	—	4	204
Financial investments	**—**	**2,569**	**—**	**36**	**2,605**	—	3,107	—	38	3,145
Borrowings	**(36,631)**	**(1,744)**	**(4,610)**	**—**	**(42,985)**	(30,616)	(10,484)	(4,365)	—	(45,465)
Pre-derivative position	**(36,578)**	**935**	**(4,610)**	**36**	**(40,217)**	(30,534)	(7,259)	(4,365)	42	(42,116)
Derivative effect	**4,213**	**(4,869)**	**(100)**	**—**	**(756)**	2,860	(3,366)	(187)	—	(693)
Net debt position	**(32,365)**	**(3,934)**	**(4,710)**	**36**	**(40,973)**	(27,674)	(10,625)	(4,552)	42	(42,809)

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 Phase I of IFRS Interest Rate Benchmark Reform amendments related to hedge accounting with effect from 1 April 2019, and Phase II with effect from 1 April 2020. The amendments impact our fair value hedging relationships where derivative cash flows will have been transitioned from paying LIBOR to paying an alternative reference rate. The hedged risk must be re-documented to reflect this, and allow existing hedge designations to continue unchanged during the period of uncertainty relating to the timing and method of benchmark migrations. This process completed for sterling LIBOR contracts in the prior year but remains in progress for US dollar contracts as at 31 March 2023.

The amendments will be applied until the earliest point in time of the Group's contracts that reference LIBOR being amended, the hedging relationship being formally discontinued or formal market conventions ending uncertainty being 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.

32. Financial risk management continued

(e) Hedge accounting

In accordance with the requirements of IFRS 7, certain additional information about hedge accounting is disaggregated by risk type and hedge designation type in the tables below:

Year ended 31 March 2023	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 gains/(losses) in respect of:				
Cash flow hedges	–	136	10	–
Cost of hedging	4	4	–	(24)
Net investment hedges	–	–	–	(198)
Transferred to profit or loss in respect of:				
Cash flow hedges	–	(136)	–	–
Cost of hedging	–	–	–	1
Reclassification of foreign currency translation reserve[1]	–	–	–	373
Consolidated statement of changes in equity				
Other equity reserves – cost of hedging balances	(11)	(12)	–	(27)
Consolidated statement of financial position				
Derivatives – carrying value of hedging instruments[2]				
Assets – current	–	–	6	52
Assets – non-current	25	166	1	–
Liabilities – current	(43)	(39)	(6)	–
Liabilities – non-current	(559)	(248)	(1)	(15)
Profiles of the significant timing, price and rate information of hedging instruments				
Maturity range	Aug 2023 – Sep 2044	Jul 2024 – Nov 2040	Apr 2023 – May 2029	Jun 2023 – Sep 2027
Spot foreign exchange range:				
GBP:USD	n/a	1.30 – 1.66	1.20 – 1.36	1.18 – 1.22
GBP:EUR	1.11 – 1.20	1.08 – 1.24	1.10 – 1.20	1.12 – 1.13
EUR:USD	1.13 – 1.17	1.13 – 1.15	n/a	n/a
Interest rate range:				
GBP	SONIA +84bps/+374bps	0.976% – 7.410%	n/a	n/a
USD	LIBOR +68bps/ SOFR +126bps	2.095% – 3.864%	n/a	n/a

1. The reclassification of the net investment hedge on the disposals of NECO and Millennium Pipeline Company LLC has been included within Other operating income.
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.

32. Financial risk management continued

(e) Hedge accounting continued

Year ended 31 March 2022	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 gains/(losses) in respect of:				
Cash flow hedges	—	(103)	(1)	—
Cost of hedging	(7)	16	—	(7)
Net investment hedges	—	—	—	(125)
Transferred to profit or loss in respect of:				
Cash flow hedges	—	43	—	—
Cost of hedging	1	—	—	(2)
Consolidated statement of changes in equity				
Other equity reserves – cost of hedging balances	(15)	(16)	—	(3)
Consolidated statement of financial position				
Derivatives – carrying value of hedging instruments[1]				
Assets – current	—	—	1	10
Assets – non-current	49	67	1	82
Liabilities – current	(21)	(22)	(37)	(16)
Liabilities – non-current	(310)	(303)	(8)	—
Profiles of the significant timing, price and rate information of hedging instruments				
Maturity range	Jul 2022 – Sep 2044	Jun 2022 – Nov 2040	Apr 2022 – Feb 2027	Sep 2022 – Sep 2027
Spot foreign exchange range:				
GBP:USD	n/a	1.30 – 1.66	1.34 – 1.41	1.22 – 1.34
GBP:EUR	1.11 – 1.24	1.08 – 1.24	1.04 – 1.19	1.18
EUR:USD	1.13 – 1.17	1.13 – 1.15	n/a	n/a
Interest rate range:				
GBP	SONIA +84bps/+374bps	0.976% – 7.410%	n/a	n/a
USD	LIBOR –68bps/+115bps	2.095% – 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

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 2023		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]	(4,779)	789	(43)	398	(351)	47

1. The carrying value of the hedged borrowings is £4,042 million, of which £511 million is current and £3,531 million is non-current.
2. Included within the hedging instrument notional balance is £859 million impacted by Interest Rate Benchmark Reform amendments which are still to be transitioned.

As at 31 March 2022		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]	(3,362)	437	(55)	340	(301)	39

1. The carrying value of the hedged borrowings was £2,966 million, of which £nil was current and £2,966 million was non-current.
2. Included within the hedging instrument notional balance was £2,556 million impacted by Interest Rate Benchmark Reform amendments with £806 million still to be transitioned.

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

As at 31 March 2023		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	(9,357)	(73)	—	149	(154)	(5)
Foreign currency risk on forecast cash flows	(537)	(3)	—	(35)	35	—

As at 31 March 2022		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]	(6,287)	(48)	—	74	(74)	—
Foreign currency risk on forecast cash flows	(835)	(40)	1	18	(18)	—

1. Included within the hedging instrument notional balance was £100 million impacted by Interest Rate Benchmark Reform amendments.

(iii) Net investment hedges of foreign currency risk:

As at 31 March 2023		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	(3,095)	(129)	(2,457)	198	(198)	—

As at 31 March 2022		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]	(3,489)	(125)	(2,643)	125	(125)	—

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

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 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. Furthermore, 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. 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.

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.

	2023				2022			
	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	1,764	–	452	2,216	2,292	–	417	2,709
Investments held at FVOCI[1]	–	407	–	407	–	413	–	413
Financing derivatives	–	341	22	363	–	298	–	298
Commodity contract derivatives	–	62	4	66	–	238	51	289
	1,764	810	478	3,052	2,292	949	468	3,709
Liabilities								
Financing derivatives	–	(997)	(122)	(1,119)	–	(804)	(187)	(991)
Commodity contract derivatives	–	(134)	(40)	(174)	–	(15)	(7)	(22)
Contingent consideration[2]	–	–	(19)	(19)	–	–	(41)	(41)
	–	(1,131)	(181)	(1,312)	–	(819)	(235)	(1,054)
	1,764	(321)	297	1,740	2,292	130	233	2,655

1. Investments held includes instruments which meet the criteria of IFRS 9 or IAS 19.
2. Contingent consideration relates to the acquisition of National Grid Renewables.

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 and primarily comprise investments in short-term money market funds.

Our Level 2 financial investments held at fair value primarily include bonds with a tenor greater than one year and 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 inflation-linked swaps, 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 investments 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 relatively small, early-stage non-controlling minority interest unquoted investments where prices or valuation inputs are unobservable. Fourteen equity investments (out of thirty-one) are fair valued based on the latest transaction price (a price within the last 12 months), either being the price we paid for the investments, marked to a latest round of funding and adjusted for our preferential rights or based on an internal model. In addition, we have seventeen investments without a transaction in the last 12 months that underwent an internal valuation process.

The internal valuation process utilises a range of valuation techniques including the Black-Scholes Murton Option Pricing Model (OPM Backsolve) where the latest round of funding is within the last 12 months. Between 12 and 18 months a blend between OPM Backsolve and other techniques are utilised such as proxy group revenue multiples, discounted cash flow, comparable company analysis and probability weighted expected return approach in order to triangulate a valuation. After 18 months the valuation is based on these alternative methods as the last fundraising price is no longer a reliable basis for valuation.

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

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]		Total	
	2023 £m	2022 £m	2023 £m	2022 £m	2023 £m	2022 £m	2023 £m	2022 £m
At 1 April	**(187)**	(183)	**44**	(12)	**376**	183	**233**	(12)
Net gains/(losses) for the year[1,2]	**87**	(4)	**(18)**	56	**(2)**	102	**67**	154
Purchases	**—**	—	**(56)**	17	**59**	93	**3**	110
Settlements	**—**	—	**(6)**	(17)	**—**	(2)	**(6)**	(19)
At 31 March	**(100)**	(187)	**(36)**	44	**433**	376	**297**	233

1. Gain of £87 million (2022: £4 million loss) is attributable to derivative financial instruments held at the end of the reporting period and has been recognised in finance costs in the consolidated income statement.
2. Loss of £41 million (2022: £27 million gain) is attributable to commodity contract derivative financial instruments held at the end of the reporting period and have been recognised in other operating costs in the consolidated income statement.
3. Other comprises our investments in Sunrun Neptune 2016 LLC 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 National Grid Renewables. Net gains and losses are recognised within finance income and costs in the consolidated income statement.

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]	
	2023 £m	2022 £m	2023 £m	2022 £m	2023 £m	2022 £m
10% increase in commodity prices[1]	**—**	—	**5**	9	**—**	—
10% decrease in commodity prices[1]	**—**	—	**(6)**	(8)	**—**	—
+10% market area price change	**—**	—	**—**	—	**—**	—
-10% market area price change	**—**	—	**—**	—	**—**	—
+20 basis points change in Limited Price Inflation (LPI) market curve[2]	**(53)**	(84)	**—**	—	**—**	—
-20 basis points change in LPI market curve[2]	**51**	82	**—**	—	**—**	—
+20 basis point increase between Retail Price Index & Consumer Price Index	**43**	—	**—**	—	**—**	—
-20 basis point decrease between Retail Price Index & Consumer Price Index	**(38)**	—	**—**	—	**—**	—
+50 basis points change in discount rate	**—**	—	**—**	—	**(9)**	(10)
-50 basis points change in discount rate	**—**	—	**—**	—	**10**	10
+10% change in venture capital price	**—**	—	**—**	—	**28**	—
-10% change in venture capital price	**—**	—	**—**	—	**(28)**	—

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 2023.

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

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/debt), regulatory gearing and interest cover. For the year ended 31 March 2023, these metrics for the Group were 9.3% (2022: 8.9%), 71% (2022: 81%) and 3.8x (2022: 4.7x), respectively – see pages 54 and 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. Regulatory gearing at 31 March 2022 was higher than our long-run projections due to the fact that we were only part way through the transactions making up our strategic pivot.

We monitor the RAV gearing within National Grid Electricity Transmission plc (NGET) and National Grid Electricity Distribution plc (NGED). 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 55% to 65%. 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%.

As part of the Group's debt financing arrangements, we are subject to a number of financial covenants associated with existing borrowings and facility arrangements:

- the requirement to maintain subsidiary indebtedness relating to non-US and US subsidiaries (excluding National Grid North America Inc.) limiting the total indebtedness in absolute terms to £35 billion for non-US subsidiaries and $35 billion for US subsidiaries. As at 31 March 2023, headroom on these covenants exceeds £10 billion;
- The Articles of Association of National Grid plc limit Group total borrowings less cash and short-term investments in absolute terms to £55 billion. As at 31 March 2023 headroom on the limit exceeds £10 billion;
- interest cover ratios relating to the NGED companies within the Group requiring a consolidated EBITDA to interest payable of not less than 3:1. These covenants range in outturn from 3.5:1 to 5.2:1 at the reporting date; and
- net debt to RAV gearing covenants limiting gearing to 85% of RAV for each NGED operating company. As at 31 March 2023, actual gearing of less than 60% is reported for all impacted companies.

We consider the risk of breaching these covenants as remote given the level of headroom present.

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:

- the requirement to notify by certification to regulators and certain lenders;
- dividends must be approved in advance by the relevant US state regulatory commission;
- the subsidiary must have one or two recognised rating agency credit ratings of at least investment grade depending on contractual requirements;
- dividends must be limited to cumulative retained earnings, including pre-acquisition retained earnings and in line with relevant company legislation;
- 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 out 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;
- the percentage of equity compared with total capital of the subsidiary must remain above certain levels; and
- in the case of NGED, the percentage of debt compared with total RAV of the subsidiary must remain below 85%.

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 2023 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 committed credit facilities with financial institutions over and above the value of borrowings that may be required. These committed credit facilities are undrawn.

At 31 March 2023, we had bilateral committed credit facilities of £5,616 million (2022: £5,978 million). In addition, we had committed credit facilities from syndicates of banks of £887 million at 31 March 2023 (2022: £936 million). An analysis of the maturity of these undrawn committed facilities is shown below:

	2023 £m	2022 £m
Undrawn committed borrowing facilities expiring:		
Less than 1 year	**42**	—
In 1 to 2 years	**4,361**	936
In 2 to 3 years	**2,100**	4,373
In 3 to 4 years	**—**	1,605
In 4 to 5 years	**—**	—
More than 5 years	**—**	—
	6,503	6,914

Of the unused facilities at 31 March 2023, £6,461 million (2022: £6,823 million) is available for liquidity purposes, while £42 million (2022: £91 million) is available as backup to specific US borrowings.

Subsequent to 31 March 2023, the following undrawn facilities were renegotiated or cancelled:

- £42 million of the undrawn syndicated facilities due to mature in less than one year were renegotiated on 24 April 2023 with no uplift in the amount and a new expiry date of 31 May 2028;
- £750 million of the undrawn bilateral facilities due to mature in one to two years were renegotiated on 5 May 2023 with no uplift in the amount and a new expiry date of 31 May 2026;
- £3,526 million of the undrawn bilateral facilities due to mature in one to two years and £2,060 million of the undrawn bilateral facilities due to mature in two to three years were renegotiated on 3 April 2023, into £5,377 million bilateral facilities with an expiry date of 3 April 2026 and £1,810 million syndicated facility with an expiry date of 3 April 2028; and
- £85 million of the undrawn bilateral facilities due to mature in one to two years and £40 million of the undrawn bilateral facilities due to mature in two to three years were cancelled on 10 May 2023.

The comparative balances include a facility of £350 million related to National Grid Gas plc, a company which was disposed of in the current year.

In addition, we have the following facilities which are not included in the table above:

- for the separately regulated business of National Grid Electricity System Operator Limited, the Group has a facility of £550 million (2022: £550 million). This facility is not available as Group general liquidity support;
- the Group continues to have access to Export Credit Agreements (ECAs) funding specific projects totalling £1,530 million (2022: £1,396 million), of which £460 million (2022: £489 million) is undrawn; and
- as of 31 March 2023 the Group had a loan facility of £nil (2022: £8,250 million) to finance the consideration to acquire NGED (see note 37), of which £nil (2022: £8,179 million) was drawn down as at 31 March 2023. In the current year, the Group used the proceeds generated from the sales of NECO and the UK Gas Transmission business to fully repay the bridge facility.

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 2023 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 (US) Investments 2 Limited*, National Grid Hong Kong Limited*, National Grid Luxembourg SARL 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. All entities incorporated in the US are taxed in the US on their worldwide income other than where indicated in the footnotes below. Other entities are tax resident in their jurisdiction of incorporation other than where indicated in the footnotes below.

Incorporated in England and Wales

Registered office: 1–3 Strand, London, WC2N 5EH, UK (unless stated otherwise in footnotes).

Birch Sites Limited
Carbon Sentinel Limited
Central Networks Trustees Limited[1]
Droylsden Metering Services Limited
Gridcom Limited
Hyder Profit Sharing Trustees Limited[1]
Icelink Interconnector Limited
Kelston Properties 2 Limited[1]
Lattice Group Employee Benefit Trust Limited
Lattice Group Limited
Lattice Group Trustees Limited
Natgrid Limited[2*]
NatGrid One Limited[2*]
NatgridTW1 Limited
National Grid (US) Holdings Limited[3]
National Grid (US) Investments 2 Limited[2*]
National Grid (US) Investments 4 Limited[3]
National Grid (US) Partner 1 Limited[3]
National Grid Carbon Limited
National Grid Commercial Holdings Limited
National Grid Continental Limited
National Grid Distributed Energy Limited
National Grid Electricity Distribution (East Midlands) plc[1]
National Grid Electricity Distribution (South Wales) plc[1]
National Grid Electricity Distribution (South West) plc[1]
National Grid Electricity Distribution (West Midlands) plc[1]
National Grid Electricity Distribution Generation Limited[1]
National Grid Electricity Distribution Holdings Limited[1]
National Grid Electricity Distribution Investment Holdings Limited[1]
National Grid Electricity Distribution Investments Limited[1]
National Grid Electricity Distribution Midlands Limited[1]
National Grid Electricity Distribution Network Holdings Limited[1]
National Grid Electricity Distribution plc[1]
National Grid Electricity Distribution Property Investments Limited[1]
National Grid Electricity Group Trustee Limited
National Grid Electricity System Operator Limited
National Grid Electricity Transmission plc
National Grid Energy Metering Limited
National Grid Grain LNG Limited
National Grid Helicopters Limited[1]
National Grid Holdings Limited[3]
National Grid Holdings One plc
National Grid Hydrogen Limited
National Grid IFA 2 Limited
National Grid Interconnector Holdings Limited
National Grid Interconnectors Limited
National Grid International Limited[3]
National Grid Lion Link Limited
National Grid Nautilus Limited
National Grid North Sea Link Limited
National Grid Offshore Limited
National Grid Partners Limited
National Grid Plus Limited
National Grid Property Holdings Limited
National Grid Smart Limited
National Grid Telecoms Limited[1]
National Grid Thirty Six Limited[2*]
National Grid Twelve Limited
National Grid Twenty Eight Limited
National Grid Twenty Seven Limited
National Grid Twenty Three Limited[2*]
National Grid UK Limited
National Grid UK Pension Services 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
Port Greenwich Limited
Sheet Road Management Company Limited (51%)[4]
South Wales Electricity Share Scheme Trustees Limited[1]
Supergrid Electricity Limited[2*]
Supergrid Energy Transmission Limited[2*]
Supergrid Limited[2*]
Thamesport Interchange Limited
The National Grid Group Quest Trustee Company Limited
The National Grid YouPlan Trustee Limited[2*]
Transco Limited
Warwick Technology Park Management Company (No 2) Limited (60.56%)[5]
Western Power Pension Trustee Limited[1]
WPD Share Scheme Trustees Limited[1]
WPD WEM Holdings Limited[1]
WPD WEM Limited[1]
WW Share Scheme Trustees Limited[1]

1. Registered office: Avonbank, Feeder Road, Bristol, Avon, BS2 0TB.
2. Registered office: C/o Interpath Limited, 10 Fleet Place, London, EC4M 7RB.
3. Companies where National Grid plc has issued guarantees over the liabilities of the companies as at 31 March 2023 and for which the companies are taking the exemption from the requirements of an audit for their individual financial statements as permitted by section 479A of the Companies Act.
4. Registered office: Netley Old Hall Farm, Dorrington, Shrewsbury, United Kingdom, SY5 7JY.
5. Registered office: Shire Hall, PO Box 9, Warwick, CV34 4RL.

* 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).

Apple River Solar, LLC
Armenia Solar, LLC
Ashland Solar, LLC
Athens Solar, LLC
Autauga Solar, LLC
Banner Solar, LLC
Bazile Creek Wind Farm, LLC
Bee Hollow Solar, LLC
Bell Plaine Solar, LLC
Benevolent Solar, LLC
Blaze Solar, LLC
Blevins Solar, LLC
Blue Ridge Wind, LLC
Blue Spring Solar, LLC
Blues Solar, LLC
Bluewater Solar, LLC
Boone Solar, LLC
Boston Gas Company[1]
Bridges Solar, LLC
Brock Solar, LLC
Broken Bridge Corp.[2]
Brook Trout Solar, LLC
Burley Solar, LLC
Burlington Solar, LLC
Burr Ridge Wind, LLC
Cage Ranch Solar II, LLC
Cage Ranch Solar III, LLC
Cage Ranch Solar, LLC
Caldwell Solar II, LLC
Caldwell Solar, LLC
Canby Solar, LLC
Cass Wind Farm, LLC
Cattle Ridge Wind Farm 2, LLC
Cedar Grove Solar, LLC
Centennial Solar, LLC
Charter Oak Solar, LLC
Clay Boswell Solar, LLC
Clear Creek Solar, LLC
Clermont Solar, LLC
Clinton County Solar, LLC
Coles Solar, LLC
Compass Prairie Wind, LLC
Conestoga Wind, LLC
Creekview Solar, LLC
Crocker Wind Farm 2, LLC
Dakota Hills Wind Farm, LLC
Deatsville Solar, LLC
Deer Trail Solar, LLC
Dodson Creek Solar, LLC
Donnellson Solar, LLC
Elburn Solar, LLC
Eldena Solar, LLC
Elk Creek Solar 2, LLC
Elk Creek Solar, LLC
EUA Energy Investment Corporation[1]
Exie Solar, LLC
Falls City Solar, LLC
Fillmore County Solar Project, LLC
Firstview Wind Farm, LLC
Fort Solar, LLC
Front Range Wind Farm, LLC
Galaxy Solar, LLC
Golden Solar, LLC
Goldendale Solar, LLC
Goldenrod Wind Farm, LLC
Goldfinch Solar, LLC
Grand Junction Solar, LLC
Granite State Power Link LLC[3]
Grant Solar 2, LLC
Grant Solar, LLC
Grayson Solar, LLC
Greenbrier Creek Solar, LLC
Greensky Solar, LLC
Greenwood Solar, LLC
Grid NY LLC[4]
Grindstone Wind Farm, LLC[5]
Hale County Solar, LLC
Hansford Energy Storage, LLC
Harmony Solar ND 2, LLC
Harmony Solar ND, LLC
Harrington Solar, LLC
Hartley Solar, LLC
Hearth Solar, LLC
Hill River Solar, LLC
Honeybee Solar, LLC
Hoosier Solar, LLC
Hoskins Solar, LLC
Illumination Solar, LLC
Innovation Solar, LLC
Itasca Energy Development, LLC[6]
Itasca Energy Services, LLC
Jack Rabbit Wind, LLC
Jackson County Solar, LLC
KeySpan CI Midstream Limited[3]
KeySpan Energy Corporation[4]
KeySpan Energy Services Inc.[3]
KeySpan Gas East Corporation[4]
KeySpan International Corporation[3]
KeySpan MHK, Inc.[3]
KeySpan Midstream, Inc.[3]
KeySpan Plumbing Solutions, Inc.[4]
Kit Fox Storage, LLC
Knox Solar, LLC
Kota Storage, LLC
KSI Contracting, LLC[3]
KSI Electrical, LLC[3]
KSI Mechanical, LLC[3]
Lake Charlotte Solar, LLC
Lakeside Solar, LLC
Land Management & Development, Inc.[4]
Landwest, Inc.[4]
Lansing Solar, LLC
Las Moras Storage, LLC
Leola Wind Farm, LLC
Liberty Solar, LLC
Livingston County Solar, LLC
Long Mount Storage, LLC
Lordsburg Solar, LLC
Louisa Solar, LLC
Louise Solar Project, LLC
Lowlands Solar, LLC
Lydia Solar, LLC
Marion County Solar, LLC
Massachusetts Electric Company[1]
Maverick Wind Farm, LLC
Meadowlands Solar, LLC
Metrowest Realty LLC[3]
Miller Creek Solar, LLC
Millers Ferry Solar, LLC
Morgan County Solar, LLC
Morning Glory Solar, LLC[6]
Muddy Creek Solar, LLC
Mustang Ridge Wind Farm, LLC
Mystic Steamship Corporation[7]
Nantucket Electric Company[1]
National Grid Development Holdings Corp.[3]
National Grid Electric Services LLC[4]
National Grid Energy Management LLC[3]
National Grid Energy Services LLC[3]
National Grid Energy Trading Services LLC[4]
National Grid Engineering & Survey Inc.[4]
National Grid Generation LLC[4]
National Grid Generation Ventures LLC[4]
National Grid Glenwood Energy Center, LLC[3]
National Grid IGTS Corp.[4]
National Grid Insurance USA Ltd[8]
National Grid Islander East Pipeline LLC[3]
National Grid LNG GP LLC[3]
National Grid LNG LLC[3]
National Grid LNG LP LLC[3]
National Grid Millennium LLC[3]
National Grid NE Holdings 2 LLC[1]
National Grid North America Inc.[3]
National Grid Partners Inc.[4]
National Grid Partners LLC[3]
National Grid Port Jefferson Energy Center LLC[3]
National Grid Renewables Development, LLC
National Grid Renewables E Wind, LLC[6]
National Grid Renewables Operations, LLC[3]
National Grid Renewables Projects, LLC[6]
National Grid Renewables Stutsman, LLC
National Grid Renewables, LLC[3]

34. Subsidiary undertakings, joint ventures and associates continued

Subsidiary undertakings continued

National Grid Services Inc.[3]
National Grid US 6 LLC[3,†]
National Grid US LLC[3]
National Grid USA Service Company, Inc.[1]
National Grid USA[3]
NEES Energy, Inc.[1]
New England Electric Transmission Corporation[2]
New England Energy Incorporated[1]
New England Hydro Finance Company, Inc. (53.704%)[1]
New England Hydro-Transmission Corporation (53.704%)[2]
New England Hydro-Transmission Electric Company, Inc. (53.704%)[1]
New England Power Company[1]
Newport America Corporation[9]
Newton Solar, LLC
NG Renewables Energy Marketing, LLC[3]
NG Renewables Energy Services, LLC
NGNE LLC[3]
NGV Emerald Energy Venture Holdings, LLC[3]
NGV OSW Holdings, LLC[3]
NGV US Distributed Energy Inc.[3]
NGV US Transmission Inc.[3]
NGV US, LLC[3]
Niagara Mohawk Energy, Inc.[3]
Niagara Mohawk Holdings, Inc.[4]
Niagara Mohawk Power Corporation[4]
Niobrara Wind, LLC
NM Properties, Inc.[4]
Noble Solar, LLC[10]
Nordic VOS, LLC
North East Transmission Co., Inc.[3]
North Fork Wind, LLC
Northeast Renewable Link LLC[3]
Opinac North America, Inc.[3]
Pennington Solar, LLC
Peony Solar, LLC
Philadelphia Coke Co., Inc.[3]
Pierce County Solar, LLC
Pike County Solar, LLC
Pipestone Solar, LLC
Plum Creek Wind Farm 2, LLC
Plum Creek Wind Farm, LLC
Port of the Islands North, LLC[4]
Portage Solar, LLC
Prairie Oasis Solar, LLC
Prairie Rose Wind 2, LLC[6]
Prosperity Wind Farm 2, LLC
Prosperity Wind Farm, LLC
Red Rock Solar SD, LLC
Regal Solar 2, LLC
Regal Solar, LLC
River North Solar, LLC
Robertson Solar, LLC
Rock Ridge Wind Farm, LLC
Rolling Hills Solar, LLC
Royal Solar 2, LLC
Royal Solar, LLC
Royerton Solar, LLC
Saginaw Bay Solar, LLC
Saltillo Storage, LLC
Sandstone Creek Solar 2, LLC
Sandstone Creek Solar, LLC
Sapphire Sky Wind Farm, LLC
Sherco Solar 2, LLC[6]
Sherco Solar 3, LLC
Silver City Solar, LLC
Simpson Solar, LLC
Spotlight Solar, LLC
Spring Brook Solar, LLC
Spring River Solar, LLC
Stony Brook Wind, LLC
Stony Point Solar, LLC
Stove Creek Solar, LLC
Sturgis Solar, LLC
Summit Lake Solar, LLC
Sunbeam Solar, LLC
Sunrise Solar, LLC
Sycamore Creek Solar, LLC
Tejano Storage, LLC
Thacker Solar, LLC
The Brooklyn Union Gas Company[4]
Torchlight Solar, LLC[6]
Transgas Inc.[1]
Tri-City Solar, LLC
Uintah Solar, LLC
Unbridled Solar, LLC
Upper Hudson Development, Inc.[4]
Valley Solar, LLC
Vermont Green Line Devco, LLC (90%)[3]
Vibrant Solar, LLC
Violet Storage, LLC
Virgo Community Solar Gardens, LLC[6]
Virtue Solar, LLC
Vivid Solar, LLC
Wallowa Solar, LLC
Wayfinder Group, Inc.[1]
Wheatfield Solar, LLC
White Elm Wind Farm, LLC
Wildcat Ridge Wind Farm, LLC
Wildhorse Creek Solar, LLC
Willard Solar, LLC
Williams County Solar, LLC
Wiregrass Solar, LLC
Woodlands Solar, LLC
Worthington Solar, LLC
Yellowhammer Solar, LLC
Young County 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 LLP, c/o Charles Reagh, Queen's Marque, 600-1741 Lower Water Street, Halifax, Nova Scotia, B3J 0J2, Canada

KeySpan Energy Development Co.

Incorporated in Guernsey

Registered office: 1st & 2nd Floors Elizabeth House, Les Ruettes Brayes, St Peter Port, GY1 1EW, Guernsey, Channel Islands

NG Electricity Distribution Limited†

Registered office: PO Box 155, Mill Court, La Charroterie, St. Peter Port, GY1 4ET, Guernsey, Channel Islands

Aztec Insurance Limited

Incorporated in Hong Kong

Registered office: 5/F, Manulife Place, 348 Kwun Tong Road, Kowloon, Hong Kong

National Grid Hong Kong 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 Luxembourg

Registered office: 412F, Route d'Esch, L-2086, Luxembourg, Grand Duchy of Luxembourg

National Grid Luxembourg SARL

1. Registered office: Corporation Service Company, 84 State Street, Boston MA 02109, USA.
2. Registered office: Corporation Service Company, 10 Ferry Street, Suite 313, Concord NH 03301, USA.
3. Registered office: Corporation Service Company, 251 Little Falls Drive, Wilmington DE 19808, USA.
4. Registered office: Corporation Service Company, 80 State Street, Albany NY 12207, USA.
5. Registered office: National Registered Agents, Inc., 30600 Telegraph Road, Suite 2345, Bingham Farms, MI 48025-5720, USA.
6. Registered office: National Grid Renewables Development, LLC, 8400 Normandale Lake Blvd. Suite 1200, Bloomington, MN 55437, USA.
7. Registered office: The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington DE 19801, USA.
8. Registered office: AON Insurance Managers USA, Inc., 165 Broadway, One Liberty Plaza, New York, NY, 10006, USA.
9. Registered office: Corporation Service Company, 222 Jefferson Boulevard, Suite 200, Warwick RI 02888, USA.
10. Registered office: National Registered Agents, Inc., 1999 Bryan Street, Dallas, Dallas County TX 75201, USA.

* In liquidation.

† Entity is tax resident in the United Kingdom.

34. Subsidiary undertakings, joint ventures and associates continued

Joint ventures

A list of the Group's joint ventures as at 31 March 2023 is given below. All joint ventures are included in the Group's financial statements using the equity method of accounting.

Incorporated in England and Wales

Registered office: 1–3 Strand, London, WC2N 5EH, UK (unless stated otherwise in footnotes).

BritNed Development Limited (50%)*
National Places LLP (50%)[1]
Nemo Link Limited (50%)
NGET/SPT Upgrades Limited (50%)†

Incorporated in the US

Registered office: Corporation Service Company, 251 Little Falls Drive, Wilmington, DE 19808, USA (unless stated otherwise in footnotes).

Community Offshore Wind, LLC (previously Bight Wind Holdings LLC) (27.27%)[2]
Clean Energy Storage Systems LLC (50%)
Emerald Energy Venture LLC (51%)
Island Park Energy Center, LLC (50%)
Islander East Pipeline Company, LLC (50%)[2]
LI Energy Storage System, LLC (50%)
LI Solar Generation, LLC (50%)

Incorporated in France

Registered office: 1 Terrasse Bellini, Tour Initiale, TSA 41000 – 9291, Paris La Defense, CEDEX, France

IFA2 (50%)

Associates

A list of the Group's associates as at 31 March 2023 is given below. Unless otherwise stated, all associates are included in the Group's financial statements using the equity method of accounting.

Incorporated in England and Wales

Registered office: National Grid House, Warwick Technology Park, Gallows Hill, Warwick, CV34 6DA

GasT TopCo Limited
Joint Radio Company Limited (25%)[3]**

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 (9.41%)[5]
KHB Venture LLC (33.33%)[6]
Maine Yankee Atomic Power Company (24%)[7]
New York Transco LLC (28.3%)[8]
NYSEARCH RMLD, LLC (22.63%)
The Hive IV, LLC (28.2%)[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 2023 is given below.

Incorporated in England and Wales

Registered office: 1 More London Place, London SE1 2AF, UK

Energis plc (33.06%)‡

Registered office: Third Floor, Northumberland House, 303–306 High Holborn, London, WC1V 7JZ

Electralink Limited (27.04%)

1. Registered office: 80 Cheapside, London, EC2V 6EE, UK.
2. Registered office: The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington DE 19801, USA.
3. Registered office: Friars House, Manor House Drive, Coventry, CV1 2TE, UK.
4. Registered office: Carla Pizzella, 362 Injun Hollow Road, East Hampton CT 06424-3099, USA.
5. Registered office: Harvard Business Services, Inc., 16192 Coastal Highway, Lewes DE 19958, USA.
6. Registered office: c/o de maximis, 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 Electricity Transmission plc owns one £0.50 A Ordinary share.
† 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.

The following UK subsidiaries will take advantage of the audit exemption set out within section 479A of the Companies Act 2006 supported by guarantees issued by National Grid plc over their liabilities for the year ended 31 March 2023:

Company name	Company number
National Grid Holdings Limited	3096772
National Grid International Limited	2537092
National Grid (US) Holdings Limited	2630496
National Grid (US) Investments 4 Limited	3867128
National Grid (US) Partner 1 Limited	4314432

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 has 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 1F. 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.

	2023			2022		
	Assumptions used[1]	**Income statement £m**	**Net assets £m**	Assumptions used	Income statement £m	Net assets £m
Pensions and other post-retirement benefit liabilities (pre tax)[2]:						
UK discount rate change[3]	**1%**	**29**	**1,264**	0.5%	12	1,002
US discount rate change[3]	**1%**	**26**	**977**	0.5%	16	650
UK inflation rate change[4]	**1%**	**8**	**933**	0.5%	11	733
UK long-term rate of increase in salaries change	**1%**	**4**	**50**	0.5%	4	88
US long-term rate of increase in salaries change	**1%**	**4**	**57**	0.5%	3	41
UK change to life expectancy at age 65[5]	**one year**	**2**	**441**	one year	4	635
US change to life expectancy at age 65	**one year**	**3**	**344**	one year	3	444
Assumed US healthcare cost trend rates change	**1%**	**24**	**324**	1%	24	414
Environmental provision:						
Change in the real discount rate	**1.0%**	**159**	**159**	0.5%	81	81
Change in estimated future cash flows	**20%**	**378**	**378**	10%	188	188

1. We have increased the assumption used in our sensitivity analysis this year from 0.5% to 1.0% in light of the recent quantum of market movements.
2. The changes shown are a change in the annual pension and other post-retirement benefit service charge and change in the defined benefit obligations.
3. 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 £188 million (2022: £164 million) net assets offset from the buy-in policies, where the accounting value of the buy-in asset is set equal to the associated liabilities.
4. 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 would have a £164 million (2022: £119 million) net assets offset to the above.
5. In the UK, the buy-in policies and the longevity swap entered into would have a £136 million (2022: £111 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 2023. 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.

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. The analysis is prepared assuming the amount of liability outstanding at the reporting date was outstanding for the whole year.

Our net debt as presented in note 29 is sensitive to changes in market variables, primarily being UK and US interest rates, the UK inflation rate 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 2023 and 2022 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 FVTPL and FVOCI; 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 expense 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 is recorded directly in equity.

	2023			2022		
	Assumptions used[1]	**Income statement £m**	**Other equity reserves £m**	Assumptions used	Income statement £m	Other equity reserves £m
Financial risk (post tax):						
UK inflation change[2]	**1%**	**35**	**—**	0.5%	18	—
UK interest rates change	**1%**	**34**	**361**	0.5%	41	134
US interest rates change	**1%**	**14**	**50**	0.5%	4	8
US dollar exchange rate change[3]	**10%**	**51**	**291**	10%	43	397

1. 1% has been used for sensitivity analysis this year as opposed to 0.5% in the prior year, due to the quantum of market rate movements during the year which mean it is considered that 1% is a more appropriate measure for the year ended 31 March 2023.
2. Excludes sensitivities to LPI curve. Further details on sensitivities are provided in note 32(g).
3. The other equity reserves impact does not reflect the exchange translation in our US subsidiaries' net assets. It is estimated this would change by £1,680 million (2022: £1,670 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:

	2023			2022		
	Assumptions used	**Income statement £m**	**Net assets £m**	Assumptions used	Income statement £m	Net assets £m
Commodity price risk (post tax):						
Increase in commodity prices	**10%**	**49**	**49**	10%	53	53
Decrease in commodity prices	**10%**	**(40)**	**(40)**	10%	(54)	(54)
Assets and liabilities carried at fair value (post tax):						
Fair value change in derivative financial instruments[1]	**10%**	**(60)**	**(60)**	10%	(55)	(55)
Fair value change in commodity contract derivative liabilities	**10%**	**(8)**	**(8)**	10%	20	20

1. The effect of a 10% change in fair value assumes no hedge accounting.

36. Additional disclosures in respect of guaranteed securities

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. This guarantor commits 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 company providing the guarantee, we are required to disclose individual financial information for this company. We have chosen to include this information in the Group financial statements rather than submitting separate standalone 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 £19 million ($23 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 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 2023. The combined amounts are presented under IFRS measurement principles. Intercompany transactions between National Grid plc and Niagara Mohawk Power Corporation 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 2023 – IFRS

	National Grid plc and Niagara Mohawk Power Corporation combined £m
Combined statement of financial position	
Non-current loans to other subsidiaries	124
Non-current assets	11,385
Current loans to other subsidiaries	15,382
Current assets	1,610
Current loans from other subsidiaries	(6,181)
Current liabilities	(1,563)
Non-current loans from other subsidiaries	(2,096)
Non-current liabilities	(12,463)
Net assets[1]	6,198
Equity	6,198
Combined income statement – continuing operations	
Revenue	3,601
Operating costs	(3,463)
Operating profit	138
Other income from other subsidiaries	1,691
Other income and costs, including taxation	(157)
Profit after tax	1,672

1. Excluded from net assets above are investments in other consolidated subsidiaries with a carrying value of £14,488 million.

37. Acquisitions

Business combinations are accounted for using the acquisition method. The identifiable assets acquired and liabilities assumed are recognised at their fair values at the acquisition date.

Goodwill is initially measured as the excess of the aggregate of the consideration transferred, the amount recognised for any non-controlling interest and the acquisition-date fair values of any previously held interest in the acquiree over the fair value of the identifiable assets acquired and liabilities assumed at the acquisition date.

Acquisition-related costs are expensed as incurred and included within other operating costs.

Acquisition of NGED

On 14 June 2021, National Grid plc acquired 100% of the share capital of PPL WPD Investments Limited (WPD), the holding company of National Grid Electricity Distribution plc (formerly known as Western Power Distribution plc), which is the UK's largest electricity distribution network operator. The acquisition, along with the two disposals disclosed in note 10, strategically pivots National Grid's UK portfolio towards electricity, in order to significantly enhance National Grid's role in the delivery of the UK's net zero targets, given that electricity distribution is expected to see a high level of asset growth as a result of the ongoing energy transition.

The total cash consideration for the transaction was £7.9 billion, all of which was paid upfront, with no further contingent or deferred consideration payable. As a result of the acquisition, one of NGED's existing borrowing facilities became repayable immediately due to a change in control clause within the original borrowing agreement. The borrowing facility was immediately replaced with an intercompany loan of £350 million from National Grid plc. National Grid funded the transaction price and the new intercompany loan by taking out a bridge financing facility (see note 33) that was fully repaid substantially with the proceeds from the disposals of NECO and the UK Gas Transmission business in the year ended 31 March 2023.

The fair values of the assets and liabilities following the finalisation of the purchase price allocation in the prior year are set out below:

	IFRS book value at acquisition £m	Fair value adjustments £m	Fair value £m
Non-current assets			
Property, plant and equipment	14,077	(4,026)	10,051
Other intangible assets	49	1,714	1,763
Pension assets	402	164	566
Other non-current assets	27	—	27
Total non-current assets	14,555	(2,148)	12,407
Current assets			
Trade and other receivables	268	—	268
Financial and other investments	69	—	69
Cash	44	—	44
Other current assets	42	—	42
Total current assets	423	—	423
Total assets	14,978	(2,148)	12,830
Current liabilities			
Borrowings	(730)	—	(730)
Trade and other payables	(531)	48	(483)
Other current liabilities	(35)	—	(35)
Total current liabilities	(1,296)	48	(1,248)
Non-current liabilities			
Borrowings	(5,967)	(1,589)	(7,556)
Deferred tax	(1,013)	224	(789)
Contract liabilities	(2,706)	2,706	—
Other non-current liabilities	(56)	(21)	(77)
Total non-current liabilities	(9,742)	1,320	(8,422)
Total liabilities	(11,038)	1,368	(9,670)
Total identifiable net assets	3,940	(780)	3,160
Goodwill	1,254	3,467	4,721
Total consideration transferred	5,194	2,687	7,881
Satisfied by:			
Cash consideration			7,881
Total consideration transferred			7,881

37. Acquisitions continued

Acquisition of NGED continued

The goodwill arising from the acquisition represents the future expected growth in the NGED business, the benefits that are expected to be achieved as a result of the combination of the two businesses and the expertise of the management team acquired. No component of goodwill qualifies for recognition as a separate tangible or intangible asset. The goodwill is not deductible for tax purposes and at the acquisition date, there were no material contingent liabilities.

The fair value step down of property, plant and equipment related primarily to the distribution network assets and was calculated with reference to estimated future forecast cash flows of the existing asset base. The fair value adjustment is expected to amortise over approximately 59 years, representing the remaining useful economic lives of the assets. The intangible assets recognised of £1,714 million relate to regulatory licences acquired which provide the right to operate and invest in the relevant network that operates as a monopoly in the licensed geographical area. The fair value of the regulatory licences was estimated by subtracting goodwill and property, plant and equipment-related cash flows from the overall business cash flows. The fair value of borrowings acquired was estimated by discounting the contractual cash flows at a market cost of debt, taking into account the debt margin observed on NGED's listed debt.

The fair value of trade and other receivables of £270 million includes trade receivables with a fair value of £86 million and accrued income of £139 million. The gross contractual amount for trade receivables due is £103 million, of which £17 million was expected to be uncollectible.

Total acquisition-related costs of £110 million were recognised within other operating costs, within exceptional items and remeasurements in the consolidated income statement, of which £15 million was recognised in the year ended 31 March 2021 and £95 million in the year ended 31 March 2022.

NGED generated revenues of £1,468 million and profit before tax of £781 million for the period from 14 June 2021 to 31 March 2022. If the acquisition had occurred on 1 April 2021, the Group's consolidated revenue and consolidated profit before tax from continuing operations for the 12 months ended 31 March 2022 would have been £18,806 million and £3,600 million respectively.

38. Post balance sheet events

In the period between 1 April 2023 and 17 May 2023, there have been no significant post balance sheet events.

Company accounting policies

We are required to include the standalone 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 2023 were approved by the Board of Directors on 17 May 2023. 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 UK, 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 a 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 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 liquidity via its committed credit facilities to continue to operate for the foreseeable future.

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'.

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 fair value less costs of disposal 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.

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.

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 except for the Group's Non-executive Directors (refer to the Directors' Remuneration Report on page 101).

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 90 – 106.

Company balance sheet

as at 31 March

	Notes	2023 £m	2022 £m
Fixed assets			
Investments	1	**14,480**	14,432
Current assets			
Debtors (amounts falling due within one year)[1]	2	**15,369**	28,255
Debtors (amounts falling due after more than one year)[1]	2	**201**	207
Investments	5	**599**	1,368
Cash at bank and in hand		**55**	45
Total current assets		**16,224**	29,875
Creditors (amounts falling due within one year)	3	**(6,701)**	(23,721)
Net current assets		**9,523**	6,154
Total assets less current liabilities		**24,003**	20,586
Creditors (amounts falling due after more than one year)	3	**(7,755)**	(4,407)
Net assets		**16,248**	16,179
Equity			
Share capital	7	**488**	485
Share premium account		**1,302**	1,300
Cash flow hedge reserve		**(53)**	(15)
Cost of hedging reserve		**2**	(3)
Other equity reserves		**517**	469
Profit and loss account	8	**13,992**	13,943
Total shareholders' equity		**16,248**	16,179

1. Comparative amounts have been re-presented to reflect a correction to the prior year classification of an amount owed by a subsidiary undertaking.

The Company's profit after tax for the year was £1,644 million (2022: £2,371 million profit). Profits available for distribution by the Company to shareholders were £13.9 billion at 31 March 2023. The financial statements of the Company on pages 211 – 217 were approved by the Board of Directors on 17 May 2023 and were signed on its behalf by:

John Pettigrew Chief Executive
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 2021	474	1,296	(3)	(15)	426	12,480	14,658
Profit for the year[1]	—	—	—	—	—	2,371	2,371
Other comprehensive profit/(loss) for the year							
Transferred (from)/to equity (net of tax)	—	—	(12)	12	—	—	—
Total comprehensive (loss)/profit for the year	—	—	(12)	12	—	2,371	2,371
Other equity movements							
Scrip dividend-related share issue[2]	11	(12)	—	—	—	—	(1)
Issue of treasury shares	—	—	—	—	—	17	17
Transactions in own shares	—	16	—	—	—	(3)	13
Share awards to employees of subsidiary undertakings	—	—	—	—	43	—	43
Equity dividends	—	—	—	—	—	(922)	(922)
At 31 March 2022	485	1,300	(15)	(3)	469	13,943	16,179
Profit for the year[1]	—	—	—	—	—	1,644	1,644
Other comprehensive profit/(loss) for the year							
Transferred (from)/to equity (net of tax)	—	—	(38)	5	—	—	(33)
Total comprehensive (loss)/profit for the year	—	—	(38)	5	—	1,644	1,611
Other equity movements							
Scrip dividend-related share issue[2]	3	(3)	—	—	—	—	—
Issue of treasury shares	—	—	—	—	—	16	16
Transactions in own shares	—	5	—	—	—	(4)	1
Share awards to employees of subsidiary undertakings	—	—	—	—	48	—	48
Equity dividends	—	—	—	—	—	(1,607)	(1,607)
At 31 March 2023	**488**	**1,302**	**(53)**	**2**	**517**	**13,992**	**16,248**

1. Included within profit for the year is dividend income from subsidiaries of £1,691 million (2022: £2,500 million).
2. Included within the share premium account are costs associated with scrip dividends.

Notes to the Company financial statements

1. Fixed asset investments

	Shares in subsidiary undertakings £m
Cost at 1 April 2021	16,809
Additions	43
Cost at 31 March 2022	16,852
Additions	48
Cost at 31 March 2023	16,900
Provision at 1 April 2021	(2,420)
Charge for the year	—
Provision at 1 April 2022	(2,420)
Charge for the year	—
Provision at 31 March 2023	(2,420)
Net book value at 31 March 2023	**14,480**
Net book value at 31 March 2022	14,432

During the year, there was a capital contribution of £48 million (2022: £43 million) which represents the fair value of equity instruments granted to subsidiaries' employees arising from equity-settled employee share schemes.

The Company's direct subsidiary undertakings as at 31 March 2023 were as follows: National Grid (US) Holdings Limited, National Grid (US) Investments 2 Limited*, National Grid Hong Kong Limited*, National Grid Luxembourg SARL and NGG Finance plc. 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.

* In liquidation.

2. Debtors

	2023 £m	2022 £m
Amounts falling due within one year		
Derivative financial instruments (note 4)	**82**	65
Amounts owed by subsidiary undertakings[1]	**15,285**	28,179
Other debtors	**2**	11
	15,369	28,255
Amounts falling due after more than one year		
Derivative financial instruments (note 4)	**60**	81
Amounts owed by subsidiary undertakings[1]	**124**	120
Deferred tax	**17**	6
	201	207

1. Comparative amounts have been re-presented to reflect a correction to the prior year classification of an amount owed by a subsidiary undertaking.

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 2021	4
Charged to equity	2
At 31 March 2022	6
Charged to equity	11
At 31 March 2023	**17**

3. Creditors

	2023 £m	2022 £m
Amounts falling due within one year		
Borrowings (note 6)	**402**	9,029
Derivative financial instruments (note 4)	**131**	129
Amounts owed to subsidiary undertakings	**6,138**	14,512
Other creditors	**30**	51
	6,701	23,721
Amounts falling due after more than one year		
Borrowings (note 6)	**5,344**	2,091
Derivative financial instruments (note 4)	**315**	266
Amounts owed to subsidiary undertakings	**2,096**	2,050
	7,755	4,407
Amounts owed to subsidiary undertakings falling due after more than one year are repayable as follows:		
In 1 to 2 years	**439**	—
In 2 to 3 years	**999**	421
In 3 to 4 years	**—**	998
In 4 to 5 years	**658**	—
More than 5 years	**—**	631
	2,096	2,050

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 as follows:

	2023			2022		
	Assets £m	Liabilities £m	Total £m	Assets £m	Liabilities £m	Total £m
Amounts falling due within one year	**82**	**(131)**	**(49)**	65	(129)	(64)
Amounts falling due after more than one year	**60**	**(315)**	**(255)**	81	(266)	(185)
	142	**(446)**	**(304)**	146	(395)	(249)

For each class of derivative, the notional contract[1] amounts are as follows:

	2023 £m	2022 £m
Cross-currency interest rate swaps	**(8,232)**	(5,034)
Foreign exchange forward contracts	**(10,213)**	(12,322)
	(18,445)	(17,356)

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

5. Investments

	2023 £m	2022 £m
Investments in short-term money funds	**492**	1,164
Restricted balances – collateral	**107**	204
	599	1,368

6. Borrowings

The following table analyses the Company's total borrowings:

	2023 £m	2022 £m
Amounts falling due within one year		
Bank loans	**66**	8,206
Bonds	**28**	4
Commercial paper	**308**	819
	402	9,029
Amounts falling due after more than one year		
Bank loans	**106**	—
Bonds	**5,238**	2,091
	5,344	2,091
Total borrowings	**5,746**	11,120

The maturity of total borrowings is as follows:

	2023 £m	2022 £m
Total borrowings are repayable as follows:		
Less than 1 year	**402**	9,029
In 3 to 4 years	**563**	—
In 4 to 5 years	**387**	—
More than 5 years	**4,394**	2,091
	5,746	11,120

The notional amount of borrowings outstanding as at 31 March 2023 was £5,931 million (2022: £11,215 million).

7. Share capital

The called-up share capital amounting to £488 million (2022: £485 million) consists of 3,930,371,661 ordinary shares of $12^{204}/_{473}$ pence each (2022: 3,904,074,348 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 2023, the profit and loss account reserve stood at £13,992 million (2022: £13,943 million) of which profits available for distribution by the Company to shareholders were £13.9 billion (2022: £12.2 billion).

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 2023, the sterling equivalent amounted to £2,117 million (2022: £2,084 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 £33,000 (2022: £31,000). 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.