Financial Statements

Independent Auditor's Report

Report on the audit of the financial statements

Opinion

In our opinion:

- the Financial Statements of Centrica plc (the 'parent company') and its subsidiaries (the 'Group') give a true and fair view of the state of the Group's and of the parent company's affairs as at 31 December 2019 and of the Group's loss for the year then ended;
- the Group Financial Statements have been properly prepared in accordance with International Financial Reporting Standards (IFRSs) as adopted by the European Union;
- the parent company Financial Statements have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice, including Financial Reporting Standard 101 "Reduced Disclosure Framework"; and
- the Financial Statements have been prepared in accordance with the requirements of the Companies Act 2006 and, as regards the Group Financial Statements, Article 4 of the IAS Regulation.

We have audited the Financial Statements which comprise:

- the Group Income Statement;
- the Group Statement of Comprehensive Income;
- the Group and Company Balance Sheets;
- the Group and Company Statements of Changes in Equity;
- the Group Cash Flow Statement; and
- the related notes 1 to 26 and the supplementary notes S1 to S11 of the Group Financial Statements and notes I to XVIII of the Company Financial Statements.

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

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 S9 to the Financial Statements. We confirm that the non-audit services prohibited by the FRC's Ethical Standard were not provided to the Group or the parent company.

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

Summary of our audit approach

Key audit matters	The key audit matters that we identified in the current year were: • Presentation of the Group Income Statement; • Impairment of long-life assets; • Revenue and cost recognition for derivatives; and • Estimation of accrued energy revenue. All key audit matters are consistent with the prior year.
Materiality	The materiality that we used for the Group Financial Statements was £42 million which was determined on the basis of 5% of forecast 2019 pre-tax profit, adjusted for exceptional items and certain re-measurements as defined in note 7 to the Financial Statements. Our materiality represents 6.5% of the final pre-tax profit adjusted for exceptional items and certain re-measurements.
Scoping	All components of the Group have been subject to a full scope audit using a component materiality level relevant to the size and risk associated with that component other than Centrica Business Solutions (within the Centrica Business segment) and Direct Energy Services (US and Canada) within the Centrica Consumer segment, both of which were subject to specified audit procedures.
Significant changes in our approach	• There are no significant changes in our approach for 2019.

Conclusions relating to going concern, principal risks and viability statement

Going concern

We have reviewed the Directors' statement on page 245 to the Financial Statements about whether they considered it appropriate to adopt the going concern basis of accounting in preparing them and their identification of any material uncertainties to the Group's and company's ability to continue to do so over a period of at least 12 months from the date of approval of the Financial Statements.

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

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

Going concern is the basis of preparation of the Financial Statements that assumes an entity will remain in operation for a period of at least 12 months from the date of approval of the Financial Statements.

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

Principal risks and viability statement

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

- the disclosures on pages 34-43 that describe the principal risks, procedures to identify emerging risks, and an explanation of how these are being managed or mitigated;
- the Directors' confirmation on page 37 that they have carried out a robust assessment of the principal and emerging risks facing the Group, including those that would threaten its business model, future performance, solvency or liquidity; or
- the Directors' explanation on page 44 as to how they have assessed the prospects of the Group, over what period they have done so and why they consider that period to be appropriate, and their statement as to whether they have a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over the period of their assessment, including any related disclosures drawing attention to any necessary qualifications or assumptions.

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

Viability means the ability of the Group to continue over the time horizon considered appropriate by the Directors.

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

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 for 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.

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

Presentation of the Group Income Statement

The Group Income Statement set out on page 124 of the Annual Report & Accounts segregates Business performance from Exceptional items and certain re-measurements (the 'Middle column') in arriving at the results for the year with additional information disclosed in Note 7. The Group's policy on the presentation of exceptional items and certain re-measurements can be found in notes 2(a) and 2(b). The Audit Committee also discuss this area in their report on pages 70 to 75.

Business performance is a critical measure for stakeholders and underpins the Group's segmental analysis and description of business results, and therefore the classification of items between Business performance and the Middle column is important for users of the accounts.

The key items included within the Middle column are as follows:

- Re-measurement and settlement of certain energy contracts (£646 million);
- Impairment of certain assets (£925 million);
- Restructuring costs (£356 million);
- Pension change costs and credits (£152 million);
- Net gain on disposals programmes (£35 million); and
- Related tax charges and credits (£217 million).

The Group has an established policy which governs which items should be recognised in the Middle column. However, judgement is applied in the application of this policy. This is a key area of focus for our audit. We identified a potential fraud risk in respect of the presentation of exceptional items, in particular restructuring costs.

The valuation and recording of the impairment of certain assets and the valuation and recording of the re-measurement of certain energy contracts are separate key audit matters. Please see pages 107 and 108 for further detail. The presentation of these items within either Business performance or the Middle column is, however, addressed within this key audit matter.

Significant restructuring costs were incurred in 2019 in relation to Group's strategic review and efficiency programme as set out on page 30. The costs of restructuring arising from the strategic review are included within the Middle Column.

The presentation of the Group's revenue and cost of sales in the results for the period column has been amended and the comparative period results have been represented to comply with the requirements of the IFRIC agenda decision on the Physical Settlement of Contracts to Buy or Sell a non-Financial Item which was issued in March 2019. Please see pages 121 and 163 for further details.

Audit procedures applicable to all items

- We obtained an understanding of key controls around the presentation of items within either Business performance or the Middle column.
- We evaluated the Group's policy on the recording of items within Business performance or the Middle column and considered whether that policy was appropriate. We also evaluated the Group's policy against guidance issued by the Financial Reporting Council (FRC) and the European Securities and Markets Authority (ESMA).
- We challenged Management on the presentation of items within the Middle column and whether these items had been correctly presented within the appropriate column and properly disclosed in line with the Group's policy.

Audit procedures applicable to specific items

- On impairment of certain assets, we challenged Management on the factors that caused any significant movement in value on each asset by interrogating the underlying impairment models and whether the impairment had been recorded within the correct column.
- For restructuring costs we evaluated the costs recorded by Management within the Middle column and challenged whether those costs were being correctly reported in line with the Group's policy.
- We evaluated the income statement amendments and the presentation of certain revenue streams following the IFRIC agenda decision on the recycling of derivative movements.
- We reviewed the presentation and disclosure of Management's conclusions in the Annual Report & Accounts to assess whether the disclosures are fair, balanced and understandable and consistent with the Group's policy and relevant accounting standards.

Key observations

- The exploration and production assets impairments arise from both operating performance of certain projects and a reduction in forecast energy prices, and are material in size, while the Nuclear impairments arise from changes in forecast future energy prices therefore under the Group's policy these impairments are appropriately recorded within the Middle column.
- Where the impairment involves a change in forecast future energy prices combined with factors such as operational performance or available reserves, a judgement is taken by the Group whether this should be reported in the Middle column. We believe these judgements are reasonable.
- The majority of restructuring costs relate to clearly defined projects (see 30). However, there are certain smaller costs incurred in the year which relate to restructuring activities in other areas of the business, and which have been treated as exceptional items and presented within the Middle column in the income statement. Whilst the treatment of these costs as exceptional is subjective, the costs incurred are not material to the Financial Statements.
- We are satisfied with the income statement amendments and the presentation of certain revenue streams following the IFRIC agenda decision.

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

Impairment of long-life assets

The total book value of exploration and production assets is £2,396 million and the total book value of the investment in Nuclear is £1,289 million. Management have recorded a pre-tax impairment charge of £848 million for these assets, including £476 million on exploration and production assets and £372 million on the investment in Nuclear, primarily due to lower forecast long term prices and operational performance, as disclosed in note 7. Further details on the key sources of estimation certainty underpinning the impairment of long life assets can be found in note 3(b). Details on the sensitivity of the above impairment reviews to changes in key assumptions such as commodity prices are disclosed in Note 7(d). The matter is also considered by the Audit Committee in their report on pages 69 to 75.

The Group owns significant upstream exploration and production assets and certain power generation assets, which are required to be reviewed for indicators of impairment and tested for impairment as appropriate.

These assets are subject to the greatest estimation uncertainty, as set out below. Consequently they represent the highest risk of impairment. We therefore identified a risk of material misstatement that these long-life assets are not recoverable. The impairments recorded in the year were primarily because of a change in the estimation of long term commodity prices.

The impairment assessment involves management judgement in considering whether the carrying value of those assets or cash generating units are recoverable. The key assumptions and judgements underpinning the impairment reviews include:

- forecast future cash flows;
- forecast future production or generation profiles;
- forecast future commodity prices;
- estimates of oil and gas reserves;
- availability forecast;
- useful life estimates and life extensions; and
- determining an appropriate discount rate.

Procedures on the overall impairment review

- We have understood management's process for identifying indicators of impairment and for performing their impairment assessment. We assessed and obtained an understanding of the key controls relating to the asset impairment models, the underlying forecasting process and the impairment reviews performed.
- We evaluated and challenged the key assumptions and inputs into the impairment models, which included performing sensitivity analysis, to evaluate the impact of selecting alternative assumptions. We evaluated the current year changes to the key assumptions and retrospectively assessed whether prior year assumptions were appropriate.
- We audited the arithmetical accuracy of the impairment models. We recalculated the impairment charges and headroom and agreed these to financial records.
- We evaluated the impairment judgements taken, with reference to our assessment of the key assumptions as outlined above and the outcome of the sensitivities performed.

Procedures relating to forecast future cash flows

- We confirmed that forecast cash flows were consistent with Board approved forecasts, and analysed reasonably possible downside sensitivities.
- We validated production profiles to external reserve and operator estimates and agreed these to the cash flow forecast assumptions.
- We confirmed estimates of oil and gas reserves to third party reserve reports, assessing the skills, qualifications and independence of those third party experts.
- We evaluated the Group's determination of future commodity prices using our own internal experts, who benchmarked against externally available future commodity price estimates and performed sensitivity analysis with alternative future prices.
- We assessed the reasonableness of the nuclear plants' availability forecast and life extensions and sensitised the impact of change in assumptions on the overall impairment charge.

Procedures relating to the discount rate

- We involved our internal valuation specialists to evaluate management's discount rates, which involved benchmarking against available market views and analysis.

Key observations

- We are satisfied that the key assumptions used to determine the recoverable amount of long-life assets are appropriate, including estimates of reserves, production and generation profiles.
- We are also satisfied that the Group's discount rate assumptions are determined based on acceptable valuation methodologies. These assumptions are towards the higher end when compared to the ranges determined by our internal valuation specialists but are considered reasonable, consistent with the prior year.
- The Group's future commodity price estimates are within the middle of the acceptable range of external sources. In the prior year the Group's future commodity price estimates were towards the higher end of the acceptable range.
- Based on the procedures performed we are satisfied that the Group's impairment charge is appropriate.

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

Revenue and cost recognition for derivatives

Details on the Group's derivative activities can be found in note 19 and note S3 (a). The key sources of estimation uncertainty associated with derivatives can be found in note 3(b) with further details on the presentation of certain re-measurement arising on derivatives disclosed in note 2(b).The matter is also considered by the Audit Committee in their report on pages 69 to 75. As disclosed in note 7 to the Financial Statements, certain re-measurements of £647 million pre-tax have been recognised in the current year. The critical accounting judgement in respect of Liquefied Natural Gas ('LNG') is disclosed in note 3(a) and the long term LNG commitments are disclosed in note 23.

In addition to proprietary trading activities, the Group enters into forward commodity contracts to optimise the value of its production, generation and transportation assets as well as to meet the future needs of its customers. Certain of these arrangements are accounted for as derivative financial instruments and are recorded at fair value. We identified the following risks in respect of commodity trades, all of which were identified as fraud risks:

Valuation of complex trades

- Judgement is required in valuing derivative contracts, particularly where there is optionality in a contract that requires modelling on a bespoke basis (Level 2 or 3 in accordance with IFRS 13 Fair Value Measurement). As such we identified a risk relating to the valuation of complex trades.

Own-use treatment and accruals accounting

- Certain commodity contracts have been entered into for the purposes of securing commodities for the energy supply businesses. Where contracts have been entered into to satisfy Centrica's normal business activities, these have been determined to be own-use contracts and consequently are not recorded at fair value. Due to the size and value of these contracts we have identified the appropriateness of the own-use treatment as a key audit matter.
- The Group does not consider its long term LNG supply contracts to be derivatives because of a lack of market liquidity and the inability or lack of history of net settlement. Such contracts are therefore not marked to market. These contracts are significant commitments and therefore this judgement is important to the Group's Financial Statements.

Allocation of optimisation and hedging trading activity in the Middle column

- Where the Group enters into trades that give rise to an accounting mismatch between accrual accounted assets, contracts and demand and the marked to market accounted forward commodity contracts, the fair values of those contracts are accounted for separately as 'certain re-measurements' within the Middle column of the Group's Income Statement and are excluded from Business performance.

We have understood the Group's processes and controls for authorising and recording commodity trades.

In the Group's Energy, Marketing and Trading ('EM&T') business, we used data analytics to trace commodity trades from initiation through to confirmation, settlement (where relevant) and recording in the Group's accounting systems. This included an assessment of whether the accounting recognition was in line with the Group's accounting policies and relevant accounting standards.

Valuation of complex trades

- We used financial instrument specialists to assist the audit team in valuing material complex trades, which included auditing the Group's valuation models by creating an independent valuation, or by assessing the inputs, verifying the reasonableness of the model methodology and assessing the movement in the fair value from the change in significant inputs.

Own-use treatment

- We reviewed all the Group's material 'own use' contracts which were entered into during the year to determine whether the application of the own-use treatment was appropriate.
- We assessed whether there is liquidity in the LNG market or the Group has the ability or practice of net settling of contracts, including reviewing contractual terms.
- We audited the prospective and retrospective demand tests performed by the Group to determine whether the contract volumes exceed the amount of estimated own-use demand in the relevant periods, including an evaluation of the contracts for net settlement activity.

Allocation of optimisation and hedging trading activity in the Middle column

- We audited the principles management use to determine whether a trade should be recognised as part of on-going business performance or presented separately. We evaluated whether those agreed principles had been applied consistently by reviewing key contracts and testing a sample of trades to confirm that the accounting treatment was appropriate.
- We also verified that trades within certain re-measurements were entered into at market prices where the counter-party was another Group business, to determine whether profits and losses within the Middle column reflect only market-related movements.

Key observations

- We are satisfied that commodity trades are valued on a reasonable basis and that the accounting classification and valuation of trades is appropriate.
- We are satisfied with the appropriateness of the Group's own use accounting.
- We agree with the conclusion that LNG contracts should not be accounted for at fair value.

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

Estimation of accrued energy revenue

Details on the Group's accrued energy income can be found in note 17. Total accrued energy income at 31 December 2019 was £1,342 million (2018: £1,542 million). The key source of estimation uncertainty associated with accrued energy income is disclosed in note 3(b). The matter is also considered by the Audit Committee in their report on pages 69 to 75.

The recognition of energy supply revenue requires the Group to estimate customer energy usage between the date of the last meter read and the year end, known as accrued or unbilled energy revenue.

Our risk was focused on the accuracy and valuation of accrued energy revenue in the UK and North American Home and Business, being the businesses with the most significant accrued energy revenue. We have pinpointed the risk to the estimates underpinning the recognition and valuation of accrued energy revenue and the potential for management override of related controls. We also identified this as a fraud risk.

Our audit approach for unbilled revenue was a combination of tests of internal control and data analytics work, together with substantive analytical procedures. This included understanding controls in the UK and North American revenue processes, from meter reading to cash collection, and controls over the period end revenue reconciliation process. In the UK, we tested the key controls relied on to estimate accrued energy revenue.

- We used data analytics in UK Home and Business to reperform the calculation of the accrued energy revenue estimate generated by the billing systems for each customer account, in addition to auditing key manual adjustments made by management, and the key assumption, being the value of energy consumed since the last meter read.
- In North America, we focused on creating an independent estimate of accrued energy revenue and compared this to the estimate determined by management.
- In the UK and North America we assessed the accuracy of the estimates made by management in prior periods. Any differences as a result of the work performed were investigated and challenged.

Key observations

- We are satisfied that the estimation of the Group's accrued energy revenue is materially correct. We were able to rely on certain controls around the estimation process in the UK and whilst some improvements were made to processes in North America, the controls are not yet at a stage where we were are able to rely on them. This is discussed further in the Audit Committee's report on pages 69 to 75.

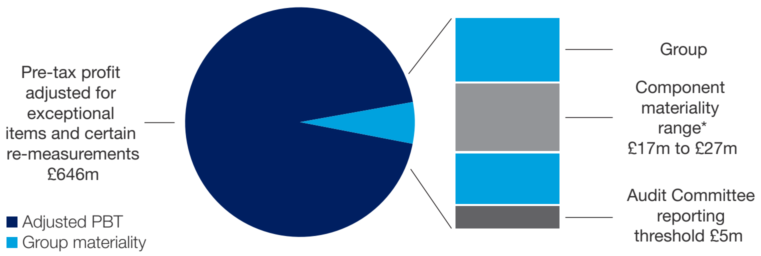
Our application of materiality

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	£42 million (2018: £60 million)	£40 million (2018: £50 million)
Basis for determining materiality	We determined Group materiality on the basis on 5% of forecast 2019 pre-tax profit, adjusted for exceptional items and certain re-measurements as defined in note 7 to the Financial Statements (2018 - 5%). Our materiality represents 6.5% of the final pre-tax profit adjusted for exceptional items and certain re-measurements (2018: 5.4%).	We determined company materiality based on 1% (2018: 1%) of estimated net assets. Our materiality represents 0.7% of final net assets (2018: 0.9%).
Rationale for the benchmark applied	Pre-tax profit adjusted for exceptional items and certain re-measurements was considered to be the most relevant benchmark as it is of most interest to stakeholders. Furthermore, exceptional items and certain re-measurements are volatile and materially impact the Group's performance each year due to events and transactions that are not part of the underlying activities of the Group, and excluding them enables a more consistent basis with which to consider the Group's performance on an ongoing basis.	We considered net assets to be the most appropriate benchmark given the primary purpose of the Company is a holding company.



*Component materiality range excludes parent company materiality

Performance materiality

We set performance materiality at a level lower than materiality to reduce the probability that, in aggregate, uncorrected and undetected misstatements exceed the materiality for the Financial Statements as a whole. Group performance materiality was set at 70% of Group materiality for the 2019 audit (2018: 70%). In determining performance materiality, we considered factors including our ability to rely on internal controls across a number of areas of the audit including payroll, expenditure, meter to cash and revenue, and the willingness to make process improvements as well as management's willingness to correct errors identified and the stability of the finance team.

Error reporting threshold

We agreed with the Audit Committee that we would report to the Committee all individual audit differences in excess of £5 million (2018: £5 million) and collectively all other errors above £2 million (2018: £3 million) as well as differences below that threshold that, in our view, warranted reporting on qualitative grounds. We also report to the Audit Committee on disclosure matters that we identified when assessing the overall presentation of the Financial Statements.

An overview of the scope of our audit

Identification and scoping of components

The Group is organised by its different segments as outlined in note 4. These segments contain a number of individual businesses, and we use those businesses as the basis for our audit scope.

Our audit was scoped by obtaining an understanding of the Group and its environment, including Group-wide controls, and assessing the risks of material misstatement at the Group level. Having performed this assessment it was concluded that the following components were considered to be the most significant and were subject to full scope audits:

Centrica Consumer

- UK Home
- North America Home
- Connected Home Solutions
- Ireland

Centrica Business

- UK Business
- North America Business
- Energy Marketing & Trading
- Central Power Generation

Upstream

- Spirit Energy
- Centrica Storage
- Nuclear

Centrica Business Solutions (within the Centrica Business segment) and Direct Energy Services US and Direct Energy Services Canada (within the Centrica Consumer segment) were individually not financially significant and as such we performed specified audit procedures over relevant audit risks.

This scoping resulted in 96% of Group revenue, 90% of Group profit before tax and 95% of Group net assets being subject to audit.

The materiality levels of the components ranged from £17 million to £27 million (excluding parent company materiality) depending on the contribution of the component's operations to the Group and our assessment of risk relevant to each location.

Working with other auditors

All components except for North America Home, North America Business and Ireland are audited from the United Kingdom and hence we oversee these component audits through regular meetings and direct supervision. For the overseas components, each was visited throughout the year by the lead audit partner or other senior members of the engagement team. Throughout the year, the Group audit team has been directly involved in overseeing the component audit planning and execution, through frequent conversations, team meetings, debate, challenge and review of reporting and underlying work papers. In addition to our direct interactions, we sent detailed instructions to our component audit teams, attended audit closing meetings, and reviewed their audit working papers. We are satisfied that the level of involvement of the lead audit partner and team in the component audits has been extensive, and 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.

Other information

The Directors are responsible for the other information. The other information comprises the information included in the annual report, other than the Financial Statements and our auditor's report thereon.

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

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

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

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

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

We have nothing to report in respect of these matters.

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.

Auditor's responsibilities for the audit of the Financial Statements

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

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

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

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

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

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;
- Group's own assessment of the risks that irregularities may occur either as a result of fraud or error that was approved by those charged with governance on 11 February 2019 and 10 February 2020;
- results of our enquiries of management, internal audit and the Audit Committee about their own identification and assessment of the risks of irregularities;
- any matters we identified having obtained and reviewed the Group's documentation of their policies and procedures relating to:
  - identifying, evaluating and complying with laws and regulations and whether they were aware of any instances of non-compliance;
  - detecting and responding to the risks of fraud and whether they have knowledge of any actual, suspected or alleged fraud;
  - the internal controls established to mitigate risks of fraud or non-compliance with laws and regulations.
- the matters discussed among the audit engagement team including significant component audit teams and involving relevant internal specialists, including tax, valuations, pensions and IT regarding how and where fraud might occur in the Financial Statements and any potential indicators of fraud.

As a result of these procedures, we considered the opportunities and incentives that may exist within the organisation for fraud and identified the greatest potential for fraud in the following areas: (i) The presentation of the Group income statement, (ii) Revenue and cost recognition for derivatives and (iii) Estimation of unbilled energy supply revenue. In common with all audits under ISAs (UK), we are also required to perform specific procedures to respond to the risk of management override.

We also obtained an understanding of the legal and regulatory framework 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 and Tax legislation.

In addition, we considered provisions of other laws and regulations that do not have a direct effect on the Financial Statements but compliance with which may be fundamental to the Group's ability to operate or to avoid a material penalty. These included the Office of Gas and Electricity Markets (Ofgem) and Regulations levied by the UK Financial Conduct Authority and Prudential Regulatory Authority.

Audit response to risks identified

As a result of performing the above, we identified the presentation of the Group income statement, revenue and cost recognition for derivatives and estimation of unbilled energy supply revenue as key audit matters related to the potential risk of fraud. The key audit matters section of our report explains the matters in more detail and also describes the specific procedures we performed in response to those key audit matters.

In addition to the above, our procedures to respond to risks identified included the following:

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

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

Report on other legal and regulatory requirements

Opinions on other matters prescribed by the Companies Act 2006

In our opinion the part of the Directors' Remuneration Report to be audited has been properly prepared in accordance with the Companies Act 2006.

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

- the information given in the Strategic Report and the Directors' Report for the financial year for which the Financial Statements are prepared is consistent with the Financial Statements; and
- the Strategic Report and the Directors' Report have been prepared in accordance with applicable legal requirements.

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

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

Other matters

Auditor tenure

Following the recommendation of the Audit Committee, we were appointed by the Shareholders on 13 May 2019 to audit the Financial Statements for the year ending 31 December 2019 and subsequent financial periods. The period of total uninterrupted engagement including previous renewals and reappointments of the firm is three years, covering the years ending 31 December 2017, 31 December 2018 and 31 December 2019.

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

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

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.

James Leigh FCA (Senior statutory auditor)
For and on behalf of Deloitte LLP

Statutory Auditor
London, United Kingdom
12 February 2020

Group Income Statement

Year ended 31 December	Notes	2019 Business performance £m	2019 Exceptional items and certain re-measurements £m	2019 Results for the year £m	2018 (restated) (i) Business performance £m	2018 (restated) (i) Exceptional items and certain re-measurements £m	2018 (restated) (i) Results for the year £m
Group revenue (i)	4	**26,825**	**(4,151)**	**22,674**	27,381	(4,077)	23,304
Cost of sales (i)	5	**(22,973)**	**7,178**	**(15,795)**	(23,128)	6,808	(16,320)
Re-measurement and settlement of energy contracts (i)	7	**–**	**(3,673)**	**(3,673)**	–	(2,931)	(2,931)
Gross profit/(loss)		**3,852**	**(646)**	**3,206**	4,253	(200)	4,053
Operating costs before exceptional items and credit losses on financial assets	5	**(2,742)**	**–**	**(2,742)**	(2,721)	–	(2,721)
Credit losses on financial assets	5, 17	**(197)**	**–**	**(197)**	(143)	–	(143)
Exceptional items – (impairment)/write-back of retained exploration and production assets	7	**–**	**(476)**	**(476)**	–	90	90
Exceptional items – impairment of power assets and provision for onerous power contracts	7	**–**	**(381)**	**(381)**	–	(46)	(46)
Exceptional items – impairment of Centrica Home Solutions	7	**–**	**(77)**	**(77)**	–	–	–
Exceptional items – net gain/(loss) on disposal (ii)	7	**–**	**35**	**35**	–	(16)	(16)
Exceptional items – net pension change credit/(cost)	7	**–**	**152**	**152**	–	(41)	(41)
Exceptional items – restructuring costs	7	**–**	**(356)**	**(356)**	–	(170)	(170)
Operating costs	5	**(2,939)**	**(1,103)**	**(4,042)**	(2,864)	(183)	(3,047)
Share of (losses)/profits of joint ventures and associates, net of interest and taxation	6, 7	**(12)**	**(1)**	**(13)**	3	(22)	(19)
Group operating profit/(loss)	4	**901**	**(1,750)**	**(849)**	1,392	(405)	987
Net finance cost	7, 8	**(255)**	**–**	**(255)**	(273)	(139)	(412)
Profit/(loss) before taxation		**646**	**(1,750)**	**(1,104)**	1,119	(544)	575
Taxation on profit/(loss)	7, 9	**(218)**	**219**	**1**	(461)	128	(333)
Profit/(loss) for the year		**428**	**(1,531)**	**(1,103)**	658	(416)	242
Attributable to:							
Owners of the parent		**419**	**(1,442)**	**(1,023)**	631	(448)	183
Non-controlling interests		**9**	**(89)**	**(80)**	27	32	59

Earnings per ordinary share	Notes	2019 Pence	2018 Pence
Basic	10	**(17.8)**	3.3
Diluted	10	**(17.8)**	3.2
Interim dividend paid per ordinary share	11	**1.50**	3.60
Final dividend proposed per ordinary share	11	**3.50**	8.40

(i) The Group has amended the presentation of energy derivative contracts following an IFRIC agenda decision in March 2019 and a review of its trading businesses. Prior year results have been restated accordingly. See note 1 for further details.

(ii) Gains and losses on disposals include any impairments and write-backs associated with the assets and businesses disposed of or classified as held for sale.

The notes on pages 119 to 195 form part of these Financial Statements.

Group Statement of Comprehensive Income

Year ended 31 December	Notes	2019 £m	2018 £m
(Loss)/profit for the year		**(1,103)**	242
Other comprehensive (loss)/income			
Items that will be or have been reclassified to the Group Income Statement:			
Impact of cash flow hedging (net of taxation)	S4	**(4)**	10
Exchange differences on translation of foreign operations		**(126)**	106
Exchange differences reclassified to Group Income Statement on disposal	12	**(18)**	–
Items that will not be reclassified to the Group Income Statement:			
Net actuarial (losses)/gains on defined benefit pension schemes (net of taxation)	S4	**(387)**	657
Gains/(losses) on revaluation of equity instruments measured at fair value through other comprehensive income (net of taxation)		**2**	(1)
Share of other comprehensive income/(loss) of joint ventures and associates, net of taxation	14, S4	**29**	(1)
Other comprehensive (loss)/income, net of taxation		**(504)**	771
Total comprehensive (loss)/income for the year		**(1,607)**	1,013
Attributable to:			
Owners of the parent		**(1,511)**	953
Non-controlling interests	S11	**(96)**	60

The notes on pages 119 to 195 form part of these Financial Statements.

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Group Statement of Changes in Equity

	Share capital £m	Share premium £m	Retained earnings £m	Other equity £m	**Total £m**	Non-controlling interests £m	**Total equity £m**
1 January 2018	348	2,121	1,184	(950)	2,703	729	3,432
Adjustment on adoption of IFRS 9	–	–	28	(28)	–	–	–
Profit for the year	–	–	183	–	183	59	242
Other comprehensive income	–	–	–	770	770	1	771
Employee share schemes	–	–	3	27	30	–	30
Scrip dividend	6	119	–	–	125	–	125
Dividends paid to equity holders (note 11)	–	–	(673)	–	(673)	–	(673)
Other	–	–	–	7	7	14	21
31 December 2018	354	2,240	725	(174)	3,145	803	3,948
Loss for the year	–	–	(1,023)	–	**(1,023)**	(80)	**(1,103)**
Other comprehensive loss	–	–	–	(488)	**(488)**	(16)	**(504)**
Employee share schemes and other share transactions	–	–	(10)	53	**43**	–	**43**
Scrip dividend (note 11)	6	90	–	–	**96**	–	**96**
Dividends paid to equity holders (note 11)	–	–	(561)	–	**(561)**	–	**(561)**
Distributions to non-controlling interests	–	–	–	–	**–**	(124)	**(124)**
31 December 2019	**360**	**2,330**	**(869)**	**(609)**	**1,212**	**583**	**1,795**

The notes on pages 119 to 195 form part of these Financial Statements.

Group Balance Sheet

	Notes	31 December 2019 £m	31 December 2018 £m
Non-current assets			
Property, plant and equipment	13	**3,133**	4,124
Interests in joint ventures and associates	14	**1,306**	1,661
Other intangible assets	15	**1,455**	1,720
Goodwill	15	**2,578**	2,736
Deferred tax assets	16	**553**	532
Trade and other receivables, and contract-related assets	17	**154**	119
Derivative financial instruments	19	**493**	537
Retirement benefit assets	22	**56**	223
Securities	24	**131**	239
		9,859	11,891
Current assets			
Trade and other receivables, and contract-related assets	17	**4,839**	5,543
Inventories	18	**431**	459
Derivative financial instruments	19	**1,320**	1,141
Current tax assets		**115**	187
Securities	24	**124**	68
Cash and cash equivalents	24	**1,342**	1,268
		8,171	8,666
Assets of disposal groups classified as held for sale	12	**124**	–
		8,295	8,666
Total assets		**18,154**	20,557
Current liabilities			
Derivative financial instruments	19	**(1,854)**	(1,136)
Trade and other payables, and contract-related liabilities	20	**(5,533)**	(6,207)
Current tax liabilities		**(339)**	(360)
Provisions for other liabilities and charges	21	**(284)**	(305)
Bank overdrafts, loans and other borrowings	24	**(857)**	(374)
		(8,867)	(8,382)
Liabilities of disposal groups classified as held for sale	12	**(18)**	–
		(8,885)	(8,382)
Non-current liabilities			
Deferred tax liabilities	16	**(151)**	(384)
Derivative financial instruments	19	**(291)**	(430)
Trade and other payables, and contract-related liabilities	20	**(152)**	(191)
Provisions for other liabilities and charges	21	**(2,175)**	(2,540)
Retirement benefit obligations	22	**(219)**	(302)
Bank loans and other borrowings	24	**(4,486)**	(4,380)
		(7,474)	(8,227)
Total liabilities		**(16,359)**	(16,609)
Net assets		**1,795**	3,948
Share capital	25	**360**	354
Share premium		**2,330**	2,240
Retained earnings		**(869)**	725
Other equity	S4	**(609)**	(174)
Total shareholders' equity		**1,212**	3,145
Non-controlling interests	S11	**583**	803
Total shareholders' equity and non-controlling interests		**1,795**	3,948

The Financial Statements on pages 114 to 195, of which the notes on pages 119 to 195 form part, were approved and authorised for issue by the Board of Directors on 12 February 2020 and were signed below on its behalf by:

Iain Conn
Group Chief Executive

Chris O'Shea
Group Chief Financial Officer

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Group Cash Flow Statement

Year ended 31 December	Notes	2019 £m	2018 £m
Group operating (loss)/profit including share of results of joint ventures and associates		**(849)**	987
Add back share of losses of joint ventures and associates, net of interest and taxation	6	**13**	19
Group operating (loss)/profit before share of results of joint ventures and associates		**(836)**	1,006
Add back/(deduct):			
Depreciation, amortisation, write-downs, impairments and write-backs		**2,299**	1,019
Profit on disposals		**(159)**	(13)
Decrease in provisions		**–**	(29)
Cash contributions to defined benefit schemes in excess of service cost income statement charge		**(493)**	(34)
Employee share scheme costs	S4	**41**	43
Unrealised losses arising from re-measurement of energy contracts		**432**	241
Exceptional charges reflected directly in operating profit		**237**	56
Operating cash flows before movements in working capital relating to business performance and payments relating to taxes and exceptional charges		**1,521**	2,289
Increase in inventories		**(14)**	(43)
Decrease/(increase) in trade and other receivables and contract-related assets relating to business performance		**518**	(834)
(Decrease)/increase in trade and other payables and contract-related liabilities relating to business performance		**(385)**	831
Operating cash flows before payments relating to taxes and exceptional charges		**1,640**	2,243
Taxes paid	9	**(92)**	(61)
Payments relating to exceptional charges in operating costs		**(298)**	(248)
Net cash flow from operating activities		**1,250**	1,934
Purchase of businesses, net of cash acquired		**(30)**	(85)
Sale of businesses		**236**	20
Purchase of property, plant and equipment and intangible assets	4	**(781)**	(926)
Sale of property, plant and equipment and intangible assets		**8**	26
Investments in joint ventures and associates		**(1)**	(3)
Dividends received from joint ventures and associates	14	**1**	22
Receipt of sub-lease capital payments	24	**3**	–
Interest received		**11**	15
Sale/(purchase) of securities	24	**50**	(76)
Net cash flow from investing activities		**(503)**	(1,007)
Payments for own shares	S4	**–**	(11)
Proceeds from sale of forfeited share capital		**2**	–
Distribution to non-controlling interests		**(124)**	–
Financing interest paid	24	**(243)**	(305)
Repayment of borrowings and capital element of leases	24	**(241)**	(1,673)
Equity dividends paid		**(471)**	(551)
Net cash flow from financing activities		**(1,077)**	(2,540)
Net decrease in cash and cash equivalents		**(330)**	(1,613)
Cash and cash equivalents including overdrafts at 1 January		**1,128**	2,737
Effect of foreign exchange rate changes		**(4)**	4
Cash and cash equivalents including overdrafts at 31 December	24	**794**	1,128
Included in the following line of the Group Balance Sheet:			
Cash and cash equivalents		**1,342**	1,268
Overdrafts included within current bank overdrafts, loans and other borrowings		**(548)**	(140)

The notes on pages 119 to 195 form part of these Financial Statements.

Notes to the Financial Statements

Notes to the Financial Statements provide additional information required by statute, accounting standards or Listing Rules to explain a particular feature of the consolidated Financial Statements.

The notes to these Financial Statements focus on areas that are key to understanding our business. Additional information that we are required to disclose by accounting standards or regulation is disclosed in the Supplementary Information (notes S1 to S11).

In addition, for clarity, each note begins with a simple introduction outlining its purpose.

1. Basis of preparation and summary of significant new accounting policies and reporting changes

This section details new accounting standards, amendments to standards and interpretations, whether these are effective in 2019 or later years, and if and how these are expected to impact the financial position and performance of the Group.

The principal accounting policies applied in the preparation of these consolidated Financial Statements are set out below and in the Supplementary Information (note S2). Unless otherwise stated, these policies have been consistently applied to the years presented.

(a) Basis of preparation

The consolidated Financial Statements have been prepared in accordance with International Financial Reporting Standards (IFRS) adopted by the European Union (EU) and therefore comply with Article 4 of the EU IAS Regulation and those parts of the Companies Act 2006 applicable to companies reporting under IFRS.

The consolidated Financial Statements have been prepared on the historical cost basis except for: certain oil and gas inventory, derivative financial instruments, financial instruments designated at fair value through profit or loss on initial recognition or required to be measured at fair value through profit or loss or other comprehensive income on initial recognition, and the assets of the Group's defined benefit pension schemes that have been measured at fair value; the liabilities of the Group's defined benefit pension schemes that have been measured using the projected unit credit valuation method; and the carrying values of recognised assets and liabilities qualifying as hedged items in fair value hedges that have been adjusted from cost by the changes in the fair values attributable to the risks that are being hedged.

The preparation of financial statements in conformity with IFRS, as adopted by the EU, requires the use of certain critical accounting estimates. It requires management to exercise its judgement in the process of applying the Group's accounting policies. The areas involving a higher degree of judgement or complexity and areas where assumptions and estimates are significant to the consolidated Financial Statements are described in notes 2 and 3.

(b) Standards, amendments and interpretations effective or adopted in 2019

From 1 January 2019, the following standards and amendments are effective in the Group's consolidated Financial Statements:

- IFRS 16: 'Leases';
- Amendments to IAS 19: 'Plan amendment, curtailment or settlement';
- Amendments to IFRS 9, IAS 39 and IFRS 7: 'Interest rate benchmark reform' (early adopted);
- Amendments to IFRS 9: 'Prepayment features with negative compensation';
- Amendments to IAS 28: 'Long-term interests in associates and joint ventures';
- Annual improvements to IFRS Standards 2015 – 2017 cycle; and
- IFRIC 23: 'Uncertainty over income tax treatments'.

The impact of adoption of IFRS 16 and the key changes to the accounting policies are disclosed below. Amendments to IAS 19 resulted in the re-measurement of pension scheme assets and liabilities subsequent to the plan amendments during the year, as reflected and detailed further in note 22.

Amendments to IFRS 9, IAS 39 and IFRS 7: 'Interest rate benchmark reform' was issued in September 2019 and endorsed by the EU on 16 January 2020. The amendments modify specific hedge accounting requirements to allow hedge accounting to continue for affected hedges during the period of uncertainty before the affected hedging instruments are amended as a result of the ongoing interest rate benchmark reforms. The amendment impacts only hedging instruments in fair value hedge relationships, as detailed further at note S5.

Other amendments effective during the year did not impact the consolidated Financial Statements.

IFRS 16

The Group adopted IFRS 16: 'Leases' from 1 January 2019. Adoption represents a significant change in accounting for lease arrangements in which the Group is a lessee as the standard mandates the on-balance sheet recognition of all lease liabilities and a corresponding right-of-use asset.

In accordance with the transition provisions of IFRS 16, for contracts entered into before 1 January 2019, the requirements of the standard have been applied only to contracts previously identified as leases in accordance with IAS 17: 'Leases' or IFRIC 4: 'Determining Whether an Arrangement Contains a Lease'. For contracts entered into or modified after that date, the definition of a lease in IFRS 16 has been applied.

On application of IFRS 16 comparative information has not been restated.

The Group utilised the recognition exemptions for both short-term leases applicable to machinery, property and exploration and production assets that have a lease term of 12 months or less and for leases of low value assets, including IT equipment. The lease payments associated with those leases are recognised as an expense on a straight-line basis over the lease term. The Group has also applied wherever applicable the following transition allowances:

- C10(a) application of a single discount rate to a portfolio of leases with reasonably similar characteristics;
- C10(b) reliance on previous assessment of whether leases are onerous in accordance with IAS 37: 'Provisions, Contingent Liabilities and Contingent Assets' immediately before the date of initial application as an alternative to performing an impairment review;
- C10(c) election not to apply the measurement requirements of the standard to leases where the term ends within 12 months of the date of initial application;
- C10(d) exclusion of initial direct costs from the measurement of the right-of-use asset at the date of initial application.

1. Basis of preparation and summary of significant new accounting policies and reporting changes

On transition, the Group measured lease liabilities for leases previously assessed as operating at the present value of the remaining lease payments and elected to measure the associated right-of-use assets at an amount equal to the lease liability, adjusted by the amount of any prepaid or accrued lease payments. For arrangements previously assessed as finance leases, the asset and liability balances at 31 December 2018 were carried forward as the opening IFRS 16 balances and subsequently measured in accordance with the new standard.

Application resulted in the recognition of total lease liabilities and right-of-use assets on 1 January 2019 of £620 million and £463 million respectively. £402 million of the lease liability is incremental to the IAS 17 position. An £8 million sub-lease asset was also recognised on transition.

Right-of-use assets are presented in Property, plant and equipment on the Group Balance Sheet. Lease liabilities are included in Current and Non-current Borrowings.

The difference between the value of the lease liability and the right-of-use asset predominantly relates to the Spalding tolling contract. The legacy finance lease position reflected a lease liability of £99 million and a fully impaired asset. An incremental £65 million lease liability was recognised post transition on re-measurement of the contract to reflect lease payments as defined under IFRS 16 and the associated asset impaired to its recoverable amount of £31 million. The current year impairment charge is offset by the release of the onerous contract provision previously recognised in respect of this arrangement.

A reconciliation of the operating lease commitment at 31 December 2018 to the opening IFRS 16 lease liability is shown below, along with a summary of the key judgements applied by the Group in determining these opening positions:

	£m
Operating lease commitment at 31 December 2018	343
Finance lease liabilities at 31 December 2018	218
Net extension and termination options reasonably certain to be exercised	(2)
Recognition of lease arrangements within joint operations	24
Re-measurement of Spalding tolling contract	65
	648
Effect of discounting	(28)
IFRS 16 lease liability at 1 January 2019	**620**

The weighted average incremental borrowing rate used by the Group for IFRS 16 is 2%.

Extension and termination options

The existence and assessment of whether a renewal or termination option is 'reasonably certain' to be exercised is particularly relevant to the Group's significant property portfolio. The Group considers, amongst other factors, the type of property and its purpose, the location of the property, the strategic direction of the business the property is used by and how far into the future the option arises when determining whether exercise is reasonably certain, along with consideration of whether economic incentive to exercise the option exists.

Where exercise of an option is considered to be reasonably certain, the termination period or renewal period is excluded or included in the lease term, respectively, when calculating the lease liability.

Identifying the customer for arrangements involving assets used in joint operations

The Group holds interests in a number of joint operations within its exploration and production business. The Group has applied judgement in identifying the customer where a lease arrangement is to be used by a jointly controlled operation.

If the leased asset is dedicated to a specific joint operation and its usage is dictated by the joint operating agreement, the joint operation is deemed the customer. In such instances:

- When the Group signs a lease agreement on behalf of a joint operation and has primary responsibility for payments to the lessor, the Group recognises 100% of the lease liability and a right-of-use asset on its balance sheet. When the partner is obliged to reimburse the Group for its share of lease payments, a sub-lease receivable is recognised and an equal adjustment to the right-of-use asset is made.
- When the partner has the primary responsibility for payments to the lessor and the Group is obliged to reimburse its share of the lease payments, a lease liability due to the partner and equal right-of-use asset are recognised.

If the leased asset is not dedicated to a specific joint operation or its usage is not dictated by the joint operating agreement of a joint operation to which it is dedicated, the signatory to the lease agreement is deemed the customer. If this is the Group, the lease liability and right-of-use asset are recognised in full. If it is the partner, no lease liability or right-of-use asset is recognised.

The comparative information continues to be reported in accordance with IAS 17 and IFRIC 4.

Significant changes in the Group's accounting policy applicable from 1 January 2019

The Group recognises a right-of-use asset and a lease liability at the lease commencement date. The right-of-use asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located, less any lease incentives received.

The right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the earlier of the end of the useful life of the right-of-use asset or the end of the lease term. The estimated useful lives of right-of-use assets are determined on the same basis as those of property and equipment. In addition, the right-of-use asset is periodically reduced by impairment losses, if any, and adjusted for certain re-measurements of the lease liability.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the Group's incremental borrowing rate.

Lease payments included in the measurement of the lease liability comprise: fixed payments (including in-substance fixed payments), variable lease payments that depend on an index or a rate (initially measured using the index or rate as at the commencement date), amounts expected to be payable under a residual value guarantee, the exercise price under a purchase option that the Group is reasonably certain to exercise, lease payments in an optional renewal period if the Group is reasonably certain to exercise an extension option, and penalties for early termination of a lease unless the Group is reasonably certain not to terminate early. Variable lease payments that do not depend on an index or rate are recognised in profit or loss in the period in which the event or condition that triggers those payments occurs.

1. Basis of preparation and summary of significant new accounting policies and reporting changes

The lease liability is subsequently measured at amortised cost using the effective interest method. It is re-measured when there is a change in future lease payments arising from a change in an index or rate, if there is a change in the Group's estimate of the amount expected to be payable under a residual value guarantee, or if the Group changes its assessment of whether it will exercise a purchase, lease-term extension or termination option.

When the lease liability is re-measured in this way, a corresponding adjustment is made to the carrying amount of the right-of-use asset or is recorded in profit or loss if the carrying amount of the right-of-use asset has been reduced to zero.

The Group recognises the lease payments associated with short-term leases (leases expiring within twelve months from commencement) and leases of low value assets (underlying asset value less than £5,000) on a straight-line basis over the lease term.

(c) Standards and amendments that are issued but not yet applied by the Group

The Group has not applied the following standards and amendments in the consolidated Group Financial Statements as they are not yet effective, and have not yet been endorsed by the EU:

- IFRS 17: 'Insurance contracts', effective from 1 January 2021; and
- Amendments to IFRS 3: 'Business Combinations', effective 1 January 2020.

IFRS 17: 'Insurance contracts', issued in May 2017, will not be effective before 1 January 2021. The Group currently has fixed-fee service contracts that it accounts for as insurance contracts under IFRS 4: 'Insurance contracts'. Under IFRS 17, subject to certain conditions, there is an accounting policy choice to account for these contracts under IFRS 17 or IFRS 15, which is being evaluated as part of the implementation project. Work is ongoing to determine the full impact of application.

Management does not expect the future application of the IFRS 3 amendments, or other issued but not effective amendments to have a material impact on the consolidated Financial Statements.

(d) Restatements

In March 2019, the International Financial Reporting Interpretations Committee (IFRIC) issued an agenda decision on the Physical Settlement of Contracts to Buy or Sell a Non-Financial Item. The committee concluded that, for physical commodity trades within the scope of IFRS 9: 'Financial instruments', entities should not transfer previously recognised, unrealised marked-to-market movements to different income statement line items upon realisation. As the Group previously recognised fair value movements on the re-measurement of certain energy contracts net within cost of sales up to the point of realisation (when the underlying contract would be recognised, either in revenue or cost of sales), presentation of the Group's revenue and cost of sales in the results for the year column has been amended to comply with the requirements of the IFRIC agenda decision. Comparative results have been represented with no impact on gross profit.

The Group will continue to present the impact of realised positions (and any unrealised fair value movements on proprietary trades) in the scope of IFRS 9 in the business performance column as either revenue or cost of sales, as this better reflects the underlying economic performance of the Group's trading, however the effect of these positions will then be removed from revenue or cost of sales through a separate column (the exceptional items and certain re-measurements column) and reflected instead in a new 'Re-measurement and settlement of energy contracts' line item.

In addition to the above, the new line item in the exceptional items and certain re-measurements column of the Income Statement includes fair value movements on those unrealised commodity derivative trades that are prohibited from being treated as 'own use' (primarily due to net settlement terms) but are economically related to our upstream assets, capacity/off-take contracts or downstream demand, in line with the policy detailed at note 2.

The effect of this re-presentation for 2018 is a reduction in revenue and cost of sales of £4.1 billion and £6.8 billion respectively. There is no impact on gross profit.

The exercise to determine the above restatement required the Group to perform a detailed review of revenue and cost of sales across its wider business. During this review, the Group specifically considered the presentation of certain European commodity trades in the business performance column. These trades (both purchases and sales) have historically been presented gross as revenue or cost of sales, however, as the primary purpose of the book is speculative, and to ensure consistency with other similar activities undertaken by the Group, net presentation is deemed more appropriate and accordingly, trades are now presented net within revenue in the business performance column. The prior year comparative has been restated and whilst there is no impact on gross profit, business performance revenue and business performance cost of sales have been reduced by £2.3 billion.

The restatement arising from the IFRIC determination has been applied to the business performance revenue and business performance cost of sales results as adjusted for the presentation of European commodity trades noted above.

The Group has redefined its operating segments during the year to reflect the way in which the business is now organised. Operating segments are now defined as:

- Centrica Consumer;
- Centrica Business; and
- Upstream.

The revised operating segments incorporate similar products and services, as well as the major factors that influence the performance of these products and services, such as regulatory environments within Centrica Consumer, and access to commodity markets and trading counterparties within Centrica Business, across different geographical locations in which the Group operates. Further information on the operating segments of the Group is shown at note 4.

2. Centrica specific accounting measures

This section sets out the Group's specific accounting measures applied in the preparation of the consolidated Financial Statements. These measures enable the users of the accounts to understand the Group's underlying and statutory business performance separately.

(a) Use of adjusted performance measures

The Directors believe that reporting adjusted measures (margin, profit, earnings per share and operating cash flow) provides additional useful information on business performance and underlying trends. These measures are used for internal performance purposes, are not defined terms under IFRS and may not be comparable with similarly titled measures reported by other companies.

Management uses adjusted gross margin and adjusted operating profit to evaluate segment performance. They are defined as gross margin/operating profit before:

- exceptional items; and
- certain re-measurements.

Exceptional items and certain re-measurements are excluded because these items are considered by the Directors to distort the Group's underlying business performance. See section (b) of this note for further details.

Adjusted earnings is defined as earnings before:

- exceptional items net of taxation; and
- certain re-measurements net of taxation.

A reconciliation of adjusted earnings and adjusted earnings per share is provided in note 10.

Adjusted operating cash flow is used by management to assess the cash generating abilities of each segment. Adjusted operating cash flow is defined as net cash flow from operating activities before:

- payments relating to exceptional items;
- deficit reduction payments made to the UK defined benefit pension schemes; and
- movements in variation margin and cash collateral that are included in net debt;

but including:

- dividends received from joint ventures and associates.

Deficit reduction payments and movements in variation margin and cash collateral are excluded because the Directors do not consider these to represent the operating cash flows generated by underlying business performance, as they are predominantly triggered by wider market factors and, in the case of variation margin and cash collateral, these represent timing differences. Dividends received from joint ventures and associates are considered by the Directors to represent operating cash flows generated by the Group's operations that are structured in this manner.

(b) Exceptional items and certain re-measurements

The Group reflects its underlying financial results in the business performance column of the Group Income Statement. To be able to provide users with this clear and consistent presentation, the effects of 'certain re-measurements' of financial instruments, and 'exceptional items', are reported in a different column in the Group Income Statement.

The Group is an integrated energy business. This means that it utilises its knowledge and experience across the gas and power (and related commodity) value chains to make profits across the core markets in which it operates. As part of this strategy, the Group enters into a number of forward energy trades to protect and optimise the value of its underlying production, generation, storage and transportation assets and contracts (and similar capacity or off-take arrangements), as well as to meet the future needs of its customers (downstream demand). These trades are designed to reduce the risk of holding such assets, contracts or downstream demand and are subject to strict risk limits and controls.

Primarily because some of these trades include terms that permit net settlement, they are prohibited from being designated as 'own use' and so IFRS 9 requires them to be individually fair valued.

Fair value movements on these commodity derivative trades do not reflect the underlying performance of the business because they are economically related to our upstream assets, capacity/off-take contracts or downstream demand, which are typically not fair valued. Therefore, these certain re-measurements are reported separately and are subsequently reflected in business performance when the underlying transaction or asset impacts profit or loss.

The effects of these certain re-measurements are presented within either revenue or cost of sales when recognised in business performance depending on the nature of the contract. They are managed separately from proprietary energy trading activities where trades are entered into speculatively for the purpose of making profits in their own right. These proprietary trades are included in revenue in the business performance column of the Group Income Statement.

The Group's result for the year presents both realised and unrealised fair value movements on all derivative energy contracts within the 'Re-measurement and settlement of energy contracts' line item.

Exceptional items are those items that, in the judgement of the Directors, need to be disclosed separately by virtue of their nature, size or incidence. Again, to ensure the business performance column reflects the underlying results of the Group, these exceptional items are also reported in the separate column in the Group Income Statement. Items that may be considered exceptional in nature include disposals of businesses or significant assets, business restructurings (including property rationalisation costs), significant onerous contract charges/releases, debt repurchase costs, certain pension past service credits/costs, asset impairments/write-backs, the tax effects of these items and the effect of changes in UK upstream tax rates.

The Group distinguishes between business performance asset impairments/write-backs and exceptional impairments/write-backs on the basis of the underlying driver of the impairment, as well as the magnitude of the impairment. Drivers that are deemed to be outside of the control of the Group (e.g. commodity price changes) give rise to exceptional impairments. Additionally, impairment charges that are of a one-off nature (e.g. reserve downgrades or one-time change in intended use of an asset) and significant enough value to distort the underlying results of the business are considered to be exceptional. Other impairments that would be expected in the normal course of business, such as unsuccessful exploration activity (dry holes), are reflected in business performance.

3. Critical accounting judgements and key sources of estimation uncertainty

This section sets out the key areas of judgement and estimation that have the most significant effect on the amounts recognised in the consolidated Financial Statements.

(a) Critical judgements in applying the Group's accounting policies

In addition to the judgements described above, management has made the following key judgements in applying the Group's accounting policies that have the most significant effect on the consolidated Group Financial Statements.

Spirit Energy consolidation

During 2017, the Group acquired Bayerngas Norge's exploration and production business and combined this with the Group's existing exploration and production business to form the Spirit Energy business (SE). The Group, through its board majority, can control decisions that represent Board Reserved Matters and the Directors consider that these rights provide control over the relevant activities that most significantly influence the variable returns of the SE business. The Group has concluded that it controls SE and consequently SE is fully consolidated with a non-controlling interest of 31%.

Metering contracts

In 2015, as part of the smart meter roll-out, the Group renewed meter rental arrangements with third parties, with a further extension of one contract in 2018. The Group assessed that these were not leases under IAS 17 and IFRIC 4 because at inception of the contract there were no specified assets, the Group did not have the right to physically or operationally control the smart meters and other parties took more than an insignificant amount of the output from the assets. This assessment was grandfathered on adoption of IFRS 16.

One of the meter rental arrangements was renegotiated during 2019 and a reassessment of the contract was performed in accordance with IFRS 16. On the basis that the asset has a predetermined use and the Group neither has the right to operate the asset, nor was involved in its design, the conclusion that these arrangements are not leases continues to be appropriate.

LNG contracts

The Group is active in the liquified natural gas (LNG) market, both procuring long-term LNG supply arrangements, and transacting in shorter-term LNG cargoes. Contracts to buy and sell LNG are not considered to meet the definition of a derivative as there is currently no active market for LNG and contracts are not capable of being net settled. As a result, they are accounted for on an accruals basis.

(b) Key sources of estimation uncertainty

Estimates and associated assumptions are based on historical experience and various other factors that are believed to be reasonable under the circumstances, including current and expected economic conditions, and, in some cases, actuarial techniques. Although these estimates and associated assumptions are based on management's best knowledge of current events and circumstances, actual results may differ.

Revenue recognition – unread gas and electricity meters

Revenue for energy supply activities includes an assessment of energy supplied to customers between the date of the last meter reading and the year end (known as unread revenue). Unread gas and electricity comprises both billed and unbilled revenue. It is estimated through the billing systems, using historical consumption patterns, on a customer-by-customer basis, taking into account weather patterns, load forecasts and the differences between actual meter readings being returned and system estimates. Actual meter readings continue to be compared to system estimates between the balance sheet date and the finalisation of the accounts.

An assessment is also made of any factors that are likely to materially affect the ultimate economic benefits that will flow to the Group, including bill cancellation and re-bill rates. Estimated revenue is restricted to the amount the Group expects to be entitled to in exchange for energy supplied. The judgements applied, and the assumptions underpinning these judgements, are considered to be appropriate. However, a change in these assumptions would have an impact on the amount of revenue recognised. Unbilled revenue recognised on the Group Balance Sheet within Trade and other receivables at 31 December 2019 was £1,342 million (2018: £1,542 million).

Industry reconciliation process – cost of sales

Industry reconciliation procedures are required as differences arise between the estimated quantity of gas and electricity the Group deems to have supplied and billed customers, and the estimated quantity industry system operators deem the individual suppliers, including the Group, to have supplied to customers. The difference in deemed supply is referred to as imbalance. The reconciliation procedures can result in either a higher or a lower value of industry deemed supply than has been estimated as being supplied to customers by the Group, but in practice tends to result in a higher value of industry deemed supply. The Group reviews the difference to ascertain whether there is evidence that its estimate of amounts supplied to customers is inaccurate or whether the difference arises from other causes. The Group's share of the resulting imbalance is included within commodity costs charged to cost of sales. Management estimates the level of recovery of imbalance that will be achieved either through subsequent customer billing or through developing industry settlement procedures. The adjustments for imbalance at 31 December 2019 are not significant. Changes resulting from these management estimates can be material with adjustments of up to £30 million having been made in the last few years, although it could possibly be higher than these amounts in the future.

Decommissioning costs

The estimated cost of decommissioning at the end of the producing lives of gas and oil fields is reviewed periodically and is based on reserves, price levels and technology at the balance sheet date. Provision is made for the estimated cost of decommissioning at the balance sheet date. The payment dates of total expected future decommissioning costs are uncertain and dependent on the lives of the facilities, but are currently anticipated to be incurred until the 2040s.

The level of provision held is also sensitive to the discount rate used to discount the estimated decommissioning costs. The real discount rate used to discount the decommissioning liabilities at 31 December 2019 is unchanged at 1.2%. A 1% change in this discount rate would change the decommissioning liability by approximately £160 million.

Gas and liquids reserves

The volume of proven and probable (2P) gas and liquids reserves is an estimate that affects the unit of production method of depreciating producing gas and liquids property, plant and equipment (PP&E) as well as being a significant estimate affecting decommissioning and impairment calculations. The factors impacting gas and liquids estimates, the process for estimating reserve quantities and reserve recognition is described on page 208.

3. Critical accounting judgements and key sources of estimation uncertainty

The impact of a change in estimated 2P reserves is dealt with prospectively by depreciating the remaining book value of producing assets over the expected future production. If 2P reserves estimates are revised downwards, earnings could be affected by higher depreciation expense or an immediate write-down (impairment) of the asset's book value.

Determination of fair values – energy derivatives

Fair values of energy derivatives are estimated by reference in part to published price quotations in active markets and in part by using valuation techniques. More detail on the assumptions used in determining fair valuations of energy derivatives is provided in note S6 and of the sensitivities to these assumptions in note S3.

Impairment of long-lived assets

The Group makes judgements in considering whether the carrying amounts of its long-lived assets (principally Upstream gas and oil assets, Nuclear investment (20% economic interest accounted for as an investment in associate) and goodwill) or cash generating units (CGUs) are recoverable and estimates their recoverable amounts.

Upstream gas and oil assets

The recoverable amount of the Group's gas and oil assets is determined by discounting the post-tax cash flows expected to be generated by the assets over their lives taking into account those assumptions that market participants would consider when assessing fair value. The cash flows are derived from projected production profiles of each field, based predominantly on expected 2P reserves and take into account forward prices for gas and liquids over the relevant period. Where forward market prices are not available, prices are determined based on the median price of a collection of third-party comparator curves.

Further details of the assumptions used in determining the recoverable amounts, the impairments booked during the year and sensitivity to the assumptions are provided in note 7. Note that Spirit Energy was not considered to be an asset held for sale as at the reporting date as its disposal was not deemed to be highly probable within one year.

Nuclear investment

The recoverable amount of the Nuclear investment is based on the value of the existing UK nuclear fleet operated by EDF. The existing fleet value is calculated by discounting pre-tax cash flows derived from the stations based on forecast power generation and power prices, whilst taking account of outages and the possibility of life extensions. Further details of the methodology, assumptions, impairment booked during the year and related sensitivities are provided in note 7. Note that the Nuclear investment was not considered to be an asset held for sale as at the reporting date as its disposal was not deemed to be highly probable within one year.

Goodwill

Goodwill does not generate independent cash flows and accordingly is allocated at inception to specific CGUs or groups of CGUs for impairment testing purposes. The recoverable amounts of these CGUs are derived from estimates of future cash flows and hence the goodwill impairment tests are also subject to these key estimates. The results of these tests may then be verified by reference to external market valuation data.

Further details on the goodwill balances, assumptions used in determining the recoverable amounts and impairment booked during the year are provided in notes 7, 15(b) and S2. Sensitivity to the assumptions is also found in note 7 for goodwill allocated to impaired CGUs in the year.

Credit provisions for trade and other receivables

The methodology for determining provisions for credit losses on trade and other receivables and the level of such provision, along with associated sensitivities, are set out in note 17. Although the provisions recognised are considered appropriate, the use of different assumptions or changes in economic conditions could lead to movements in the provisions and therefore impact the Group Income Statement.

Pensions and other post-employment benefits

The cost of providing benefits under defined benefit schemes is determined separately for each of the Group's schemes under the projected unit credit actuarial valuation method. Actuarial gains and losses are recognised in full in the period in which they occur. The key assumptions used for the actuarial valuation are based on the Group's best estimate of the variables that will determine the ultimate cost of providing post-employment benefits. The Group is permitted to recognise a pension scheme asset because it has an unconditional right to a refund on any winding up of the schemes or if gradual settlement of liabilities over time is assumed. Further details, including sensitivities to these assumptions, are provided in note 22.

Brexit

The Group has considered the potential impact of a no-deal Brexit as noted in the Strategic Report on page 38. Economists have suggested that failure to agree a satisfactory trade deal could lead to lower base interest rates and higher inflation, following a likely weakening of sterling against other currencies. This would have an impact on the Group's pension scheme discount rate assumptions (if high quality corporate bond yields follow base rates) and could change forward energy prices (particularly in sterling terms). The sensitivity of the Group's pension schemes to a change in key assumptions is disclosed in note 22.

The sensitivity of a change in forward energy prices and the impact this would have on impairment of the Group's assets is disclosed in note 7. Macroeconomic impacts on existing trade receivable recoverability are expected to be immaterial but could have a greater impact on future trade receivable recoverability.

4. Segmental analysis

The Group's reporting segments are those used internally by management to run the business and make decisions. The Group's segments are based on products and services as well as the major factors that influence the performance of these products and services across the geographical locations in which the Group operates.

(a) Segmental structure

During the year the Group's reportable operating segments have been amended due to a change in the way management review and make decisions about the business. Previously reported segments have now been amalgamated into the higher-level Centrica Consumer, Centrica Business or Upstream areas (as shown below). The exception to this was Central Power Generation, where the Nuclear investment was reallocated to Upstream, whilst the Spalding power station tolling contract remained within Centrica Business.

The types of products and services from which each reportable segment derived its income during the year are detailed below. Income sources are reflected in Group revenue unless otherwise stated:

Segment	Description
Centrica Consumer	(i) The supply of gas and electricity to residential customers in the UK, North America and to residential and commercial and industrial customers in the Republic of Ireland; (ii) the installation, repair and maintenance of domestic central heating and cooling systems and related appliances in the UK, North America and the Republic of Ireland, and the provision of fixed-fee maintenance/breakdown service and insurance contracts in the UK and North America; (iii) power generation in the Republic of Ireland; and (iv) the supply of new technologies and energy efficiency solutions in all geographies in which the Group operates.
Centrica Business	(i) The supply of gas and electricity and provision of energy-related services to business customers and trading counterparties in the UK and North America; (ii) the supply of energy efficiency solutions, flexible generation and new technologies to commercial and industrial customers in all geographies in which the Group operates. Flexible merchant generation is also provided to the UK system operator; (iii) the generation of power from the Spalding combined cycle gas turbine tolling contract and other thermal assets in the UK; and (iv) the procurement, trading and optimisation of energy in the UK and North America. This income stream is included in re-measurement and settlement of energy contracts.
Upstream	(i) The production and processing of gas and oil and the development of new fields, principally within Spirit Energy, to maintain reserves in the UK and Europe; and (ii) the generation of power from nuclear assets in the UK.

(b) Revenue

Gross segment revenue includes revenue generated from the sale of products and services to other reportable segments of the Group. Group revenue reflects only the sale of products and services to third parties. Sales between reportable segments are conducted on an arm's length basis.

	2019			2018 (restated) (i)		
Year ended 31 December	**Gross segment revenue £m**	**Less inter-segment revenue £m**	**Group revenue £m**	Gross segment revenue £m	Less inter-segment revenue £m	Group revenue £m
Centrica Consumer	**11,956**	**–**	**11,956**	11,870	–	11,870
Centrica Business	**13,759**	**(217)**	**13,542**	14,492	(211)	14,281
Upstream	**2,290**	**(963)**	**1,327**	2,648	(1,418)	1,230
Group revenue included in business performance	**28,005**	**(1,180)**	**26,825**	29,010	(1,629)	27,381
Less: revenue arising on contracts in scope of IFRS 9 included in business performance			**(4,151)**			(4,077)
Group Revenue			**22,674**			23,304

(i) Segmental revenues have been restated to reflect the new operating structure of the Group. Group revenue has been restated to exclude revenue from contracts in the scope of IFRS 9. Group revenue and group revenue included in business performance have also been restated to include the net result of certain commodity purchases and sales trades that are deemed to be speculative in nature. See note 1 for further details.

4. Segmental analysis

The table below shows the Group revenue arising from contracts with customers, and therefore in the scope of IFRS 15, and revenue arising from contracts in the scope of other standards. The key economic factors impacting the nature, timing and uncertainty of revenue and cash flows are considered to be driven by the type and broad geographical location of the customer. The analysis of IFRS 15 revenue below reflects these factors.

	2019				
Year ended 31 December	**Revenue from contracts with customers in scope of IFRS 15 £m**	**Revenue from fixed-fee service and insurance contracts in scope of IFRS 4, and leasing contracts in scope of IFRS 16 £m**	**Group Revenue £m**	**Revenue in business performance arising from contracts in scope of IFRS 9 £m**	**Group Revenue included in business performance £m**
Energy supply – UK and Republic of Ireland	**7,398**				
Energy supply – North America	**2,307**				
Energy services	**1,023**				
Centrica Consumer	**10,728**	**1,110**	**11,838**	**118**	**11,956**
Energy supply – UK and Republic of Ireland	**1,574**				
Energy supply – North America	**6,927**				
Energy sales to trading and energy procurement counterparties	**1,237**				
Other	**300**				
Centrica Business	**10,038**	**19**	**10,057**	**3,485**	**13,542**
Oil and gas production	**779**				
Upstream	**779**	**–**	**779**	**548**	**1,327**
	21,545	**1,129**	**22,674**	**4,151**	**26,825**

	2018 (restated) (i)				
Year ended 31 December	Revenue from contracts with customers in scope of IFRS 15 £m	Revenue from fixed-fee service and insurance contracts in scope of IFRS 4, and leasing contracts in scope of IFRS 16 £m	Group Revenue £m	Revenue in business performance arising from contracts in scope of IFRS 9 £m	Group Revenue included in business performance £m
Energy supply – UK and Republic of Ireland	7,416				
Energy supply – North America	2,079				
Energy services	1,011				
Centrica Consumer	10,506	1,134	11,640	230	11,870
Energy supply – UK and Republic of Ireland	1,421				
Energy supply – North America	7,449				
Energy sales to trading and energy procurement counterparties	1,565				
Other	236				
Centrica Business	10,671	9	10,680	3,601	14,281
Oil and gas production	984				
Upstream	984	–	984	246	1,230
	22,161	1,143	23,304	4,077	27,381

(i) Segmental revenues have been restated to reflect the new operating structure of the Group. Group revenue has been restated to exclude revenue from contracts in the scope of IFRS 9. Group revenue and group revenue included in business performance have also been restated to include the net result of certain commodity purchases and sales trades that are deemed to be speculative in nature. See note 1 for further details.

The Group applies the practical expedient in paragraph 121 of IFRS 15 and therefore does not disclose information related to the transaction price allocated to remaining performance obligations on the basis that the Group recognises revenue from the satisfaction of the performance obligations within energy supply contracts in accordance with Paragraph B16.

4. Segmental analysis

Geographical analysis of revenue and non-current assets

The Group monitors and manages performance by reference to its operating segments and not solely on a geographical basis. However, provided below is an analysis of revenue and certain non-current assets by geography.

	Group revenue (based on location of customer) (restated) (i)		Non-current assets (based on location of assets) (ii)	
Year ended 31 December	**2019 £m**	2018 £m	**2019 £m**	2018 £m
UK	**10,437**	10,494	**4,860**	5,814
Republic of Ireland	**777**	679	**135**	124
Norway	**322**	603	**1,474**	1,768
United States of America	**8,613**	8,918	**1,524**	1,774
Canada	**1,272**	1,170	**379**	360
Rest of the world	**1,253**	1,440	**214**	478
	22,674	23,304	**8,586**	10,318

(i) Prior year revenue has been restated to exclude revenue arising from contracts in the scope of IFRS 9 and to include the net result of certain commodity purchases and sales trades that are deemed to be speculative in nature. See note 1 for further details.

(ii) Non-current assets comprise goodwill, other intangible assets, PP&E, interests in joint ventures and associates and non-financial assets within trade and other receivables, and contract-related assets.

(c) Adjusted gross margin and adjusted operating profit

The measure of profit used by the Group is adjusted operating profit. Adjusted operating profit is operating profit before exceptional items and certain re-measurements. This includes business performance results of equity-accounted interests.

This note also details adjusted gross margin. Both measures are reconciled to their statutory equivalents.

	Adjusted Gross Margin		Adjusted Operating Profit (restated) (i)	
Year ended 31 December	**2019 £m**	2018 £m	**2019 £m**	2018 £m
Centrica Consumer	**2,315**	2,606	**505**	750
Centrica Business	**1,030**	882	**217**	75
Upstream	**507**	765	**179**	567
Adjusted gross margin/adjusted operating profit	**3,852**	4,253	**901**	1,392
Certain re-measurements	**(646)**	(200)	**(646)**	(200)
Share of re-measurement of certain associates' energy contracts (net of taxation)	**–**	–	**(1)**	(20)
Gross profit	**3,206**	4,053		
Exceptional items in operating profit			**(1,103)**	(183)
Share of associates' exceptional operating cost (net of taxation)			**–**	(2)
Total exceptional items and certain re-measurements included in operating profit			**(1,750)**	(405)
Operating (loss)/profit after exceptional items and certain re-measurements			**(849)**	987

(i) Segmental results have been restated to reflect the new operating structure of the Group. See note 1 for further details.

Financial statements

4. Segmental analysis

(d) Included within adjusted operating profit

Presented below are certain items included within adjusted operating profit, including a summary of impairments of property, plant and equipment and write-downs relating to exploration and evaluation assets.

	Depreciation and impairments of property, plant and equipment		Amortisation, write-downs and impairments of intangibles	
Year ended 31 December	**2019 £m**	2018 (restated) (i) £m	**2019 £m**	2018 (restated) (i) £m
Centrica Consumer	**(70)**	(64)	**(148)**	(168)
Centrica Business	**(69)**	(21)	**(76)**	(73)
Upstream	**(690)**	(639)	**(63)**	(59)
Other (ii)	**(51)**	(12)	**(39)**	(22)
	(880)	(736)	**(326)**	(322)

(i) Segmental results been restated to reflect the new operating structure of the Group. See note 1 for further details.
(ii) The Other segment includes corporate functions, subsequently recharged.

(e) Capital expenditure

Capital expenditure represents additions, other than assets acquired as part of business combinations, to property, plant and equipment and intangible assets. Capital expenditure has been reconciled to the related cash outflow.

	Capital expenditure on property, plant and equipment (note 13)		Capital expenditure on intangible assets other than goodwill (note 15)	
Year ended 31 December	**2019 £m**	2018 (restated) (i) £m	**2019 £m**	2018 (restated) (i) £m
Centrica Consumer	**35**	45	**512**	469
Centrica Business	**53**	114	**593**	594
Upstream	**328**	367	**218**	118
Other	**23**	44	**26**	84
Capital expenditure	**439**	570	**1,349**	1,265
Capitalised borrowing costs	**(11)**	(14)	**(2)**	(4)
Inception of new leases and movements in payables and prepayments related to capital expenditure	**(41)**	18	**(20)**	(55)
Purchases of emissions allowances and renewable obligation certificates	**–**	–	**(933)**	(854)
Net cash outflow	**387**	574	**394**	352

(i) Segmental results have been restated to reflect the new operating structure of the Group. See note 1 for further details.

(f) Adjusted operating cash flow

Adjusted operating cash flow is used by management to assess the cash generating abilities of each segment. Adjusted operating cash flow is net cash flow from operating activities before payments relating to exceptional items, deficit payments to the UK defined benefit pension schemes, movements in variation margin and cash collateral that are included in net debt, but including dividends from joint ventures and associates. This measure is reconciled to the net cash flow from operating activities.

Year ended 31 December	**2019 £m**	2018 (restated) (i) £m
Centrica Consumer	**913**	1,019
Centrica Business	**282**	214
Upstream	**635**	1,012
Adjusted operating cash flow	**1,830**	2,245
Dividends received from joint ventures and associates	**(1)**	(22)
UK pension deficit payments (note 22)	**(235)**	(98)
Payments relating to exceptional charges	**(298)**	(248)
Movements in margin and cash collateral included in net debt (note 24)	**(46)**	57
Net cash flow from operating activities	**1,250**	1,934

(i) Segmental results have been restated to reflect the new operating structure of the Group. See note 1 for further details.

5. Costs of operations

This section details the types of costs the Group incurs and the number of employees in each of our operations.

(a) Analysis of costs by nature

Year ended 31 December	2019 Cost of sales and settlement of certain energy contracts £m	2019 Operating costs £m	2019 Total costs £m	2018 Cost of sales and settlement of certain energy contracts (restated) (i) £m	2018 Operating costs (restated) (ii) £m	2018 Total costs £m
Transportation, distribution, capacity market and metering costs	**(5,228)**	**–**	**(5,228)**	(4,671)	–	(4,671)
Commodity costs	**(14,409)**	**–**	**(14,409)**	(15,000)	–	(15,000)
Depreciation, amortisation, impairments and write-downs	**(674)**	**(532)**	**(1,206)**	(661)	(397)	(1,058)
Employee costs (ii)	**(597)**	**(1,291)**	**(1,888)**	(689)	(1,265)	(1,954)
Other direct costs (ii)	**(2,065)**	**(919)**	**(2,984)**	(2,107)	(1,059)	(3,166)
Costs included within business performance before credit losses on financial assets	**(22,973)**	**(2,742)**	**(25,715)**	(23,128)	(2,721)	(25,849)
Credit losses on financial assets (net of recovered amounts) (note 17)	**–**	**(197)**	**(197)**	–	(143)	(143)
Total costs included within business performance	**(22,973)**	**(2,939)**	**(25,912)**	(23,128)	(2,864)	(25,992)
Adjustment for gross cost of settled energy contracts in the scope of IFRS 9 (i)	**7,178**	**–**	**7,178**	6,808	–	6,808
Exceptional items and re-measurement and settlement of energy contracts (note 7)	**(3,673)**	**(1,103)**	**(4,776)**	(2,931)	(183)	(3,114)
Total costs within Group operating profit	**(19,468)**	**(4,042)**	**(23,510)**	(19,251)	(3,047)	(22,298)

(i) Prior year results have been restated to exclude costs related to certain commodity trades that are deemed to be proprietary in nature. These costs are now presented net in revenue within business performance. Comparatives have also been restated to present net costs arising from the settlement of all energy contracts in the scope of IFRS 9 in the Group Income Statement and in the above analysis.
(ii) Employee costs and other direct costs have been restated to reflect amounts charged to exceptional items and amounts capitalised.

(b) Employee costs

Year ended 31 December	2019 £m	2018 (restated) (i) £m
Wages and salaries	**(1,630)**	(1,618)
Social security costs	**(165)**	(151)
Pension and other post-employment benefits costs	**(191)**	(207)
Share scheme costs (note S4)	**(41)**	(43)
	(2,027)	(2,019)
Capitalised employee costs	**40**	44
Employee costs included in exceptional items (ii)	**99**	21
Employee costs recognised in business performance in the Group Income Statement	**(1,888)**	(1,954)

(i) Employee costs have been restated to reflect amounts charged to exceptional items. As part of this exercise, the Group has also restated capitalised employee costs.
(ii) Employee costs included in exceptional items includes £65 million for one-off payments to facilitate pension scheme changes. See note 7.

(c) Average number of employees during the year

Year ended 31 December	2019 Number	2018 (restated) (i) Number
Consumer	**21,127**	23,521
Business	**4,116**	4,239
Upstream	**909**	913
Group Functions	**2,995**	3,107
	29,147	31,780

(i) Comparatives have been restated to reflect the new operating structure of the Group. See note 1 for further details.

6. Share of results of joint ventures and associates

Share of results of joint ventures and associates represents the results of businesses where we exercise joint control or significant influence and generally have an equity holding of up to 50%.

Share of results of joint ventures and associates

The Group's share of results of joint ventures and associates for the year ended 31 December 2019 principally arises from its interest in Nuclear - Lake Acquisitions Limited, an associate, reported in the Upstream segment.

	2019			2018		
Year ended 31 December	**Share of business performance £m**	**Share of exceptional items and certain re-measurements £m**	**Share of results for the year £m**	Share of business performance £m	Share of exceptional items and certain re-measurements £m	Share of results for the year £m
Income	**505**	**–**	**505**	489	–	489
Expenses before exceptional items and certain re-measurements	**(508)**	**–**	**(508)**	(486)	–	(486)
Exceptional items and re-measurement of certain contracts	**–**	**(1)**	**(1)**	–	(23)	(23)
Operating (loss)/profit	**(3)**	**(1)**	**(4)**	3	(23)	(20)
Financing costs	**(10)**	**–**	**(10)**	(3)	–	(3)
Taxation on profit/(loss)	**1**	**–**	**1**	3	1	4
Share of post-taxation results of joint ventures and associates	**(12)**	**(1)**	**(13)**	3	(22)	(19)

Further information on the Group's investments in joint ventures and associates is provided in notes 14 and S10.

7. Exceptional items and certain re-measurements

Exceptional items are those items that, in the judgement of the Directors, need to be disclosed separately by virtue of their nature, size or incidence. Items which may be considered exceptional in nature include disposals of businesses or significant assets, business restructurings, significant onerous contract charges and releases, pension change costs or credits, significant debt repurchase costs and asset write-downs/impairments and write-backs.

(a) Exceptional items

Year ended 31 December	2019 £m	2018 £m
(Impairment)/write-back of retained exploration and production assets (i)	**(476)**	90
Impairment of power assets and provision for onerous power contracts (ii)	**(381)**	(46)
Impairment of Centrica Home Solutions (formerly Connected Home) (iii)	**(77)**	–
Restructuring costs (iv)	**(356)**	(170)
Net pension change credit/(costs) (v)	**152**	(43)
Net gain/(loss) on significant disposals (including impairment of assets sold or held for sale) (vi)	**35**	(16)
Exceptional items included within Group operating profit	**(1,103)**	(185)
Debt repurchase costs included within financing costs	**–**	(139)
Exceptional items included within Group profit before taxation	**(1,103)**	(324)
Net taxation on exceptional items (note 9)	**116**	89
Net exceptional items after taxation	**(987)**	(235)

(i) In the Upstream segment, impairments of exploration and production assets have been booked relating to the value of certain UK, Norwegian and Danish gas and oil fields. Predominantly due to the impact of a reduction in near-term liquid prices and long-term price forecasts, together with the conclusion that certain field reserve levels were not sufficient for development, there has been a write-off of £508 million (post-tax £406 million). Also included is the reduction of decommissioning provisions (pre-tax £32 million, post-tax £20 million) related to assets previously impaired through exceptional items. Separately, in the taxation line, the net write-off of a deferred tax asset associated with exploration and production investment allowance, decommissioning carry back and PRT has also been recorded (post-tax £35 million) related to these exceptional items.

(ii) In the Upstream segment, an impairment of the nuclear investment has been booked as a result of a reduction in price forecasts, and availability issues at Hunterston and Dungeness. The pre and post-tax impact was £372 million. Similarly, in the Centrica Business segment, an impairment of a battery storage asset has also been recorded as a result of forecast price reductions. This gave rise to a charge of £9 million (post-tax £7 million).

(iii) In the Consumer segment, following the strategic decision to refocus Centrica Home Solutions activity to the UK and Ireland and an updated profitability forecast, the Group has reflected a charge of £77 million, including inventory write-downs of £22 million, asset impairments (including goodwill) of £48 million and onerous contract provisions and other costs of £7 million. The post-tax impact was £69 million.

(iv) The continuation of phase 2 of the Group's cost efficiency programme has seen the Group recognise restructuring costs principally related to redundancy (excluding pension strains), change resource, consultancy, property rationalisation and other transformational activity, including member compensation payments from renegotiating the UK defined benefit pension arrangements to update contribution rates, salary caps and benefits, in the first half of 2019. The post-tax impact was £288 million.

(v) A pension past service credit of £260 million (post-tax £216 million) has been recognised predominantly related to a rule amendment to the UK defined benefit pension scheme arrangements to offer members an option to level up their ongoing pension if they retire before the statutory retirement age. This has been offset by pension strain costs associated with redundancy of £108 million (post-tax £89 million). In 2018, £2 million of the pension past service cost related to the Nuclear associate schemes.

(vi) The disposals of Clockwork, and Valemon and Sindre, together with the King's Lynn power station transfer to held for sale, resulted in a net gain of £5 million (post-tax £13 million). Trinidad and Tobago exploration and production assets formerly owned by the Group have passed the final investment decision hurdle under their new owner. This has resulted in the receipt of previously unrecognised contingent consideration. The pre and post-tax impact was £30 million. See note 12 for further details.

7. Exceptional items and certain re-measurements

(b) Certain re-measurements

Certain re-measurements are the fair value movements on energy contracts entered into to meet the future needs of our customers or to sell the energy produced from our upstream assets. These contracts are economically related to our upstream assets, capacity/off-take contracts or downstream demand, which are typically not fair valued, and are therefore separately identified in the current period and reflected in business performance in future periods when the underlying transaction or asset impacts the Group Income Statement.

Year ended 31 December	2019 £m	2018 £m
Certain re-measurements recognised in relation to energy contracts:		
Net gains/(losses) arising on delivery of contracts	63	(127)
Net losses arising on market price movements and new contracts	(709)	(73)
Net re-measurements included within gross profit	**(646)**	(200)
Net losses arising on re-measurement of certain associates' contracts (net of taxation)	(1)	(20)
Net re-measurements included within Group operating profit	**(647)**	(220)
Taxation on certain re-measurements (note 9)	103	39
Net re-measurements after taxation	**(544)**	(181)

Year ended 31 December	2019 £m	2018 £m
Total re-measurement and settlement of derivative energy contracts	(3,673)	(2,931)
Less: IFRS 9 business performance revenue	(4,151)	(4,077)
Less: IFRS 9 business performance cost of sales	7,178	6,808
Unrealised certain re-measurements recognised in relation to energy contracts included in gross profit	**(646)**	(200)

(c) Impairment accounting policy, process and sensitivities

The information provided below relates to the assets and CGUs (or groups of CGUs) that have been subject to impairment during the year. Details of the Group's wider impairment assessment and measurement policy are provided in note S2.

Exceptional impairments of assets measured on a FVLCD basis

Segment	Asset/CGU (or group of CGUs)	Basis for impairment	Recoverable amount £m	FV hierarchy	Impairment £m
Upstream	UK Shale Assets and Danish fields	Further field development deemed uneconomic	–	N/A	310
	UK and Norwegian fields	Significant deterioration in forecast NBP	157	L3	198
	Valemon, Sindre (i)	Reclassification to disposal group held for sale	33	N/A	49
Centrica Business	King's Lynn power station	Reclassification to disposal group held for sale	101	L2	14
Other	Property	Change in usage of assets (including right-of-use assets)	31	L2/L3	34
Centrica Consumer	Software intangible asset	Sale of business (Clockwork) to which intangible asset relates	5	L3	59

(i) The recoverable amounts are stated prior to disposal.

Fair value less costs of disposal (FVLCD) is determined by discounting the post-tax cash flows expected to be generated by the assets or CGU, net of associated selling costs, taking into account those assumptions that market participants would use in estimating fair value. Post-tax cash flows used in the FVLCD calculation are based on the Group's Board-approved business plans and strategic shape assumptions, together with, where relevant, long-term production and cash flow forecasts.

Upstream oil and gas assets

For Upstream oil and gas assets post-tax cash flows are derived from projected production profiles of each field, taking into account forward prices for gas and liquids over the relevant period. Where forward market prices are not available (i.e. outside the active period for each commodity), prices are determined based on the median of third-party market comparator curves. The date of cessation of production depends on the interaction of a number of variables, such as the recoverable quantities of hydrocarbons, production costs, the contractual duration of the licence area and the selling price of the gas and liquids produced. As each field has specific reservoir characteristics and economic circumstances, the post-tax cash flows for each field are computed using individual economic models. Price assumptions are critical and use liquid market prices for 2020 to 2022, blended over a two-year period to long-term price forecasts. Long-term price assumptions derived from third-party market comparator median curves are deemed best aligned with pricing that a reasonable market participant would use, due to inclusion of certain data points, e.g. the impact of climate change.

The future post-tax cash flows are discounted using a post-tax nominal discount rate of 9.0% (2018: 9.5%).

7. Exceptional items and certain re-measurements

As forward commodity prices are a key assumption in the valuations, average prices and associated impairment sensitivities for the Group's upstream oil and gas assets for the relevant periods are shown below.

	Five-year liquid and blended-period price (i)		Ten-year long-term average price (i)		Change in post-tax headroom/(impairment) (ii)			
					+10%		-10%	
	2020 – 2024	2019 – 2023	2025 – 2034	2024 – 2033				
	2019	2018	**2019**	2018	**2019 £m**	2018 £m	**2019 £m**	2018 £m
NBP (p/th)	**43**	53	**58**	67	**180**	128	**(197)**	(97)
Brent ($/bbl)	**62**	62	**81**	96				

(i) Prices are shown in real terms.
(ii) Sensitivity relates to Upstream exploration and production assets and CGUs, there is no impact on goodwill.

Exceptional impairments of assets measured on a VIU basis

Segment	Asset/CGU (or group of CGUs)	Basis for impairment	Recoverable amount £m	Impairment (i) £m
Upstream	Nuclear	Reduction in baseload power prices and outages at Hunterston/Dungeness	1,289	372
Centrica Consumer	Centrica Home Solutions	Strategic refocusing of activity onto UK and Ireland and reduction in profitability	123	48
Centrica Business	Battery storage	Decline in forecast prices	20	9

(i) Impairment of Centrica Home Solutions CGU includes £31 million impairment of goodwill.

Nuclear

A VIU calculation has been used to determine the recoverable amount of the Group's investment in Nuclear. The post-tax cash flows incorporated in the valuation are derived from board approved forecasts, based on the expected generation profile of the fleet for its remaining life. Assumptions include forward commodity prices, capacity rates, transportation and fuel costs and balancing system charges. Price assumptions are based on liquid market prices for 2020 to 2022 and then blended over a two-year period to long-term price forecasts. Long-term price assumptions derived from third-party market comparator median curves are used due to alignment with pricing that a reasonable market participant would use, and the inclusion of certain data points (e.g. impact of climate change).

The VIU calculation assumes that the life of Sizewell is extended to 2055, reflecting a 20-year extension. In the absence of this extension, the Group's investment in Nuclear would be impaired by a further £311 million.

The asset is particularly sensitive to changes in commodity price and the table below details average prices for the relevant periods and associated sensitivities.

	Five-year liquid and blended-period price (i)		Ten-year long-term average price (i)		Change in pre/post-tax headroom/(impairment)			
					+10%		-10%	
	2020 – 2024	2019 – 2023	2025 – 2034	2024 – 2033				
	2019 £/MWh	2018 £/MWh	**2019 £/MWh**	2018 £/MWh	**2019 £m**	2018 £m	**2019 £m**	2018 £m
Baseload power	**47**	51	**59**	63	**376**	365	**(376)**	(365)

(i) Prices are shown in real terms.

The VIU calculation is also sensitive to changes in output assumptions. A 1% increase in unplanned outages across the nuclear fleet would increase impairment by £32 million.

The future pre-tax cash flows generated by the investment in the associate are discounted using a pre-tax nominal discount rate of 8.4% (2018: 9.2%).

Centrica Home Solutions

The VIU calculation for the Centrica Home Solutions CGU incorporates growth assumptions to generate positive cash inflows of £21 million in 2024, and includes a terminal value based on this final year. If the 2024 cash flow reduced by 10%, with a consequent fall in terminal value, a further impairment of £14 million would be required.

The discount rate and inflation rate used in the above calculations are determined in the same manner as the rates used in the VIU calculations described in note S2.

Other impairments

Other impairments totalling £99 million (2018: £54 million) have been recognised in the business performance column of the Group Income Statement within the Upstream segment. These relate to oil and gas field impairments incurred in the ordinary course of business, such as dry hole write-offs, and fields where no further development is planned.

The recoverable amounts of these assets have been calculated as £nil on the basis of FVLCD.

8. Net finance cost

Financing costs mainly comprise interest on bonds and bank debt, the results of hedging activities used to manage foreign exchange and interest rate movements on the Group's borrowings, and notional interest arising on discounting of decommissioning provisions and pensions. An element of financing cost is capitalised on qualifying projects.

Investment income predominantly includes interest received on short-term investments in money market funds, bank deposits and government bonds.

	2019			2018		
Year ended 31 December	**Financing costs £m**	**Investment income £m**	**Total £m**	Financing costs £m	Investment income £m	Total £m
Cost of servicing net debt:						
Interest income	**–**	**17**	**17**	–	20	20
Interest cost on bonds, bank loans and overdrafts	**(236)**	**–**	**(236)**	(250)	–	(250)
Interest cost on lease liabilities (2018: finance leases)	**(15)**	**–**	**(15)**	(12)	–	(12)
	(251)	**17**	**(234)**	(262)	20	(242)
Net gains on revaluation	**–**	**–**	**–**	–	7	7
Notional interest arising from discounting	**(34)**	**–**	**(34)**	(56)	–	(56)
	(285)	**17**	**(268)**	(318)	27	(291)
Capitalised borrowing costs [(i)]	**13**	**–**	**13**	18	–	18
Financing (cost)/income before exceptional items	**(272)**	**17**	**(255)**	(300)	27	(273)
Exceptional items (note 7)	**–**	**–**	**–**	(139)	–	(139)
(Cost)/income	**(272)**	**17**	**(255)**	(439)	27	(412)

(i) Borrowing costs have been capitalised using an average rate of 4.77% (2018: 4.75%).

9. Taxation

The taxation note details the different tax charges and rates, including current and deferred tax arising in the Group. The current tax charge is the tax payable on this year's taxable profits together with amendments in respect of tax provisions made in earlier years. This tax charge excludes the Group's share of taxation on the results of joint ventures and associates. Deferred tax represents the tax on differences between the accounting carrying values of assets and liabilities and their tax bases. These differences are temporary and are expected to unwind in the future.

(a) Analysis of tax charge

	2019			2018		
Year ended 31 December	**Business performance £m**	**Exceptional items and certain re-measurements £m**	**Results for the year £m**	Business performance £m	Exceptional items and certain re-measurements £m	Results for the year £m
Current tax						
UK corporation tax	**(37)**	**37**	**–**	(44)	49	5
UK petroleum revenue tax	**17**	**–**	**17**	50	–	50
Non-UK tax	**(147)**	**(32)**	**(179)**	(278)	9	(269)
Adjustments in respect of prior years – UK (i)	**16**	**(34)**	**(18)**	17	2	19
Adjustments in respect of prior years – non-UK (i)	**(9)**	**–**	**(9)**	(16)	1	(15)
Total current tax	**(160)**	**(29)**	**(189)**	(271)	61	(210)
Deferred tax						
Origination and reversal of temporary differences – UK	**15**	**15**	**30**	(70)	51	(19)
UK petroleum revenue tax	**(5)**	**22**	**17**	(1)	(14)	(15)
Origination and reversal of temporary differences – non-UK	**(28)**	**163**	**135**	(120)	32	(88)
Adjustments in respect of prior years – UK	**(34)**	**34**	**–**	(11)	(3)	(14)
Adjustments in respect of prior years – non-UK	**(6)**	**14**	**8**	12	1	13
Total deferred tax	**(58)**	**248**	**190**	(190)	67	(123)
Total taxation on profit/(loss) (ii)	**(218)**	**219**	**1**	(461)	128	(333)

(i) The net adjustments in respect of prior years include uncertain tax provision credits of £nil (2018: £13 million).
(ii) Total taxation on profit/(loss) excludes taxation on the Group's share of profits of joint ventures and associates.

UK tax rates

Most activities in the UK are subject to the standard rate for UK corporation tax of 19% (2018: 19%). Upstream gas and oil production activities are taxed at a rate of 30% (2018: 30%) plus a supplementary charge of 10% (2018: 10%) to give an overall rate of 40% (2018: 40%). Certain upstream assets in the UK under the petroleum revenue tax (PRT) regime have a current rate of 0% (2018: 0%).

The UK corporation tax rate is scheduled to reduce to 17% from 1 April 2020. At 31 December 2019, the relevant UK deferred tax assets and liabilities included in these consolidated Group Financial Statements were based on this substantively-enacted reduced rate having regard to their reversal profiles.

Non-UK tax rates

Norwegian upstream profits are taxed at the standard rate of 22% (2018: 23%) plus a special tax of 56% (2018: 55%) resulting in an aggregate tax rate of 78% (2018: 78%). Profits earned in the US are taxed at a Federal rate of 21% (2018: 21%) together with state taxes at various rates dependent on the state. Taxation for other jurisdictions is calculated at the rate prevailing in those respective jurisdictions, with rates ranging from 12.5% in the Republic of Ireland to 50% in the Netherlands. The tax charges were not material in such jurisdictions.

Prior year adjustments reflect changes made to estimates or to judgements when further information becomes available.

Movements in deferred tax liabilities and assets are disclosed in note 16.

Tax on items taken directly to equity is disclosed in note S4.

9. Taxation

(b) Factors affecting the tax charge

The Group is expected to continue carrying out the majority of its business activities in the UK and accordingly considers the standard UK rate to be the appropriate reference rate.

The differences between the total taxation shown above and the amount calculated by applying the standard rate of UK corporation tax to the profit/(loss) before taxation are as follows:

	2019			2018		
Year ended 31 December	**Business performance £m**	**Exceptional items and certain re-measurements £m**	**Results for the year £m**	Business performance £m	Exceptional items and certain re-measurements £m	Results for the year £m
Profit/(loss) before taxation	**646**	**(1,750)**	**(1,104)**	1,119	(544)	575
Add back/(deduct) share of losses/(profits) of joint ventures and associates, net of interest and taxation	**12**	**1**	**13**	(3)	22	19
	658	**(1,749)**	**(1,091)**	1,116	(522)	594
Tax on profit at standard UK corporation tax rate of 19% (2018: 19%)	**(125)**	**332**	**207**	(212)	99	(113)
Effects of:						
Depreciation/impairment on non-qualifying assets (including write-backs)	**(31)**	**(229)**	**(260)**	(34)	(3)	(37)
Higher rates applicable to upstream profits/losses	**(107)**	**42**	**(65)**	(269)	6	(263)
Non-UK tax rates	**15**	**112**	**127**	(27)	4	(23)
Upstream investment incentives	**37**	**(32)**	**5**	47	33	80
Movements in uncertain tax provisions	**8**	**–**	**8**	(12)	–	(12)
Other	**(15)**	**(6)**	**(21)**	46	(11)	35
Taxation on profit/(loss)	**(218)**	**219**	**1**	(461)	128	(333)
Less: movement in deferred tax	**58**	**(248)**	**(190)**	190	(67)	123
Total current tax	**(160)**	**(29)**	**(189)**	(271)	61	(210)

The Group is subject to taxation in a number of jurisdictions. The complexity of applicable rules may result in legitimate differences of interpretation between the Group and taxing authorities (or between different taxing authorities) especially where an economic judgement or valuation is involved. Resolution of these differences typically takes many years. The uncertain tax provisions represent multiple layers of estimation for different time periods and different jurisdictions.

The Group has applied IFRIC 23: 'Uncertainty over income tax treatments' during the year. The interpretation requires consideration of the likelihood that the relevant taxing authority will accept an uncertain tax treatment in order to determine the measurement basis. The value is calculated in accordance with the rules of the relevant tax authority when acceptance is deemed probable.

The principal element of the Group's uncertain tax position relates to transfer pricing challenges in jurisdictions outside the UK. While the Group applies the arm's length principle to all intra-group transactions, taking OECD guidance into account, taxing authorities may take different views. The outcome of resolving any disputes is not predictable and therefore in order to reflect the effect of uncertainties, the provisions represent management's assessment of the most likely outcome of each issue. The assessment is reviewed and updated on a regular basis.

9. Taxation

(c) Factors that may affect future tax charges

The Group's effective tax rates are impacted by changes to the mix of activities and production across the territories in which it operates. Effective tax rates may also fluctuate where profits and losses cannot be offset for tax purposes. Losses realised in one territory cannot be offset against profits in another.

The Group's UK profits earned away from gas and oil production will benefit from reduced rates of corporation tax: 17% from 1 April 2020.

Profits from gas and oil production in the UK continue to be taxed at rates above the UK statutory rate (40% versus 19%). PRT is now set at 0% but may still give rise to historic refunds from the carry-back of excess reliefs (for example, from decommissioning).

Income earned in territories outside the UK, particularly in Norway, is generally subject to higher effective rates of tax than the current UK statutory rate.

The Group's US profits are subject to a Federal rate of 21% plus applicable state taxes.

Globally, tax reform has significant potential to change tax charges, particularly in relation to the OECD's Base Erosion and Profit Shifting (BEPS) project, which has widespread support. The Group does not expect its tax position to be impacted materially. Local tax laws and rates are subject to change, which may have a significant impact on the Group's future tax charges.

In the medium term, the Group's effective tax rate is expected to remain above the UK statutory rate, reflecting higher rates applicable to profits earned outside the UK. The mix of upstream/downstream activities across regimes continues to be influential on the effective tax rate.

(d) Relationship between current tax charge and taxes paid

	2019			2018		
Year ended 31 December	UK £m	Non-UK £m	**Total £m**	UK £m	Non-UK £m	Total £m
Current tax charge/(credit):						
Corporation tax	18	188	**206**	(24)	284	260
Petroleum revenue tax	(17)	–	**(17)**	(50)	–	(50)
	1	**188**	**189**	(74)	284	210
Taxes (refunded)/paid:						
Corporation tax	(43)	239	**196**	18	99	117
Petroleum revenue tax	(68)	–	**(68)**	(56)	–	(56)
	(111)	**239**	**128**	(38)	99	61
Included in the following lines of the Group Cash Flow Statement:						
Taxes paid in cash flows from operating activities			**92**			61
Sale of businesses in cash flows from investing activities			**36**			–

Differences between current tax charged and taxes paid arose principally due to the following factors:

- Corporation tax payments are generally made by instalment, based on estimated taxable profits, or the prior period's profits. Payments are made on account and the final liability is settled as the tax return is filed. Fluctuations in profits from year to year, one-off items and mark-to-market movements within the year may therefore give rise to divergence between the charge for the year and the taxes paid. In certain jurisdictions advance tax payments are required (based on estimated tax liabilities) which can result in overpayments. These are included as tax assets, to be refunded in a subsequent period (2018 and 2019 saw net refunds in the UK); and
- PRT refunds are based on results in the preceding six-monthly PRT period, therefore PRT cash movements will reflect refunds on a six-month delay.

10. Earnings per ordinary share

Earnings per share (EPS) is the amount of profit or loss attributable to each share. Basic EPS is the amount of profit or loss for the year divided by the weighted average number of shares in issue during the year. Diluted EPS includes the impact of outstanding share options.

Basic earnings per ordinary share has been calculated by dividing the loss attributable to equity holders of the Company for the year of £1,023 million (2018: £183 million profit) by the weighted average number of ordinary shares in issue during the year of 5,758 million (2018: 5,623 million). The number of shares excludes 22 million ordinary shares (2018: 40 million), being the weighted average number of the Company's own shares held in the employee share trust and treasury shares purchased by the Group as part of the share repurchase programme.

The Directors believe that the presentation of adjusted basic earnings per ordinary share, being the basic earnings per ordinary share adjusted for certain re-measurements and exceptional items, assists with understanding the underlying performance of the Group, as explained in note 2.

Information presented for diluted and adjusted diluted earnings per ordinary share uses the weighted average number of shares as adjusted for 44 million (2018: 48 million) potentially dilutive ordinary shares as the denominator, unless it has the effect of increasing the profit or decreasing the loss attributable to each share.

Basic to adjusted basic earnings per share reconciliation

	2019		2018	
Year ended 31 December	**£m**	**Pence per ordinary share**	£m	Pence per ordinary share
Earnings – basic	**(1,023)**	**(17.8)**	183	3.3
Net exceptional items after taxation (notes 2 and 7) [(i)]	**862**	**15.0**	266	4.7
Certain re-measurement losses after taxation (notes 2 and 7) [(i)]	**580**	**10.1**	182	3.2
Earnings – adjusted basic	**419**	**7.3**	631	11.2
Earnings – diluted	**(1,023)**	**(17.8)**	183	3.2
Earnings – adjusted diluted	**419**	**7.2**	631	11.1

(i) Net exceptional loss after taxation and certain re-measurement losses after taxation are adjusted to reflect the share attributable to non-controlling interests.

11. Dividends

Dividends represent the return of profits to shareholders and are paid twice a year, in June and November. Dividends are paid as an amount per ordinary share held. The Group retains part of the profits generated to meet future investment plans or to fund share repurchase programmes.

	2019			2018		
	£m	Pence per share	Date of payment	£m	Pence per share	Date of payment
Prior year final dividend (i)	474	8.40	27 Jun 2019	470	8.40	28 Jun 2018
Interim dividend	87	1.50	21 Nov 2019	203	3.60	22 Nov 2018
	561			673		

(i) Included within the prior year final dividend are forfeited dividends of £5 million (2018: £1 million) older than 12 years that were written back in accordance with Group policy.

The Directors propose a final dividend of 3.50 pence per ordinary share (totalling £204 million) for the year ended 31 December 2019. The dividend will be submitted for formal approval at the Annual General Meeting to be held on 11 May 2020 and, subject to approval, will be paid on 22 June 2020 to those shareholders registered on 11 May 2020.

In prior years the Company offered a scrip dividend alternative to its shareholders. £96 million of the £474 million prior year final dividend was in the form of ordinary shares to shareholders opting in to the scrip dividend alternative. The market value per share at the date of payment was 94 pence per share resulting in the issue of 102 million new shares and £90 million of share premium. The scrip dividend alternative is no longer offered.

The Group has sufficient distributable reserves to pay dividends to its ultimate shareholders. Distributable reserves are calculated on an individual legal entity basis and so, despite the consolidated Group Balance Sheet containing negative retained earnings, the ultimate parent company, Centrica plc, currently has adequate levels of realised profits within its retained earnings to support dividend payments. Refer to the Centrica plc Company Balance Sheet on page 197. At 31 December 2019, Centrica plc's company-only distributable reserves were c.£2.7 billion. On an annual basis, the distributable reserve levels of the Group's subsidiary undertakings are reviewed and dividends paid up to Centrica plc to replenish its reserves.

12. Acquisitions, disposals and disposal groups classified as held for sale

This section details acquisitions and disposals made by the Group.

(a) 2019 business combinations and asset acquisitions

On 1 July 2019 the Group acquired SmartWatt Energy Inc., a leading energy services and solutions company in North America, for consideration of $37 million (£29 million).

Acquisition-related costs have been charged to 'operating costs before exceptional items and credit losses on financial assets' in the Group Income Statement for an aggregated amount of £1 million.

(b) 2018 business combinations – measurement period adjustments

There have been no material updates to the fair value of assets and liabilities recognised for businesses acquired in 2018.

(c) Disposals

On 30 April 2019 the Group disposed of Clockwork Home Services in North America. The business comprised a series of franchises, company-owned stores and brands, including One Hour Heating & Air Conditioning, Benjamin Franklin Plumbing and Mister Sparky, to Apax Partners and was part of the Centrica Consumer segment.

Gross consideration of $300 million (£231 million) has predominantly been reduced by working capital and transaction costs, to generate net consideration of $279 million (£215 million). The cash inflow from the disposal is presented net of tax paid in the Group Cash Flow Statement.

	Clockwork Home Services £m
Property, plant and equipment	7
Brand intangible asset	12
Other net assets	9
Attributable goodwill	76
Net assets disposed of	**104**
Consideration received	215
	111
Recycling of foreign currency translation reserves on disposal	18
Impairment of intangible asset	(59)
Other directly-attributable costs of disposal	(2)
Profit on disposal before taxation	**68**
Taxation	(27)
Profit on disposal after taxation	**41**

The Group also disposed of Norwegian exploration and production assets, Valemon and Sindre, part of the Upstream segment, during the year. Proceeds of £33 million were equal to the carrying value of the assets disposed of subsequent to the recognition of a pre-tax impairment charge of £49 million. The impairment charge is included in net gain on significant disposals within exceptional items.

None of the disposals are shown as discontinued operations on the face of the Group Income Statement as they do not represent a separate major line of business or geographical area of operation that is material to the Group's results.

The Group received £30 million of previously unrecognised contingent consideration in respect of the historic disposal of Trinidad and Tobago assets.

There were no other material disposals.

12. Acquisitions, disposals and disposal groups classified as held for sale

(d) Assets and liabilities of disposal groups held for sale

On 23 December 2019 the Group agreed to sell its 382MW King's Lynn combined cycle gas turbine (CCGT) power station to RWE Generation for headline consideration of £105 million, adjusted for final working capital, based on a valuation date of 31 December 2019. These interests are currently reported in the Centrica Business segment. An impairment charge of £14 million was recorded against the assets of the disposal group and is included in net gain on significant disposals within exceptional items. The transaction completed on 12 February 2020.

Also included in assets and liabilities of disposal groups held for sale is a net amount of £5 million related to an exploration and production field.

	Exploration and production field £m	King's Lynn power station £m	**Total £m**
Non-current assets	11	111	122
Current assets	–	2	2
Assets of disposal groups classified as held for sale	**11**	**113**	**124**
Current liabilities	(1)	(5)	(6)
Non-current liabilities	(5)	(7)	(12)
Liabilities of disposal groups classified as held for sale	**(6)**	**(12)**	**(18)**
Net assets of disposal groups classified as held for sale	**5**	**101**	**106**

Assets and associated liabilities that are expected to be recovered principally through a sale have been classified as held for sale and are presented separately on the face of the Group Balance Sheet.

13. Property, plant and equipment

PP&E includes significant investment in power stations and gas and liquid production assets. Once operational, all assets are depreciated over their useful lives.

(a) Carrying amounts

	2019					2018				
	Land and buildings £m	Plant, equipment and vehicles £m	Power generation £m	Gas production and storage £m	**Total £m**	Land and buildings £m	Plant, equipment and vehicles £m	Power generation £m	Gas production and storage £m	Total £m
Cost										
1 January prior to adoption of IFRS 16	75	568	1,059	15,476	**17,178**	64	566	950	15,428	17,008
Right-of-use assets recognised on adoption of IFRS 16 (note 1)	254	26	65	33	**378**	–	–	–	–	–
Lease modifications and re-measurements	15	(39)	–	–	**(24)**	–	–	–	–	–
Additions and capitalised borrowing costs (note 4)	19	49	44	327	**439**	10	79	114	367	570
Acquisitions	1	–	–	–	**1**	–	2	–	3	5
Transfers	–	(24)	–	5	**(19)**	–	–	–	36	36
Disposals, retirements and transfers to disposal groups held for sale	–	(45)	(209)	(510)	**(764)**	–	(84)	(8)	(427)	(519)
Decommissioning liability and dilapidations revisions and additions (note 21)	1	–	–	(127)	**(126)**	–	–	2	44	46
Exchange adjustments	(4)	(7)	(6)	(278)	**(295)**	1	5	1	25	32
31 December	**361**	**528**	**953**	**14,926**	**16,768**	75	568	1,059	15,476	17,178
Accumulated depreciation and impairment										
1 January	23	211	782	12,038	**13,054**	21	179	761	11,915	12,876
Charge for the year	45	91	27	644	**807**	2	86	10	638	736
Impairments/(write-backs)	23	11	57	478	**569**	–	–	18	(105)	(87)
Disposals, retirements and transfers to disposal groups held for sale	–	(30)	(103)	(479)	**(612)**	–	(57)	(7)	(427)	(491)
Exchange adjustments	(1)	(4)	(1)	(177)	**(183)**	–	3	–	17	20
31 December	**90**	**279**	**762**	**12,504**	**13,635**	23	211	782	12,038	13,054
NBV at 31 December	**271**	**249**	**191**	**2,422**	**3,133**	52	357	277	3,438	4,124

(b) Assets in the course of construction included in above carrying amounts

31 December	**2019 £m**	2018 £m
Plant, equipment and vehicles	**30**	45
Gas production	**177**	605
Power generation	**20**	99

(c) Additional information relating to right-of-use assets included in the above

	2019 (i)					2018 (i)				
	Land and buildings £m	**Plant, equipment and vehicles £m**	**Power generation £m**	**Gas production and storage £m**	**Total £m**	Land and buildings £m	Plant, equipment and vehicles £m	Power generation £m	Gas Production and storage £m	Total £m
Additions	**16**	**15**	**–**	**37**	**68**	–	36	–	–	36
Depreciation charge for the year	**(43)**	**(34)**	**(11)**	**(13)**	**(101)**	–	24	–	15	39
NBV at 31 December	**231**	**83**	**20**	**56**	**390**	–	118	–	1	119

(i) 2019 reflects right-of-use assets recognised in accordance with IFRS 16. 2018 reflects assets held under finance leases in accordance with IAS 17 and to which title was restricted.

Further information on the Group's leasing arrangements is provided in note 23.

14. Interests in joint ventures and associates

Investments in joint ventures and associates represent businesses where we exercise joint control or significant influence and generally have an equity holding of up to 50%. These include the investment in Lake Acquisitions Limited, which owns the existing EDF UK nuclear power station fleet.

(a) Interests in joint ventures and associates

	2019 Investments in joint ventures and associates £m	2018 Investments in joint ventures and associates £m
1 January	**1,661**	1,699
Impairment	**(372)**	–
Share of loss for the year	**(13)**	(19)
Share of other comprehensive income/(loss)	**29**	(1)
Dividends	**(1)**	(22)
Other movements	**2**	4
31 December	**1,306**	1,661

(b) Share of joint ventures' and associates' assets and liabilities

	2019			2018
31 December	Associates Nuclear £m	Other £m	**Total £m**	Total £m
Share of non-current assets	4,414	11	**4,425**	3,811
Share of current assets	684	13	**697**	660
	5,098	24	**5,122**	4,471
Share of current liabilities	(135)	(3)	**(138)**	(139)
Share of non-current liabilities	(2,716)	(1)	**(2,717)**	(2,082)
	(2,851)	(4)	**(2,855)**	(2,221)
Cumulative impairment	(958)	(3)	**(961)**	(589)
Interests in joint ventures and associates	**1,289**	**17**	**1,306**	1,661
Net cash included in share of net assets	56	–	**56**	83

Further information on the Group's investments in joint ventures and associates is provided in notes 6 and S10.

15. Other intangible assets and goodwill

The Group Balance Sheet contains significant intangible assets. Goodwill, customer relationships and brands usually arise when we acquire a business. Goodwill is attributable to enhanced geographical presence, cost savings, synergies, growth opportunities, the assembled workforce and also arises from items such as deferred tax. Goodwill is not amortised but is assessed for recoverability each year.

The Group uses European Union Allowances (EUAs) and Renewable Obligation Certificates/Renewable Energy Certificates (ROCs/RECs) to satisfy its related obligations.

Upstream exploration and evaluation expenditure is capitalised as an intangible asset until development of the asset commences, at which point it is transferred to PP&E or is deemed not commercially viable and is written down.

(a) Carrying amounts

	2019						2018					
	Customer relation-ships and brands £m	Application software (i) (ii) £m	EUA/ ROC/RECs £m	Exploration and evaluation expenditure £m	Goodwill £m	**Total £m**	Customer relation-ships and brands £m	Application software (i) (ii) £m	EUA/ ROC/RECs £m	Exploration and evaluation expenditure £m	Goodwill £m	Total £m
Cost												
1 January	830	1,837	321	304	3,298	**6,590**	749	1,570	323	324	3,212	6,178
Additions and capitalised borrowing costs (note 4(e))	–	200	933	216	–	**1,349**	12	281	854	118	–	1,265
Acquisitions	7	6	–	–	10	**23**	33	(7)	–	–	26	52
Disposals/retirements and surrenders	(43)	(28)	(1,068)	(14)	(76)	**(1,229)**	–	(26)	(869)	–	–	(895)
Write-downs	–	–	–	(178)	–	**(178)**	–	–	–	(102)	–	(102)
Transfers	–	24	–	(5)	–	**19**	–	–	–	(36)	–	(36)
Exchange adjustments	(30)	(18)	(7)	(3)	(61)	**(119)**	36	19	13	–	60	128
31 December	**764**	**2,021**	**179**	**320**	**3,171**	**6,455**	830	1,837	321	304	3,298	6,590
Accumulated amortisation												
1 January	596	859	–	117	562	**2,134**	514	659	–	117	562	1,852
Amortisation (iii)	38	228	–	–	–	**266**	52	216	–	–	–	268
Disposals/retirements and surrenders	(31)	(22)	–	–	–	**(53)**	–	(23)	–	–	–	(23)
Impairments	–	76	–	–	31	**107**	–	–	–	–	–	–
Exchange adjustments	(23)	(9)	–	–	–	**(32)**	30	7	–	–	–	37
31 December	**580**	**1,132**	**–**	**117**	**593**	**2,422**	596	859	–	117	562	2,134
NBV at 31 December	**184**	**889**	**179**	**203**	**2,578**	**4,033**	234	978	321	187	2,736	4,456

(i) Application software includes assets under construction with a cost of £259 million (2018: £302 million).
(ii) The remaining amortisation period of individually material application software assets, which had a carrying value of £270 million (2018: £260 million), is between five and six years.
(iii) Amortisation of £266 million (2018: £268 million) has been recognised in operating costs before exceptional items.

15. Other intangible assets and goodwill

(b) Carrying amount of goodwill and intangible assets with indefinite useful lives allocated to CGUs

Goodwill acquired through business combinations, and indefinite-lived intangible assets, have been allocated for impairment testing purposes to individual CGUs or groups of CGUs, each representing the lowest level within the Group at which the goodwill or indefinite-lived intangible asset is monitored for internal management purposes.

31 December	Principal acquisitions to which goodwill and intangibles with indefinite useful lives relate	2019 Carrying amount of goodwill £m	2019 Carrying amount of indefinite-lived intangible assets (i) £m	2019 Total £m	2018 Carrying amount of goodwill £m	2018 Carrying amount of indefinite-lived intangible assets (i) £m	2018 Total £m
CGUs							
Centrica Consumer:							
UK Home (Residential energy and services)	AlertMe/Dyno-Rod	**63**	**57**	**120**	63	57	120
Ireland	Bord Gáis Energy	**15**	**–**	**15**	16	–	16
North America (Home energy and services)	Direct Energy/ATCO/CPL/WTU/FCP/Bounce/Residential Services Group/Clockwork/Astrum Solar (i)	**974**	**4**	**978**	1,061	14	1,075
Centrica Home Solutions	AlertMe/FlowGem	**–**	**–**	**–**	31	–	31
Centrica Business:							
UK Business (Energy supply and services)	Enron Direct/Electricity Direct	**181**	**–**	**181**	181	–	181
North America Business (Energy supply and trading)	Direct Energy/ATCO/Strategic Energy/FCP/HEM	**550**	**–**	**550**	567	–	567
Centrica Business Solutions	ENER-G/Panoramic Power/REstore/SmartWatt	**178**	**2**	**180**	174	–	174
Energy Marketing & Trading	Neas Energy	**142**	**–**	**142**	151	–	151
Upstream:							
Exploration & Production	Newfield/Heimdal/Venture/Bayerngas	**475**	**–**	**475**	492	–	492
		2,578	**63**	**2,641**	2,736	71	2,807

(i) The indefinite-lived intangible assets relate mainly to the Dyno-Rod brand. In the prior year amounts also relate to the Mr Sparky and Benjamin Franklin brands acquired as part of the Clockwork business combination, which have now been disposed of.

16. Deferred tax assets and liabilities

Deferred tax is an accounting adjustment to provide for tax that is expected to arise in the future as a result of differences in the accounting and tax bases of assets and liabilities. The principal deferred tax assets and liabilities recognised by the Group relate to capital investments, decommissioning assets and provisions, tax losses, fair value movements on derivative financial instruments, PRT and pensions.

	Accelerated tax depreciation (corporation tax) £m	Net decommissioning (i) £m	Losses carried forward (ii) £m	Other timing differences £m	Marked to market positions £m	Net deferred PRT (iii) £m	Retirement benefit obligation and other provisions £m	Total £m
1 January 2018	(931)	864	335	8	(80)	136	62	394
(Charge)/credit to income	(115)	16	(12)	(29)	40	(9)	(14)	(123)
Credit/(charge) to equity	–	–	–	1	(2)	–	(135)	(136)
Disposal of businesses	(5)	–	–	–	–	–	–	(5)
Exchange and other adjustments	(5)	–	–	24	(1)	–	–	18
31 December 2018	(1,056)	880	323	4	(43)	127	(87)	**148**
Credit/(charge) to income	142	(2)	(70)	24	159	11	(74)	**190**
(Charge)/credit to equity	–	–	–	(1)	2	–	78	**79**
Disposal of businesses	(32)	–	–	–	–	–	–	**(32)**
Exchange and other adjustments	22	(11)	2	(12)	16	–	–	**17**
31 December 2019	**(924)**	**867**	**255**	**15**	**134**	**138**	**(83)**	**402**

(i) Net decommissioning includes deferred tax assets of £1,040 million (2018: £1,215 million) in respect of decommissioning provisions.
(ii) The losses arise principally from accelerated allowances for upstream investment expenditure, for which equivalent deferred tax liabilities are included under accelerated tax depreciation.
(iii) The deferred PRT amounts include the effect of deferred corporation tax as PRT is chargeable to corporation tax.

Certain deferred tax assets and liabilities have been offset where there is a legally enforceable right to offset current tax assets against current tax liabilities and when the deferred income taxes relate to the same fiscal authority.

	2019		2018	
31 December	**Assets £m**	**Liabilities £m**	Assets £m	Liabilities £m
Gross deferred tax balances	**1,820**	**(1,418)**	2,029	(1,881)
Offsetting deferred tax balances	**(1,267)**	**1,267**	(1,497)	1,497
Net deferred tax balances (after offsetting for financial reporting purposes)	**553**	**(151)**	532	(384)

Deferred tax assets arise typically on decommissioning provisions, trading losses carried forward, retirement benefit obligations and marked to market positions. Forecasts indicate that there will be suitable taxable profits to utilise those deferred tax assets not offset against deferred tax liabilities. Specific legislative provisions applicable to gas and oil production provide assurance that deferred tax assets relating to decommissioning costs and certain trading losses will be utilised.

At the balance sheet date, the Group had certain unrecognised deductible temporary differences of £3,537 million (2018: £3,165 million), of which £2,620 million (2018: £2,294 million) related to carried forward tax losses available for utilisation against future taxable profits. Some £44 million (2018: £59 million) of these losses will expire within one to five years. All other temporary differences have no expiry date.

No deferred tax asset has been recognised in respect of these temporary differences, due to the unpredictability of future profit streams. At the balance sheet date, no taxable temporary differences existed in respect of the Group's overseas investments (2018: £nil).

17. Trade and other receivables, and contract-related assets

Trade and other receivables include accrued income, and are amounts owed by our customers for goods we have delivered or services we have provided. These balances are valued net of provisions for bad debt. Other receivables include payments made in advance to our suppliers. Contract-related assets are balances arising as a result of the Group's contracts with customers in the scope of IFRS 15.

31 December	2019 Current £m	2019 Non-current £m	2018 Current £m	2018 Non-current £m
Financial assets:				
Trade receivables	**2,138**	**2**	2,043	3
Unbilled downstream energy income	**1,342**	**–**	1,542	–
Other accrued energy income	**1,003**	**–**	1,323	–
Other accrued income	**131**	**–**	116	–
Cash collateral posted (note 24)	**155**	**–**	446	–
Other receivables (including loans and contract assets)	**301**	**38**	292	39
	5,070	**40**	5,762	42
Less: provision for credit losses	**(589)**	**–**	(569)	–
	4,481	**40**	5,193	42
Non-financial assets: prepayments, other receivables and costs to obtain or fulfill a contract with a customer	**358**	**114**	350	77
	4,839	**154**	5,543	119

The amounts above include gross amounts arising from the Group's IFRS 15 contracts with customers of £2,019 million (2018: £1,913 million).

Trade and other receivables include financial assets representing the contractual right to receive cash or other financial assets from residential customers, business customers and treasury, trading and energy procurement counterparties as follows:

31 December	2019 Current £m	2019 Non-current £m	2018 Current £m	2018 Non-current £m
Financial assets by class:				
Residential customers	**1,722**	**12**	1,700	8
Business customers	**2,104**	**26**	2,321	28
Treasury, trading and energy procurement counterparties	**1,244**	**2**	1,741	6
	5,070	**40**	5,762	42
Less: provision for credit losses	**(589)**	**–**	(569)	–
	4,481	**40**	5,193	42

Receivables from residential and business customers are generally considered to be credit impaired when the payment is past the contractual due date. Contractual due dates range from falling due upon receipt to falling due in 30 days from receipt.

The table below shows the change in gross receivables between credit impaired balances (those that are past due) and receivables that are not yet due and therefore not considered to be credit impaired.

Gross financial assets within trade and other receivables 31 December	2019 £m	2018 £m
Balances that are not past due	**3,718**	4,418
Balances that are past due	**1,352**	1,344
	5,070	5,762

17. Trade and other receivables, and contract-related assets

The IFRS 9 impairment model is applicable to the Group's financial assets including trade receivables, contract assets and other financial assets as described in note S3. As the majority of the relevant balances are trade receivables and contract assets to which the simplified model applies, this disclosure focuses on these balances.

The provision for credit losses for trade receivables, contract assets and finance lease receivables is based on an expected credit loss model that calculates the expected loss applicable to the receivable balance over its lifetime. Credit losses on receivables due from treasury, trading and energy procurement counterparties are not significant (see note S3 for further analysis of this determination). For residential and business customers default rates are calculated initially by operating segment considering historical loss experience and applied to trade receivables within a provision matrix. The matrix approach allows application of different default rates to different groups of customers with similar characteristics. These groups will be determined by a number of factors including; the nature of the customer, the payment method selected and where relevant, the sector in which they operate. The characteristics used to determine the groupings of receivables are the factors that have the greatest impact on the likelihood of default. The rate of default increases once the balance is 30 days past due and subsequently in 30-day increments.

Receivables from residential and business customers are generally considered to be credit impaired when the payment is past the contractual due date. The Group applies different definitions of default for different groups of customers, ranging from 60 days past the due date to six to twelve months from the issuance of a final bill. Receivables are generally written off only once a period of time has elapsed since the final bill. Contractual due dates range from falling due upon receipt to falling due in 30 days from receipt.

The impairment charge in trade receivables is stated net of credits for the release of specific provisions made in previous years, which are no longer required. These relate primarily to residential customers in the UK. Movements in the provision for credit losses by class are as follows:

	2019				2018			
	Residential customers £m	Business customers £m	Treasury, trading and energy procurement counterparties £m	**Total £m**	Residential customers £m	Business customers £m	Treasury, trading and energy procurement counterparties £m	Total £m
1 January	(343)	(222)	(4)	**(569)**	(347)	(248)	(4)	(599)
Net impairment of trade receivables (predominantly related to credit impaired trade receivables) (i) (ii) (iii)	(145)	(58)	–	**(203)**	(85)	(64)	(1)	(150)
Receivables written off (iv)	101	82	–	**183**	89	90	1	180
31 December	**(387)**	**(198)**	**(4)**	**(589)**	(343)	(222)	(4)	(569)

(i) Includes £190 million (2018: £135 million) of credit losses related to trade receivables resulting from contracts in the scope of IFRS 15.
(ii) All loss allowances reflect the lifetime expected credit losses on trade receivables, contract assets and finance lease receivables.
(iii) Excludes recovery of previously written-off receivables of £6 million (2018: £7 million).
(iv) Materially all write-offs relate to trade receivables where enforcement activity is ongoing.

Enforcement activity continues in respect of balances that have been written off unless there are specific known circumstances (such as bankruptcy) that render further action futile.

Sensitivity to changes in assumptions

The most significant assumption included within the expected credit loss provisioning model that gives rise to estimation uncertainty is that future performance will be reflective of past performance and there will be no significant change in the payment profile or recovery rates within each identified group of receivables. To address this risk, the Group reviews and updates default rates, by group, on a regular basis to ensure they incorporate the most up to date assumptions along with forward-looking information where available and relevant. The Group also considers regulatory changes and customer segment specific factors that may have an impact, now or in the future, on recoverability of the balance. While forward-looking information is usually considered to be immaterial, the exception to this could be the forecast occurrence of a significant one-off event. The Group does not believe that Brexit will have a material impact on the outstanding receivables balance during the transition period or beyond.

This approach is considered appropriate as the Group's outstanding trade receivable balance is made up of a high volume of individually low value balances relative to the total outstanding debt. As a result, impairment losses on trade receivables are more sensitive to macroeconomic events, rather than customer specific future events, which are unlikely to have a material impact. The Group's receivables are predominantly short term and the rate of default increases significantly when a balance is more than 90 days past due. In order to test the sensitivity to changes in the debt profile, the Group has considered the impact of further credit deterioration of these balances and determined that if all balances were to remain unpaid for a further 30 days, the additional credit loss recognisable by the Group would be up to £35 million.

18. Inventories

Inventories represent assets that we intend to use in future periods, either by selling the asset itself (for example gas in storage) or by using it to provide a service to a customer.

31 December	2019 £m	2018 £m
Gas and oil in storage and transportation (i)	**157**	210
Other raw materials and consumables	**190**	169
Finished goods and goods for resale	**84**	80
	431	459

(i) Includes oil inventory and gas in storage held at fair value of £43 million (2018: £76 million).

The Group consumed £854 million of inventories (2018: £768 million) during the year. Write-downs amounting to £28 million (2018: £8 million) were charged to the Group Income Statement in the year.

19. Derivative financial instruments

The Group uses derivative financial instruments to manage the risk arising from fluctuations in the value of certain assets or liabilities associated with treasury management, energy sales and procurement. These derivatives are held at fair value and are predominantly unrealised positions, expected to unwind in future periods. The Group also uses derivatives for proprietary energy trading purposes.

Purpose	Accounting treatment
Proprietary energy trading and treasury management	Carried at fair value, with changes in fair value recognised in the Group's business performance results for the year. (i)
Energy procurement/ optimisation	Carried at fair value, with changes in fair value reflected in certain re-measurements.

(i) With the exception of certain energy derivatives related to cross-border transportation and capacity contracts.

In cases where a derivative qualifies for hedge accounting, derivatives are classified as fair value hedges or cash flow hedges. Note S5 provides further detail on the Group's hedge accounting.

The carrying values of derivative financial instruments by product type for accounting purposes are as follows:

	2019		2018	
31 December	Assets £m	Liabilities £m	Assets £m	Liabilities £m
Derivative financial instruments – held for trading under IFRS 9:				
Energy derivatives – for procurement/optimisation	**553**	**(1,245)**	567	(704)
Energy derivatives – for proprietary trading	**917**	**(769)**	837	(787)
Interest rate derivatives	**3**	**(23)**	–	(26)
Foreign exchange derivatives	**104**	**(104)**	30	(38)
Derivative financial instruments in hedge accounting relationships:				
Interest rate derivatives	**105**	**(2)**	59	(10)
Foreign exchange derivatives	**131**	**(2)**	185	(1)
Total derivative financial instruments	**1,813**	**(2,145)**	1,678	(1,566)
Included within:				
Derivative financial instruments – current	**1,320**	**(1,854)**	1,141	(1,136)
Derivative financial instruments – non-current	**493**	**(291)**	537	(430)

19. Derivative financial instruments

The contracts included within energy derivatives are subject to a wide range of detailed specific terms, but comprise the following general components, analysed on a net carrying value basis:

31 December	**2019 £m**	2018 £m
Short-term forward market purchases and sales of gas and electricity:		
UK and Europe	**249**	(236)
North America	**(165)**	65
Other derivative contracts	**(628)**	84
Net total	**(544)**	(87)

Net (losses)/gains on derivative financial instruments due to re-measurement	**2019**		2018	
31 December	**Income Statement £m**	**Equity £m**	Income Statement £m	Equity £m
Financial assets and liabilities measured at fair value:				
Derivative financial instruments – held for trading	**(551)**	**–**	(144)	–
Derivative financial instruments in hedge accounting relationships	**55**	**(53)**	(60)	37
	(496)	**(53)**	(204)	37

20. Trade and other payables, and contract liabilities

Trade and other payables include accruals and are principally amounts we owe to our suppliers. Financial deferred income represents monies received from customers in advance of the delivery of goods or services that may be returned to the customer if future delivery does not occur. For example, downstream customers with a credit balance may request repayment of the outstanding amount in cash, rather than taking delivery of commodity. By contrast, contract liabilities arise when the Group receives consideration from a customer in advance of performance, and has a non-financial liability to deliver future goods or services in return.

	2019		2018	
31 December	**Current £m**	**Non-current £m**	Current £m	Non-current £m
Financial liabilities:				
Trade payables	**(571)**	**(1)**	(578)	–
Deferred income	**(328)**	**–**	(287)	–
Capital payables	**(181)**	**(96)**	(166)	(124)
Cash collateral received (note 24)	**(35)**	**–**	(157)	–
Other payables	**(327)**	**(36)**	(403)	(21)
Accruals:				
Commodity costs	**(1,866)**	**–**	(2,475)	–
Transportation, distribution and metering costs	**(401)**	**–**	(384)	–
Operating and other accruals	**(783)**	**–**	(825)	–
	(3,050)	**–**	(3,684)	–
	(4,492)	**(133)**	(5,275)	(145)
Non-financial liabilities:				
Other payables and accruals	**(850)**	**(1)**	(774)	(14)
Contract liabilities	**(55)**	**(15)**	(54)	(22)
Deferred income	**(136)**	**(3)**	(104)	(10)
	(5,533)	**(152)**	(6,207)	(191)

Maturity profile of financial liabilities within current trade and other payables 31 December	**2019 £m**	2018 £m
Less than 90 days	**(4,245)**	(5,005)
90 to 182 days	**(140)**	(165)
183 to 365 days	**(107)**	(105)
	(4,492)	(5,275)

21. Provisions for other liabilities and charges

Provisions are recognised when an obligation exists that can be reliably measured, but where there is uncertainty over the timing and/or amount of the payment. The main provisions relate to decommissioning costs for upstream assets we own, or have owned, which require restoration or remediation. Further provisions relate to sale and purchase contracts we have entered into that are now onerous, restructuring costs, and legal and regulatory matters.

Current	1 January 2019 £m	Acquisitions and disposals £m	Charged in the year £m	Notional interest £m	Unused and reversed in the year £m	Utilised (i) £m	Transfers (ii) £m	Exchange adjustments £m	31 December 2019 £m
Restructuring costs	(22)	–	(225)	–	16	66	111	(2)	**(56)**
Decommissioning costs (iii)	(194)	–	(2)	–	–	156	(113)	1	**(152)**
Sale/purchase contract loss provision (iv)	(40)	–	(14)	–	22	21	(18)	1	**(28)**
Other (v)	(49)	–	(158)	–	2	162	(5)	–	**(48)**
	(305)	**–**	**(399)**	**–**	**40**	**405**	**(25)**	**–**	**(284)**

Non-current	1 January 2019 £m	Acquisitions and disposals (vi) £m	Charged in the year £m	Notional interest £m	Unused and reversed in the year £m	Revisions and additions £m	Transfers (ii) £m	Exchange adjustments £m	31 December 2019 £m
Restructuring costs	(7)	–	(1)	–	–	–	–	–	**(8)**
Decommissioning costs (iii)	(2,401)	45	(11)	(31)	45	127	113	42	**(2,071)**
Sale/purchase contract loss provision (iv)	(75)	–	–	–	18	–	18	3	**(36)**
Other (v)	(57)	–	(6)	–	–	(1)	5	(1)	**(60)**
	(2,540)	**45**	**(18)**	**(31)**	**63**	**126**	**136**	**44**	**(2,175)**

Included within the above liabilities are the following financial liabilities:

Financial liabilities	**2019**		2018	
31 December	**Current £m**	**Non-current £m**	Current £m	Non-current £m
Restructuring costs	**(56)**	**(8)**	(22)	(7)
Provisions other than restructuring costs	**(71)**	**(86)**	(85)	(129)
	(127)	**(94)**	(107)	(136)

(i) Utilisation of provisions includes £88 million (2018: £145 million) of payments relating to exceptional charges. The remainder of the total £298 million (2018: £248 million) of payments relating to exceptional charges shown in the Group Cash Flow Statement was paid directly during the year, without first giving rise to a provision.
(ii) Includes transfers to/from other balance sheet accounts including post-retirement benefit obligations.
(iii) Provision has been made for the estimated net present cost of decommissioning gas production facilities at the end of their useful lives. The estimate has been based on 2P reserves, price levels and technology at the balance sheet date. The payment dates of decommissioning costs are dependent on the lives of the facilities, but utilisation of the provision is expected to occur until the 2040s.
(iv) The sale/purchase contract loss provision relates mainly to North America Business wind farm power purchase agreements. The majority of the provision is expected to be utilised by 2021.
(v) Other provisions have been made for dilapidations, insurance, legal and various other claims.
(vi) Includes amounts transferred to disposal groups held for sale.

22. Post-retirement benefits

The Group manages a number of final salary and career average defined benefit pension schemes. It also has defined contribution schemes. The majority of these schemes are in the UK.

(a) Summary of main post-retirement benefit schemes

Name of scheme	Type of benefit	Status	Country	Number of active members as at 31 December 2019	Total membership as at 31 December 2019
Centrica Engineers	Defined benefit final salary pension	Closed to new members in 2006	UK	**2,699**	**8,503**
Pension Scheme	Defined benefit career average pension	Open to service engineers only	UK	**3,223**	**5,579**
Centrica Pension Plan	Defined benefit final salary pension	Closed to new members in 2003	UK	**2,219**	**8,506**
Centrica Pension Scheme	Defined benefit final salary pension	Closed to new members in 2003	UK	**2**	**10,421**
	Defined benefit career average pension	Closed to new members in 2008	UK	**1,051**	**4,103**
	Defined contribution pension	Open to new members	UK	**12,873**	**19,204**
Bord Gáis Energy Company Defined Benefit Pension Scheme	Defined benefit final salary pension	Closed to new members in 2014	Republic of Ireland	**126**	**173**
Bord Gáis Energy Company Defined Contribution Pension Plan	Defined contribution pension	Open to new members	Republic of Ireland	**246**	**316**
Direct Energy Marketing Limited Pension Plan	Defined benefit final salary pension	Closed to new members in 2004	Canada	**6**	**361**
Direct Energy Marketing Limited	Post-retirement benefits	Closed to new members in 2012	Canada	**7**	**270**

The Centrica Engineers Pension Scheme (CEPS), Centrica Pension Plan (CPP) and Centrica Pension Scheme (CPS) form the significant majority of the Group's defined benefit obligation and are referred to below as the 'Registered Pension Schemes'. The other schemes are individually, and in aggregate, immaterial.

Independent valuations

The Registered Pension Schemes are subject to independent valuations at least every three years, on the basis of which the qualified actuary certifies the rate of employer contributions, which together with the specified contributions payable by the employees and proceeds from the schemes' assets, are expected to be sufficient to fund the benefits payable under the schemes.

The latest full actuarial valuations were carried out at the following dates: the Registered Pension Schemes at 31 March 2018, the Bord Gáis Energy Company Defined Benefit Pension Scheme at 1 January 2017 and the Direct Energy Marketing Limited Pension Plan at 1 January 2018. These have been updated to 31 December 2019 for the purpose of meeting the requirements of IAS 19. Investments held in all schemes have been valued for this purpose at market value.

Governance

The Registered Pension Schemes are managed by trustee companies whose boards consist of both company-nominated and member-nominated Directors. Each scheme holds units in the Centrica Combined Common Investment Fund (CCCIF), which holds the majority of the combined assets of the Registered Pension Schemes. The board of the CCCIF is currently comprised of nine directors: three independent directors, three directors appointed by Centrica plc (including the Chairman) and one director appointed by each of the three Registered Pension Schemes.

Under the terms of the Pensions Act 2004, Centrica plc and each trustee board must agree the funding rate for its defined benefit pension scheme and a recovery plan to fund any deficit against the scheme-specific statutory funding objective. This approach was first adopted for the triennial valuations completed at 31 March 2006, and has been reflected in subsequent valuations, including the 31 March 2018 valuation.

22. Post-retirement benefits

(b) Risks

The Registered Pension Schemes expose the Group to the following risks:

Asset volatility

The pension liabilities are calculated using a discount rate set with reference to AA corporate bond yields. If the growth in plan assets is lower than this, this will create an actuarial loss within other equity. The CCCIF is responsible for managing the assets of each scheme in line with the risk tolerances (which were updated in 2019) that have been set by the trustees of the schemes, and invests in a diversified portfolio of assets. The schemes are relatively young in nature (the schemes opened in 1997 on the formation of Centrica plc on demerger from BG plc (formerly British Gas plc), and only took on past service liabilities in respect of active employees. The trustees have significantly reduced their risk tolerance in 2019, increasing inflation and interest rate hedges from one third to two thirds. This has resulted in a significant reduction of return-seeking assets within the portfolio, as well as a higher weighting to assets that better manage downside risk. This can be seen in the change of asset portfolio mix in section (f) of this note.

Interest rate

A decrease in the bond interest rate will increase the net present value of the pension liabilities. The relative immaturity of the schemes means that the duration of the liabilities is longer than average for typical UK pension schemes, resulting in a relatively higher exposure to interest rate risk. The trustees took action to materially reduce this risk in 2019.

Inflation

Pensions in deferment, pensions in payment and pensions accrued under the career average schemes increase in line with the Retail Prices Index (RPI) and the Consumer Prices Index (CPI). Therefore, scheme liabilities will increase if inflation is higher than assumed, although in some cases caps are in place to limit the impact of significant movements in inflation. Furthermore, a pension increase exchange (PIE) option implemented in 2015 is available to future retirees, which gives the choice to receive a higher initial pension in return for giving up certain future increases linked to RPI, again limiting the impact of significant movements in inflation.

Longevity

The majority of the schemes' obligations are to provide benefits for the life of scheme members and their surviving spouses; therefore increases in life expectancy will result in an increase in the pension liabilities. The relative immaturity of the schemes means that there is comparatively little observable mortality data to assess the rates of mortality experienced by the schemes, and means that the schemes' liabilities will be paid over a long period of time, making it particularly difficult to predict the life expectancy of the current membership. Furthermore, pension payments are subject to inflationary increases, resulting in a higher sensitivity to changes in life expectancy.

Salary

Pension liabilities are calculated by reference to the future salaries of active members, and hence salary rises in excess of assumed increases will increase scheme liabilities. During 2011, changes were introduced to the final salary sections of CEPS and CPP such that annual increases in pensionable pay are capped to 2%, resulting in a reduction in salary risk. During 2016, a salary cap on pensionable pay for the CPS career average and CPP schemes was implemented, and in 2019 a similar change took place for CEPS. All of the 2011, 2016 and 2019 changes result in a reduction in salary risk.

Foreign exchange

Certain assets held by the CCCIF are denominated in foreign currencies, and hence their values are subject to exchange rate risk.

The CCCIF has long-term hedging policies in place to manage interest rate, inflation and foreign exchange risks.

The table below analyses the total liabilities of the Registered Pension Schemes, calculated in accordance with accounting principles, by type of liability, as at 31 December 2019.

Total liabilities of the Registered Pension Schemes 31 December	**2019** **%**
Actives – final salary – capped	**18**
Actives – final salary – uncapped and crystallised benefits	**4**
Actives – career average	**6**
Deferred pensioners	**33**
Pensioners	**39**
	100

Financial statements

22. Post-retirement benefits

(c) Accounting assumptions

The accounting assumptions for the Registered Pension Schemes are given below:

Major assumptions used for the actuarial valuation 31 December	**2019** **%**	2018 %
Rate of increase in employee earnings:		
Subject to 2% cap	**1.6**	1.7
Other not subject to cap	**2.1**	2.2
Rate of increase in pensions in payment	**2.9**	3.1
Rate of increase in deferred pensions:		
In line with CPI capped at 2.5%	**1.9**	2.0
In line with RPI	**2.9**	3.1
Discount rate	**2.2**	3.0

The assumptions relating to longevity underlying the pension liabilities at the balance sheet date have been based on a combination of standard actuarial mortality tables, scheme experience and other relevant data, and include an allowance for future improvements in mortality. The longevity assumptions for members in normal health are as follows:

Life expectancy at age 65 for a member	**2019**		2018	
31 December	**Male** **Years**	**Female** **Years**	Male Years	Female Years
Currently aged 65	**22.6**	**24.1**	22.9	24.5
Currently aged 45	**23.9**	**25.6**	24.3	26.0

The other demographic assumptions have been set having regard to the latest trends in scheme experience and other relevant data. The assumptions are reviewed and updated as necessary as part of the periodic actuarial valuations of the pension schemes.

For the Registered Pension Schemes, marginal adjustments to the assumptions used to calculate the pension liability, or significant swings in bond yields or stock markets, can have a large impact in absolute terms on the net assets of the Group. Reasonably possible changes as at 31 December to one of the actuarial assumptions would have affected the scheme liabilities as set out below:

Impact of changing material assumptions	**2019**		2018	
31 December	**Increase/ decrease in assumption**	**Indicative effect on scheme liabilities** **%**	Increase/ decrease in assumption	Indicative effect on scheme liabilities %
Rate of increase in employee earnings subject to 2% cap	**0.25%**	**+/-0**	0.25%	+/-0
Rate of increase in pensions in payment and deferred pensions	**0.25%**	**+/-5**	0.25%	+/-5
Discount rate	**0.25%**	**-/+6**	0.25%	-/+6
Inflation assumption	**0.25%**	**+/-5**	0.25%	+/-5
Longevity assumption	**1 year**	**+/-3**	1 year	+/-3

The indicative effects on scheme liabilities have been calculated by changing each assumption in isolation and assessing the impact on the liabilities. For the reasonably possible change in the inflation assumption, it has been assumed that a change to the inflation assumption would lead to corresponding changes in the assumed rates of increase in uncapped pensionable pay, pensions in payment and deferred pensions.

The remaining disclosures in this note cover all of the Group's defined benefit schemes.

(d) Amounts included in the Group Balance Sheet

31 December	**2019** **£m**	2018 £m
Fair value of plan assets	**8,999**	8,487
Present value of defined benefit obligation	**(9,162)**	(8,566)
Net liability recognised in the Group Balance Sheet	**(163)**	(79)
Pension liability presented in the Group Balance Sheet as:		
Retirement benefit assets	**56**	223
Retirement benefit liabilities	**(219)**	(302)

The Trust Deed and Rules for the Registered Pension Schemes provide the Group with a right to a refund of surplus assets assuming the full settlement of scheme liabilities. No asset ceiling restrictions have been applied in the consolidated Financial Statements.

22. Post-retirement benefits

(e) Movements in the year

	2019		2018	
	Pension liabilities £m	**Pension assets £m**	Pension liabilities £m	Pension assets £m
1 January	**(8,566)**	**8,487**	(9,337)	8,451
Items included in the Group Income Statement:				
Current service cost	**(87)**	**–**	(120)	–
Contributions by employer in respect of employee salary sacrifice arrangements (i)	**(29)**	**–**	(29)	–
Total current service cost	**(116)**	**–**	(149)	–
Past service credit/(cost) (ii)	**260**	**–**	(41)	–
Interest (expense)/income	**(242)**	**241**	(239)	218
Items included in the Group Statement of Comprehensive Income:				
Returns on plan assets, excluding interest income	**–**	**204**	–	(145)
Actuarial gain from changes to demographic assumptions	**229**	**–**	42	–
Actuarial (loss)/gain from changes in financial assumptions	**(1,286)**	**–**	912	–
Actuarial gain/(loss) from experience adjustments	**388**	**–**	(17)	–
Exchange adjustments	**–**	**–**	1	–
Items included in the Group Cash Flow Statement:				
Employer contributions	**–**	**320**	–	216
Contributions by employer in respect of employee salary sacrifice arrangements	**–**	**29**	–	29
Other movements:				
Benefits paid from schemes	**285**	**(285)**	277	(277)
Other	**(3)**	**3**	6	(5)
Transfers from provisions for other liabilities and charges	**(111)**	**–**	(21)	–
31 December	**(9,162)**	**8,999**	(8,566)	8,487

(i) A salary sacrifice arrangement was introduced on 1 April 2013 for pension scheme members. The contributions paid via the salary sacrifice arrangement have been treated as employer contributions and included within the current service cost, with a corresponding reduction in salary costs.

(ii) A £252 million past service credit was recognised in the year in relation to a rule amendment during December 2019 to the UK defined benefit pension scheme arrangements to offer members an option to level up their ongoing pension, if they retire before the statutory retirement age, and an £8 million past service credit was recognised in relation to changes made to future service benefits from June 2019. A £41 million past service cost was recognised in 2018 as a result of GMP equalisation.

In addition to current service cost on the Group's defined benefit pension schemes, the Group also charged £75 million (2018: £58 million) to operating profit in respect of defined contribution pension schemes, including a one-off defined contribution payment of £8 million, to facilitate scheme changes, part of restructuring costs in note 7. This included contributions of £20 million (2018: £17 million) paid via a salary sacrifice arrangement.

(f) Pension scheme assets

The market values of plan assets were:

	2019			2018		
31 December	**Quoted £m**	**Unquoted £m**	**Total £m**	Quoted £m	Unquoted £m	Total £m
Equities	**188**	**346**	**534**	1,991	351	2,342
Corporate bonds	**2,646**	**–**	**2,646**	1,118	–	1,118
High-yield debt	**1,015**	**1,288**	**2,303**	595	1,360	1,955
Liability matching assets	**1,430**	**1,075**	**2,505**	1,581	994	2,575
Property	**–**	**316**	**316**	–	395	395
Cash pending investment	**695**	**–**	**695**	102	–	102
	5,974	**3,025**	**8,999**	5,387	3,100	8,487

Unquoted assets are valued by the fund managers with reference to the expected cash flows associated with the assets. These valuations are reviewed annually as part of the CCCIF audit. Included within equities are £nil of ordinary shares of Centrica plc (2018: £1 million) via pooled funds that include a benchmark allocation to UK equities. Included within corporate bonds are £nil (2018: £nil) of bonds issued by Centrica plc held within pooled funds over which the CCCIF has no ability to direct investment decisions. Apart from the investment in the Scottish Limited Partnerships which form part of the asset-backed contribution arrangements described in section (g) of this note, no direct investments are made in securities issued by Centrica plc or any of its subsidiaries or property leased to or owned by Centrica plc or any of its subsidiaries.

22. Post-retirement benefits

Included within the Group Balance Sheet within non-current securities are £103 million (2018: £91 million) of investments, held in trust on behalf of the Group, as security in respect of the Centrica Unfunded Pension Scheme. Of the pension scheme liabilities above, £62 million (2018: £63 million) relate to this scheme. More information on the Centrica Unfunded Pension Scheme is included in the Remuneration Report on pages 82 to 93.

(g) Pension scheme contributions

The Group estimates that it will pay £67 million of ordinary employer contributions during 2020 for its defined benefit schemes, at an average rate of 19% of pensionable pay, together with £32 million of contributions paid via a salary sacrifice arrangement. At 31 March 2018 (the date of the latest full agreed actuarial valuations) the weighted average duration of the liabilities of the Registered Pension Schemes was 22 years.

For the Registered Pension Schemes the latest actuarial valuation as at 31 March 2018 has been finalised with the Pension Trustees. The technical provisions deficit was £1,402 million. The Group has committed to additional annual cash contributions to fund this pension deficit. The overall deficit contributions, including the previously disclosed asset-backed contribution arrangements, totalled £223 million in 2019, and will amount to £175 million per annum from 2020 to 2025, with a balancing payment of £93 million in 2026. The Group has paid £12 million of pension strains in 2019. For redundancies between 1 July 2019 and 30 June 2021, a deferral arrangement is in place, up to a limit of £240 million. As a result, there has also been a matching increase, to £1,235 million, of the security package over certain of the Group's assets, enforceable in the unlikely event the Group is unable to meet its obligations.

On a pure roll-forward basis, from 31 March 2018, using the same methodology and consequent assumptions, the technical provisions deficit would be c.£1.6 billion at the reporting date. Note that the next triennial review is scheduled for 31 March 2021, and the valuation methodology and assumptions may differ from those previously used.

23. Commitments and contingencies

(a) Commitments

Commitments are not held on the Group's Balance Sheet as these are executory arrangements, and relate to amounts that we are contractually required to pay in the future as long as the other party meets its contractual obligations.

The Group's commitments in relation to commodity purchase contracts disclosed below are stated net of amounts receivable under commodity sales contracts where there is a right of offset with the counterparty, and are based on the expected minimum quantities of gas and other commodities that the Group is contracted to buy at estimated future prices.

The commitments in this note differ in scope and in basis from the maturity analysis of energy derivatives disclosed in note S3, as only certain procurement and sales contracts are within the scope of IFRS 9 and included in note S3 and the volumes used in calculating the maturity analysis in note S3 are estimated using valuation techniques, rather than being based on minimum contractual quantities.

The Group's 20-year agreement with Cheniere to purchase 89bcf per annum of LNG volumes for export from the Sabine Pass liquefaction plant in the US commits the Group to capacity payments of £3.9 billion (included in 'LNG capacity' below) between 2019 and 2039. It also allows the Group to make up to £6.3 billion of commodity purchases based on market gas prices and foreign exchange rates as at the balance sheet date. The first commercial delivery was September 2019.

During 2019, the Group signed a 20-year agreement to purchase LNG volumes from Mozambique LNG1 Company. The commercial start date is 2025 and under this agreement the Group anticipates making £8.2 billion of commodity purchases, based on a mixture of market gas and oil prices.

23. Commitments and contingencies

31 December	2019 £m	2018 £m
Commitments in relation to the acquisition of property, plant and equipment:	**299**	392
Commitments in relation to the acquisition of intangible assets:		
Renewable obligation certificates	**3,756**	4,326
Other intangible assets	**762**	592
Other commitments:		
Commodity purchase contracts	**46,411**	48,055
LNG capacity	**4,282**	4,371
Transportation capacity	**1,117**	1,013
Other long-term commitments (i)	**747**	669

(i) Other long-term commitments include amounts in respect of executory contracts, power station tolling fees and the smart meter roll-out programme.

The maturity analysis for commodity purchase contract commitments at 31 December is given below:

	Commodity purchase contract commitments	
31 December	2019 £billion	2018 £billion
<1 year	**11.3**	13.9
1–2 years	**6.2**	7.9
2–3 years	**4.1**	5.2
3–4 years	**3.7**	4.0
4–5 years	**3.2**	4.0
>5 years	**17.9**	13.1
	46.4	48.1

The Group enters into lease arrangements for assets including property, vehicles and assets used within the exploration and production business. Refer to note 1 for details.

The carrying amount, additions and depreciation charge associated with right-of-use assets is disclosed in note 13 and the interest expense arising on the Group's lease liability is disclosed in note 8. The total cash outflow in the year for lease arrangements was £240 million and the maturity analysis of cash flows associated with the Group's lease liability at the reporting date is shown in note S3.

The table below provides further information on amounts not included in the lease liability and charged to the Group Income Statement during the year.

Year ended 31 December	2019 £m	2018 £m
Expense related to short-term leases	**47**	N/A
Expense related to variable lease payments (i)	**23**	59

(i) 2018 represents contingent rents paid.

During the year, the Group's expense related to short-term lease commitments predominantly related to the hire of LNG vessels and exploration and production drilling rigs. The commitment at the balance sheet date also relates to assets of a similar nature. The Group does not have any material sub-lease or sale and leaseback arrangements. The Group does not have any material arrangements in which it acts as a lessor.

23. Commitments and contingencies

(b) Guarantees and indemnities

This section discloses any guarantees and indemnities that the Group has given, where we may have to provide security in the future against existing and future obligations that will remain for a specific period.

In connection with the Group's energy trading, transportation and upstream activities, certain Group companies have entered into contracts under which they may be required to prepay, provide credit support or provide other collateral in the event of a significant deterioration in creditworthiness. The extent of credit support is contingent upon the balance owing to the third party at the point of deterioration.

As at 31 December 2019, £651 million (2018: £612 million) of letters of credit and on-demand payment bonds have been issued in respect of decommissioning obligations included in the Group Balance Sheet.

(c) Contingent liabilities

The Group has no material contingent liabilities.

24. Sources of finance

(a) Capital structure

The Group seeks to maintain an efficient capital structure with a balance of net debt and equity as shown in the table below:

31 December	**2019 £m**	2018 £m
Net debt	**3,181**	2,656
Shareholders' equity	**1,212**	3,145
Capital	**4,393**	5,801

Debt levels are restricted to limit the risk of financial distress and, in particular, to maintain a strong credit profile. The Group's credit standing is important for several reasons: to maintain a low cost of debt, limit collateral requirements in energy trading, hedging and decommissioning security arrangements, and to ensure the Group is an attractive counterparty to energy producers and long-term customers.

The Group monitors its current and projected capital position on a regular basis, considering a medium-term view of at least three years, and different stress case scenarios, including the impact of changes in the Group's credit ratings and significant movements in commodity prices. A number of financial ratios are monitored, including those used by the credit rating agencies.

The level of debt that can be raised by the Group is restricted by the Company's Articles of Association. Borrowings is limited to the higher of £10 billion and a gearing ratio of three times adjusted capital and reserves. The Group funds its long-term debt requirements through issuing bonds in the capital markets and taking bank debt. Short-term debt requirements are met primarily through commercial paper or short-term bank borrowings. The Group maintains substantial committed facilities and uses these to provide liquidity for general corporate purposes, including short-term business requirements and back-up for commercial paper.

British Gas Insurance Limited (BGIL) is required under PRA regulations to hold a minimum capital amount and has complied with this requirement in 2019 (and 2018). BGIL's capital management policy and plan is subject to review and approval by the BGIL board. Reporting processes provide relevant and timely capital information to management and the board. A medium-term capital management plan forms part of BGIL's planning and forecasting process, embedded into approved timelines, management reviews and board approvals.

(b) Liquidity risk management and going concern

The Group has a number of treasury and risk policies to monitor and manage liquidity risk. Cash forecasts identifying the Group's liquidity requirements are produced regularly and are stress-tested for different scenarios, including, but not limited to, reasonably possible increases or decreases in commodity prices and the potential cash implications of a credit rating downgrade. The Group seeks to ensure that sufficient financial headroom exists for at least a 12-month period to safeguard the Group's ability to continue as a going concern. It is the Group's policy to maintain committed facilities and/or available surplus cash resources of at least £1,200 million, raise at least 75% of its gross debt (excluding non-recourse debt) in the capital market and to maintain an average term to maturity in the recourse long-term debt portfolio greater than five years.

At 31 December 2019, the Group had undrawn committed credit facilities of £3,072 million (2018: £3,879 million) and £1,167 million (2018: £1,079 million) of unrestricted cash and cash equivalents. 95% (2018: 93%) of the Group's gross debt has been raised in the long-term debt market and the average term to maturity of the long-term debt portfolio was 10.6 years (2018: 11.1 years).

The Group's liquidity is impacted by the cash posted or received under margin and collateral agreements. The terms and conditions of these agreements depend on the counterparty and the specific details of the transaction. Cash is generally returned to the Group or by the Group within two days of trade settlement. Refer to section (c) of this note for the movement in cash posted or received as collateral.

The level of undrawn committed bank facilities and available cash resources has enabled the Directors to conclude that the Group has sufficient headroom to continue as a going concern. The statement of going concern is included in the Governance section – Other Statutory Information, on page 102.

24. Sources of finance

(c) Net debt summary

Net debt predominantly includes capital market borrowings offset by cash, cash posted or received as collateral, securities and certain hedging financial instruments used to manage interest rate and foreign exchange movements on borrowings.

Presented in the derivatives and current and non-current borrowings, leases and interest accruals columns shown below are the assets and liabilities that give rise to financing cash flows.

				Other assets and liabilities				
	Current and non-current borrowings, leases and interest accruals £m	Derivatives £m	Gross debt £m	Cash and cash equivalents, net of bank overdrafts (i) (ii) £m	Collateral posted/ (received) £m	Current and non-current securities (iii) £m	Sub-lease assets £m	Net debt £m
1 January 2018	(6,171)	266	(5,905)	2,737	336	236	–	(2,596)
Net cash outflow from purchase of securities	–	–	–	(76)	–	76	–	–
Cash outflow from payment of capital element of finance leases	56	–	56	(56)	–	–	–	–
Cash outflow from repayment of borrowings	1,516	(38)	1,478	(1,617)	–	–	–	(139)
Remaining cash inflow and movement in cash posted/received under margin and collateral agreements	–	–	–	441	(57)	–	–	384
Revaluation	39	25	64	–	–	(6)	–	58
Financing interest paid	288	(20)	268	(305)	–	–	–	(37)
Increase in interest payable and amortisation of borrowings	(262)	–	(262)	–	–	–	–	(262)
New finance lease agreements	(36)	–	(36)	–	–	–	–	(36)
Exchange adjustments	(44)	–	(44)	4	11	1	–	(28)
31 December 2018	(4,614)	233	(4,381)	1,128	290	307	–	(2,656)
Incremental lease liability recognised on transition to IFRS 16 (iv)	(402)	–	**(402)**	–	–	–	–	**(402)**
Recognition of sub-lease asset on transition to IFRS 16 (iv)	–	–	**–**	–	–	–	8	**8**
1 January 2019 post-adoption of IFRS 16	(5,016)	233	**(4,783)**	1,128	290	307	8	**(3,050)**
Net cash inflow from sale and purchase of securities	–	–	**–**	50	–	(51)	–	**(1)**
Cash outflow from payment of capital element of leases	155	–	**155**	(155)	–	–	–	**–**
Cash outflow from repayment of borrowings	86	–	**86**	(86)	–	–	–	**–**
Remaining cash inflow and movement in cash posted/received under margin and collateral agreements	–	–	**–**	104	46	–	(3)	**147**
Revaluation	(57)	11	**(46)**	–	–	6	–	**(40)**
Financing interest paid	220	(10)	**210**	(243)	–	–	–	**(33)**
Increase in interest payable and amortisation of borrowings	(229)	–	**(229)**	–	–	–	–	**(229)**
New lease agreements and re-measurement of existing lease liabilities	(47)	–	**(47)**	–	–	–	–	**(47)**
Business disposals and asset purchases	3	–	**3**	–	–	(6)	–	**(3)**
Exchange adjustments	90	–	**90**	(4)	(10)	(1)	–	**75**
31 December 2019	**(4,795)**	**234**	**(4,561)**	**794**	**326**	**255**	**5**	**(3,181)**

(i) Cash and cash equivalents includes £175 million (2018: £189 million) of restricted cash. This includes cash totalling £48 million (2018: £100 million) within the Spirit Energy business that is not restricted by regulation but is managed by its own treasury department.
(ii) Cash and cash equivalents are net of £548 million bank overdrafts (2018: £140 million).
(iii) Securities balances include £124 million (2018: £126 million) of index-linked gilts which the Group uses for short-term liquidity management purposes. Securities balances also include £77 million (2018: £68 million) debt instruments and £54 million (2018: £45 million) equity instruments, all measured at fair value, as described in note 1. Securities include no deposits with maturities greater than three months (2018: £68 million).
(iv) Following the adoption of IFRS 16 on 1 January 2019, the Group has recognised incremental lease liabilities and sub-lease assets within net debt. See note 1 for further details.

24. Sources of finance

Collateral is posted or received to support energy trading and procurement activities. It is posted when contracts with marginable counterparties are out of the money and received when contracts are in the money. These positions reverse when contracts are settled and the collateral is returned. Collateral received or posted is included in the following lines of the Group Balance Sheet:

31 December	2019 £m	2018 £m
Collateral posted/(received) included within:		
Trade and other payables	**(35)**	(157)
Trade and other receivables	**155**	446
Net derivative liabilities	**199**	1
Inventories	**7**	–
Net collateral posted	**326**	290

(d) Borrowings, leases and interest accruals summary

			2019			2018		
31 December	Coupon rate %	Principal m	Current £m	Non-current £m	Total £m	Current £m	Non-current £m	Total £m
Bank overdrafts			**(548)**	**–**	**(548)**	(140)	–	(140)
Bank loans (> 5 year maturity)			**–**	**(144)**	**(144)**	–	(149)	(149)
Bonds (by maturity date):								
1 February 2019	3.213	€100	**–**	**–**	**–**	(90)	–	(90)
25 September 2020	Floating	US$80	**(60)**	**–**	**(60)**	–	(63)	(63)
22 February 2022	3.680	HK$450	**–**	**(44)**	**(44)**	–	(45)	(45)
10 March 2022 (i)	6.375	£246	**–**	**(254)**	**(254)**	–	(255)	(255)
16 October 2023 (i)	4.000	US$302	**–**	**(234)**	**(234)**	–	(237)	(237)
4 September 2026 (i)	6.400	£52	**–**	**(57)**	**(57)**	–	(56)	(56)
16 April 2027	5.900	US$70	**–**	**(52)**	**(52)**	–	(55)	(55)
13 March 2029 (i)	4.375	£552	**–**	**(574)**	**(574)**	–	(553)	(553)
5 January 2032 (ii)	Zero	€50	**–**	**(59)**	**(59)**	–	(60)	(60)
19 September 2033 (i)	7.000	£770	**–**	**(790)**	**(790)**	–	(769)	(769)
16 October 2043	5.375	US$367	**–**	**(272)**	**(272)**	–	(283)	(283)
12 September 2044	4.250	£550	**–**	**(538)**	**(538)**	–	(537)	(537)
25 September 2045	5.250	US$50	**–**	**(37)**	**(37)**	–	(38)	(38)
10 April 2075 (i) (iii)	5.250	£450	**–**	**(460)**	**(460)**	–	(449)	(449)
10 April 2076 (iv)	3.000	€750	**–**	**(634)**	**(634)**	–	(672)	(672)
			(60)	**(4,005)**	**(4,065)**	(90)	(4,072)	(4,162)
Obligations under lease arrangements			**(166)**	**(337)**	**(503)**	(59)	(159)	(218)
Interest accruals			**(83)**	**–**	**(83)**	(85)	–	(85)
			(857)	**(4,486)**	**(5,343)**	(374)	(4,380)	(4,754)

(i) Bonds or portions of bonds maturing in 2022, 2023, 2026, 2029, 2033 and 2075 have been designated in a fair value hedge relationship. See note S5 for details of hedge relationships.
(ii) €50 million of zero coupon notes have an accrual yield of 4.200%, which will result in a €114 million repayment on maturity.
(iii) The Group has the right to repay at par on 10 April 2025 and every interest payment date thereafter.
(iv) The Group has the right to repay at par on 10 April 2021 and every interest payment date thereafter.

25. Share capital

Ordinary share capital represents the total number of shares issued which are publicly traded. We also disclose the number of own and treasury shares the Company holds, which the Company has bought itself, principally as part of the share repurchase programme.

Allotted and fully paid share capital of the Company 31 December	**2019** **£m**	2018 £m
5,829,597,044 ordinary shares of $6^{14}/_{81}$ pence each (2018: 5,727,912,880)	**360**	354

During the year 102 million new ordinary shares were issued at an average price of 94.4 pence for the scrip dividends, total value of £96 million.

The closing price of one Centrica ordinary share on 31 December 2019 was 89.3 pence (2018: 134.9 pence). Centrica employee share ownership trusts purchase Centrica ordinary shares from the open market and receive treasury shares to satisfy future obligations of certain employee share schemes. The movements in own and treasury shares during the year are shown below:

	Own shares (i)		Treasury shares (i) (ii)	
	2019 **million** **shares**	2018 million shares	**2019** **million** **shares**	2018 million shares
1 January	**5.8**	5.3	**31.3**	42.1
Shares purchased	**1.6**	8.2	**–**	–
Treasury shares placed into trust	**1.0**	1.1	**(1.0)**	(1.1)
Shares released to employees on vesting (ii)	**(4.7)**	(8.8)	**(20.1)**	(9.7)
31 December (i)	**3.7**	5.8	**10.2**	31.3

(i) The closing balance in the treasury and own share reserve of own shares was £5 million (2018: £10 million) and treasury shares was £32 million (2018: £97 million).
(ii) Includes shares purchased by employees under share purchase schemes for a value of £1 million.

26. Events after the balance sheet date

The Group updates disclosures in light of new information being received, or a significant event occurring, in the period between 31 December 2019 and the date of this report.

Dividends

The Directors propose a final dividend of 3.50 pence per ordinary share (totalling £204 million) for the year ended 31 December 2019. The dividend will be submitted for formal approval at the Annual General Meeting to be held on 11 May 2020 and, subject to approval, will be paid on 22 June 2020 to those shareholders registered on 11 May 2020.

King’s Lynn power station

On 23 December 2019, the Group agreed to sell its 382MW King’s Lynn CCGT power station to RWE Generation for headline consideration of £105 million, adjusted for final working capital, based on a valuation date of 31 December 2019. The deal completed on 12 February 2020.

Supplementary information

Supplementary information includes additional information and disclosures we are required to make by accounting standards or regulation.

S1. General information

Centrica plc (the 'Company') is a public company limited by shares, domiciled and incorporated in the UK, and registered in England and Wales. The address of the registered office is Millstream, Maidenhead Road, Windsor, Berkshire, SL4 5GD. The Company, together with its subsidiaries comprise the 'Group'. The nature of the Group's operations and principal activities are set out in note 4(a) and on pages 2 to 54.

The consolidated Financial Statements of Centrica plc are presented in pounds sterling. Operations and transactions conducted in currencies other than pounds sterling are included in the consolidated Financial Statements in accordance with the foreign currencies accounting policy set out in note S2.

S2. Summary of significant accounting policies

This section sets out the Group's significant accounting policies in addition to the critical accounting policies applied in the preparation of these consolidated Financial Statements. Unless otherwise stated, these accounting policies have been consistently applied to the years presented.

Basis of consolidation

The Group Financial Statements consolidate the Financial Statements of the Company and entities controlled by the Company. Subsidiaries are all entities (including structured entities) over which the Group has control. Control is exercised over an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are fully consolidated from the date on which control is transferred to the Group. They are deconsolidated from the date that control ceases. Transactions with non-controlling interests that relate to their ownership interests and do not result in a loss of control are accounted for as equity transactions.

The results of subsidiaries acquired or disposed of during the year are consolidated from the effective date of acquisition (at which point the Group gains control over a business as defined by IFRS 3, and applies the acquisition method to account for the transaction as a business combination) or up to the effective date of disposal, as appropriate. Where necessary, adjustments are made to the Financial Statements of subsidiaries, associates and joint ventures to align the accounting policies with those used by the Group.

When the Group ceases to have control, any retained interest in the entity is re-measured to its fair value with the change in carrying amount recognised in profit or loss. This fair value becomes the initial carrying amount for the purposes of subsequently accounting for the retained interest as a joint venture, associate or financial asset.

Segmental reporting

The Group's operating segments are reported in a manner consistent with the internal reporting provided to and regularly reviewed by the Group's Executive Committee (which is the Group's Chief Operating Decision Maker as defined by IFRS 8: 'Operating segments') for the purposes of evaluating segment performance and allocating resources.

The Group redefined its operating segments during the year, to reflect the way the business is now organised. Information relating to the prior year has been represented in line with the new segmental structure.

Revenue

Energy supply to business and residential customers

The vast majority of contractual energy supply arrangements have no fixed duration, require no minimum consumption by the customer and can be terminated by either party at any time. No enforceable rights and obligations exist at inception of the contract and arise only once the cooling off period is complete and the Group is the legal supplier of energy to the customer. The performance obligation is the supply of energy over the contractual term; the units of supply represent a series of distinct goods that are substantially the same with the same pattern of transfer to the customer. The performance obligation is considered to be satisfied as the customer consumes based on the units of energy delivered. This is the point at which revenue is recognised. In respect of energy supply contracts, the Group considers that it has the right to consideration from the customer for an amount that corresponds directly with the invoiced value delivered to the customer through their consumption. The Group's assessment of the amount that it has a right to invoice includes an assessment of energy supplied to customers between the date of the last meter reading and the year end (known as unread revenue). Unread gas and electricity comprises both billed and unbilled revenue and is estimated through the billing systems, using historical consumption patterns, on a customer-by-customer basis, taking into account weather patterns, load forecasts and the differences between actual meter readings being returned and system estimates. Actual meter readings continue to be compared to system estimates between the balance sheet date and the finalisation of the accounts.

The Group holds a number of energy supply contracts that specify a minimum consumption volume over a specified contractual term. The transaction price for these contracts is the minimum supply volume multiplied by the contractually agreed price per unit of energy. Revenue from the sale of additional volumes is considered to be variable and not included in the transaction price. Revenue for these contracts continues to be recognised as invoiced.

S2. Summary of significant accounting policies

Energy services provided to business and residential customers

Energy services relate to the installation, repair and maintenance of central heating, ventilation and air conditioning systems.

In the UK, delivery of an item is considered a separate performance obligation to the installation of the item, both satisfied at a point in time. Delivery is the point at which control passes to the customer as the customer takes physical possession of the asset. It is also the point at which the Group has the right to consideration. Delivery and installation usually occur at the same point in time and consequently revenue is recognised for both performance obligations simultaneously.

Certain heating, ventilation and air conditioning (HVAC) system installations in North America are considered to be a single performance obligation satisfied over time, representing the Group's promise to deliver to the customer a functioning HVAC system. Revenue is recognised on an input basis with reference to costs incurred.

Sales of own gas and liquid production

Revenue arising from the sale of produced gas is recognised in a manner consistent with energy supply contracts with the revenue recognition profile reflecting the supply of gas to the customer. In respect of oil sales, each barrel of oil is considered a separate performance obligation satisfied at a point in time – on delivery.

The rights and obligations identifiable within a contract where the Group holds sellers' nomination rights are considered to be enforceable from inception of the contract. The transaction price for the contract will include variable consideration based on forecast production and market prices. The point at which the performance obligation is satisfied and revenue recognised is the point at which control of the commodity passes to the customer according to the contractual trading terms, usually on shipment or delivery to a specified location.

Revenue arising from contracts outside the scope of IFRS 15

Revenue from sources other than the Group's contracts with customers is recognised in accordance with the relevant standard, as detailed below:

Fixed-fee service and insurance contracts: revenue from these contracts is recognised in the Group Income Statement with regard to the incidence of risk over the life of the contract, reflecting the seasonal propensity of claims to be made under the contracts and the benefits receivable by the customer, which span the life of the contract as a result of emergency maintenance being available throughout the contract term.

Amounts paid in advance are treated as deferred income, with any amount in arrears recognised as accrued income.

Revenue from the production of natural gas, oil and condensates in which the Group has an interest with other producers is recognised based on the Group's working interest and the terms of the relevant production sharing arrangements (the entitlement method). Where differences arise between production sold and the Group's share of production, this is accounted for as an overlift or underlift (see separate accounting policy).

Cost of sales

Energy supply includes the cost of gas and electricity produced and purchased during the year for own-use contracts, taking into account the industry reconciliation process for total gas and total electricity usage by supplier and related transportation, distribution, royalty costs and bought-in materials and services.

Cost of sales relating to fixed-fee service and insurance contracts includes direct labour and related overheads on installation work, repairs and service contracts in the year.

Cost of sales relating to gas and oil production includes depreciation of assets used in production of gas and oil, royalty costs and direct labour costs.

Cost of sales within power generation businesses includes the depreciation of assets included in generating power, fuel purchase costs, direct labour costs and carbon emissions costs.

Re-measurement and settlement of energy contracts

Re-measurement and settlement of energy contracts includes both realised (settled) commodity sales and purchase contracts in the scope of IFRS 9, as well as unrealised (fair value changes) on active contracts, as detailed further in notes 1 and 2.

Financing costs

Financing costs that arise in connection with the acquisition, construction or production of a qualifying asset are capitalised and subsequently amortised in line with the depreciation of the related asset. Financing costs not arising in connection with the acquisition, construction or production of a qualifying asset are expensed.

Supplementary information continued

S2. Summary of significant accounting policies

Foreign currencies

The consolidated Financial Statements are presented in pounds sterling, the functional currency of the Company and the Group's presentational currency. Each entity in the Group determines its own functional currency and items included in the financial statements of each entity are measured using that functional currency. Transactions in foreign currencies are initially recorded in the functional currency of the entity at the exchange rate ruling at the date of the transaction.

Monetary assets and liabilities denominated in foreign currencies are retranslated at the functional currency rate of exchange ruling at the balance sheet date and exchange movements included in the Group Income Statement for the period. In previous periods, the Group utilised net investment hedging and historic exchange differences will remain in equity until the disposal of the specific investments.

Non-monetary items that are measured at historical cost in a currency other than the functional currency of the entity concerned are translated using the exchange rate prevailing at the dates of the initial transaction.

For the purpose of presenting consolidated Financial Statements, the assets and liabilities of the Group's non-sterling functional currency subsidiary undertakings, joint ventures and associates are translated into pounds sterling at exchange rates prevailing at the balance sheet date. The monthly results of these (generally foreign) subsidiary undertakings, joint ventures and associates are translated into pounds sterling each month at the average rates of exchange for that month. The closing exchange rates, and the average of the rates used to translate the results of foreign operations to pounds sterling are shown below.

	Closing rate at 31 December		Average rate for the year ended 31 December	
Exchange rate per pound sterling (£)	**2019**	2018	**2019**	2018
US dollars	**1.33**	1.28	**1.28**	1.33
Canadian dollars	**1.72**	1.74	**1.69**	1.73
Euro	**1.18**	1.11	**1.14**	1.13
Norwegian krone	**11.65**	11.04	**11.25**	10.87
Danish krone	**8.83**	8.32	**8.52**	8.42

Exchange adjustments arising from the retranslation of the opening net assets and results of non-sterling functional currency operations are transferred to the Group's foreign currency translation reserve, a separate component of equity, and are reported in other comprehensive income. In the event of the disposal of a non-sterling functional currency subsidiary, the cumulative translation difference arising in the foreign currency translation reserve is charged or credited to the Group Income Statement on disposal.

Employee share schemes

The Group operates a number of employee share schemes, detailed in the Remuneration Report on pages 82 to 93, under which it makes equity-settled share-based payments to certain employees. Equity-settled share-based payments are measured at fair value at the date of grant (excluding the effect of non-market-based vesting conditions). The fair value determined at the grant date is expensed on a straight-line basis together with a corresponding increase in equity over the vesting period, based on the Group's estimate of the number of awards that will vest, and adjusted for the effect of non-market-based vesting conditions.

The majority of the share-based payment charge arises from the On Track Incentive Plan. This scheme is applicable to senior executives, and senior and middle management. Shares issued under the scheme vest subject to continued employment within the Group in two stages (half after two years and the other half after three years). Employees leaving prior to the vesting date will normally forfeit their rights to unvested share awards. The fair value of the awards is measured using the market value at the date of grant.

More information is included in the Remuneration Report on pages 82 to 93.

S2. Summary of significant accounting policies

Business combinations and goodwill

The acquisition of subsidiaries is accounted for using the acquisition method (at the point the Group gains control over a business as defined by IFRS 3). The cost of the acquisition is measured as the cash paid and the aggregate of the fair values, at the date of exchange, of other assets transferred, liabilities incurred or assumed, and equity instruments issued by the Group in exchange for control of the acquiree. The consideration transferred includes the fair value of any asset or liability resulting from a contingent consideration arrangement at the acquisition date.

Acquisition-related costs are expensed as incurred. The identifiable assets, liabilities and contingent liabilities are recognised at their fair value at the acquisition date, except for non-current assets (or disposal groups) that are classified as held for sale in accordance with IFRS 5: 'Non-current assets held for sale and discontinued operations'. The Group recognises any non-controlling interests in the acquiree either at fair value or at the non-controlling interests' proportionate share of the recognised amounts of the acquiree's identifiable net assets.

Goodwill arising on a business combination represents the excess of the consideration transferred, the amount of the non-controlling interests and the acquisition date fair value of any previously held interest in the acquiree over the Group's interest in the fair value of the identifiable net assets acquired. Goodwill arising on the acquisition of a stake in a joint venture or an associate represents the excess of the consideration transferred over the Group's interest in the fair value of the identifiable assets and liabilities of the investee at the date of acquisition. Goodwill is initially recognised as an asset at cost and is subsequently measured at cost less any accumulated impairment losses. The goodwill arising on an investment in a joint venture or in an associate is not recognised separately, but is shown under 'Interests in joint ventures and associates' in the Group Balance Sheet. If, after reassessment, the Group's interest in the net fair value of the acquiree's identifiable assets, liabilities and contingent liabilities exceeds the cost of the business combination, the excess is recognised immediately in the Group Income Statement.

Acquisitions of joint operations that meet the definition of a business as defined in IFRS 3 are accounted for as business combinations.

On disposal of a subsidiary, associate or joint venture entity, any amount of goodwill attributed to that entity is included in the determination of the profit or loss on disposal. A similar accounting treatment is applied on disposal of assets that represent a business.

Other intangible assets

Intangible assets acquired separately are measured on initial recognition at cost.

Capitalisation begins when expenditure for the asset is being incurred and activities necessary to prepare the asset for use are in progress and ceases when substantially all the activities that are necessary to prepare the asset for use are complete. Amortisation commences at the point of commercial deployment. The cost of intangible assets acquired in a business combination is their fair value as at the date of acquisition.

Following initial recognition, intangible assets are carried at cost less any accumulated amortisation and any accumulated impairment losses. Intangible assets with finite lives are amortised over their useful lives and are tested for impairment annually and whenever there is an indication that the asset could be impaired. The amortisation period and method for an intangible asset are reviewed at each financial year end. Changes in the expected useful life or the expected pattern of consumption of future economic benefits embodied in the asset are accounted for on a prospective basis by changing the amortisation period or method, as appropriate, and treated as changes in accounting estimates.

Intangible assets are derecognised on disposal, or when no future economic benefits are expected from their use.

Intangible assets with indefinite useful lives are not amortised but tested for impairment annually, and whenever there is an indication that the intangible asset could be impaired, either individually or at the CGU level. The indefinite life assessment is reviewed annually and, if not supportable, the change in the useful life assessment from indefinite to finite is made on a prospective basis.

The useful economic lives for the principal categories of intangible assets are as follows:

Customer relationships and other contractual assets	Up to 20 years
Strategic identifiable acquired brands	Indefinite
Application software	Up to 15 years

Strategic identifiable acquired brands are deemed to have indefinite lives where evidence suggests that the brand will generate net cash inflows for the Group for an indefinite period.

EU Emissions Trading Scheme and renewable obligation certificates

Purchased carbon dioxide emissions allowances are recognised initially at cost (purchase price) within intangible assets. The liability is measured at the cost of purchased allowances up to the level of purchased allowances held, and then at the market price of allowances ruling at the balance sheet date, with movements in the liability recognised in operating profit.

Forward contracts for the purchase or sale of carbon dioxide emissions allowances are measured at fair value with gains and losses arising from changes in fair value recognised in the Group Income Statement. The intangible asset is surrendered and the liability is extinguished at the end of the compliance period to reflect the consumption of economic benefits.

Purchased renewable obligation certificates are recognised initially at cost within intangible assets. A liability for the renewables obligation is recognised based on the level of electricity supplied to customers, and is calculated in accordance with percentages set by the UK Government and the renewable obligation certificate buyout price for that period.

The intangible asset is surrendered and the liability is extinguished at the end of the compliance period to reflect the consumption of economic benefits. Any recycling benefit related to the submission of renewable obligation certificates is recognised in the Group Income Statement when received.

Supplementary information continued

S2. Summary of significant accounting policies

Exploration, evaluation, development and production assets

The Group uses the successful efforts method of accounting for exploration and evaluation expenditure. Exploration and evaluation expenditures associated with an exploration well, including acquisition costs related to exploration and evaluation activities are capitalised initially as intangible assets. Certain expenditures such as geological and geophysical exploration costs are expensed. If the prospects are subsequently determined to be successful on completion of evaluation, the relevant expenditure is transferred to PP&E. If the prospects are subsequently determined to be unsuccessful, the associated costs are expensed in the period in which that determination is made.

All field development costs are capitalised as PP&E. Such costs relate to the acquisition and installation of production facilities and include development drilling costs, project-related engineering and other technical services costs. PP&E, including rights and concessions related to production activities, are depreciated from the commencement of production in the fields concerned, using the unit of production method, based on all of the 2P reserves of those fields. Changes in these estimates are dealt with prospectively.

The net carrying value of fields in production and development is compared annually on a field-by-field basis with the likely discounted future net revenues to be derived from the remaining commercial reserves. An impairment loss is recognised where it is considered that recorded amounts are unlikely to be fully recovered from the net present value of future net revenues. Exploration assets are reviewed annually for indicators of impairment and production and development assets are tested annually for impairment.

Interests in joint arrangements and associates

The Group's joint ventures and associates (as defined in note 6) are accounted for using the equity method.

The Group's interests in joint operations (gas and oil exploration and production licence arrangements) are accounted for by recognising its assets (including its share of assets held jointly), its liabilities (including its share of liabilities incurred jointly), its revenue from the sale of its share of the output arising from the joint operation, its share of the revenue from the sale of the output by the joint operation and its expenses (including its share of any expenses incurred jointly).

Where the Group has an equity stake or a participating interest in operations governed by a joint arrangement for which it is acting as operator, an assessment is carried out to confirm whether the Group is acting as agent or principal. As the terms and conditions negotiated between business partners usually provide joint control to the parties over the relevant activities of the gas and oil fields that are governed by joint arrangements, the Group is usually deemed to be an agent when it is appointed as operator and not as principal (as the contracts entered into do not convey control to the parties). Accordingly, the Group recognises its interests in these arrangements as outlined above except that it presents gross liabilities and gross receivables of joint operations (including amounts due to or from non-operating partners) in the Group Balance Sheet in accordance with the netting rules of IAS 32: 'Financial instruments – presentation'.

Property, plant and equipment

PP&E is included in the Group Balance Sheet at cost, less accumulated depreciation and any provisions for impairment.

Subsequent expenditure in respect of items of PP&E, such as the replacement of major parts, major inspections or overhauls, are capitalised as part of the cost of the related asset where it is probable that future economic benefits will arise as a result of the expenditure and the cost can be reliably measured. All other subsequent expenditure is expensed as incurred.

Freehold land is not depreciated. Other PP&E, with the exception of upstream production assets (see above), are depreciated on a straight-line basis at rates sufficient to write off the cost, less estimated residual values, of individual assets over their estimated useful lives. The depreciation periods for the principal categories of assets are as follows:

Freehold and leasehold buildings	Up to 50 years
Plant	Five to 20 years
Equipment and vehicles	Three to 10 years
Power generation assets	Up to 30 years

The carrying values of PP&E are tested annually for impairment and are reviewed for impairment when events or changes in circumstances indicate that the carrying value may not be recoverable. Residual values and useful lives are reassessed annually and, if necessary, changes are accounted for prospectively.

S2. Summary of significant accounting policies

Impairment assumptions

The Group tests the carrying amounts of goodwill, PP&E and intangible assets (with the exception of exploration assets) for impairment at least annually. Interests in joint ventures and associates and exploration assets are reviewed annually for indicators of impairment and tested for impairment where such an indicator arises. Where an asset does not generate cash flows that are independent from other assets, the Group estimates the recoverable amount of the CGU to which the asset belongs. The recoverable amount is the higher of value in use (VIU) and fair value less costs of disposal (FVLCD).

At inception, goodwill is allocated to each of the Group's CGUs or groups of CGUs that expect to benefit from the business combination in which the goodwill arose. If the recoverable amount of an asset (or CGU) is estimated to be less than its carrying amount, the carrying amount of the asset (or CGU) is reduced to its recoverable amount. Any impairment is expensed immediately in the Group Income Statement. Any CGU impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the CGU and then to the other assets of the CGU pro rata on the basis of the carrying amount of each asset in the CGU.

Further information on the assumptions used in the VIU calculations and FVLCD calculations that resulted in impairment or impairment reversals during the year can be found at note 7.

VIU – Key assumptions used

Pre-tax cash flows used in the VIU calculations are derived from the Group's Board-approved business plans, and assumptions specific to the nature and life of the asset. The Group's business plans and assumptions are based on past experience and adjusted to reflect market trends, economic conditions and key risks. Commodity prices used in the planning process are based in part on observable market data and in part on estimates. Note S6 provides additional detail on the active period of each of the commodity markets in which the Group operates.

(a) VIU – Growth rates and discount rates

Unless stated otherwise in the table below, cash flows beyond the planned period have been extrapolated using long-term growth rates in the market where the CGU operates. Long-term growth rates are determined using a blend of publicly available historical data and long-term growth rate forecasts published by external analysts. Cash flows are discounted using a discount rate specific to each CGU. Discount rates reflect the current market assessments of the time value of money and are based on the estimated cost of capital of each CGU. Additionally, risks specific to the cash flows of the CGUs are reflected within cash flow forecasts. Each CGU's weighted average cost of capital is then adjusted to reflect the impact of tax in order to calculate an equivalent pre-tax discount rate.

Long-term growth rates and pre-tax discount rates used in the VIU calculations for each of the Group's CGUs are shown below.

2019	**UK Home %**	**UK Business %**	**Ireland %**	**North America Home (i) %**	**North America Business (i) %**	**Centrica Home Solutions %**	**Centrica Business Solutions (turbines/engines /battery) (ii) %**	**Energy Marketing & Trading %**	**Nuclear (ii) %**
Growth rate to perpetuity (including inflation)	**2.0**	**2.0**	**1.2**	**2.1/2.0**	**2.1/2.0**	**2.0**	**N/A**	**2.0**	**N/A**
Pre-tax discount rate	**7.8**	**7.8**	**7.4**	**8.7**	**9.0**	**10.8**	**9.0**	**8.4**	**8.4**

2018	UK Home %	UK Business %	Ireland %	North America Home (i) %	North America Business (i) %	Centrica Home Solutions (iii) %	Centrica Business Solutions (turbines/engines /battery) (ii) %	Energy Marketing & Trading %	Nuclear (ii) %
Growth rate to perpetuity (including inflation)	2.1	2.1	1.4	2.2/2.0	2.2/2.0	2.2/2.1	N/A	2.1	N/A
Pre-tax discount rate	8.2	8.2	7.8	9.1	11.0	12.3/11.1	8.2	9.9	9.2

(i) US/Canada respectively.

(ii) Cash flows arising after the plan period have been derived from forecasts to the end of the asset lives. Due to the nature of these finite-lived assets this provides a more appropriate valuation in later years.

(iii) US/UK respectively.

Supplementary information continued

S2. Summary of significant accounting policies

(b) VIU – Inflation rates

Inflation rates used in the business plan were based on a blend of publicly available inflation forecasts and range from 1.1% to 2.2%.

(c) Key operating assumptions by CGUs using VIU

The key operating assumptions across all CGUs are gross margin, revenues and operating costs. These assumptions are tailored to the specific CGU using management's knowledge of the environment, as shown in the table below:

CGU	Gross margin	Revenues	Operating costs
All – base assumptions	Existing customers: based on contractual terms. Losses are forecast based on historic data and future expectations of the market. New customers and renewals: based on gross margins achieved in the period leading up to the date of the business plan. Both adjusted for current market conditions and cost of goods inflation. For the Services business, future sales and related gross margins are based on planned future product sales and contract losses based upon past performance and future expectations of the competitive environment.	Existing customers: based on contractual terms. Losses are forecast based on historic data and future expectations of the market. Adjusted for: growth forecasts which are based on sales and marketing activity, recent customer acquisitions and the current economic environment in the UK. Gas and electricity revenues based on forward market prices. Market share: percentage immediately prior to business plan.	Wages: projected headcount in line with expected efficiency programme. Salary increases based on inflation expectations. Credit losses: historical assumptions regarding realised cash losses have been updated to reflect the current environment.
North America Home (Residential energy supply and services)	Existing customers: gross margins achieved in the period leading up to the date of the business plan. Adjusted for: competitor data. For the Services business, adjustments are made for current economic conditions and the status of the housing market as appropriate.	Market share: average percentage immediately prior to business plan. For the Services business, the market share is based on historical growth trends and planned sales activities by individual market sectors. Adjusted for: expectations of growth or decline to reflect competitive differences. For the Services business, adjustments are made for new product offerings and continued penetration into new markets.	Customer acquisition: based on experience of costs required to support acquisition, renewal and other servicing activities.
North America Business (Business energy supply and trading)	New customers and renewals: based on gross margins achieved historically.	Market share: based on historical growth trends and planned sales activities by individual market sector. Adjusted for: prices based on contractual terms for fixed-price contracts and forward market curves for both gas and electricity in Canada and the US.	As above.

S2. Summary of significant accounting policies

CGU	Gross margin	Revenues	Operating costs
Energy Marketing & Trading	Trading business: Existing and new markets: management's estimate of future trading performance.	As above.	Future development: increase in costs to support growth forecasts, adjusted for planned business process efficiencies.
Centrica Business Solutions (turbines/ engines)	Based on forecast revenues, operations and maintenance costs, grid network and balancing system charges for the asset life.	Based on forward and contracted prices for commodity, capacity market and grid ancillary service contracts for the asset life. No capacity market revenue until October 2019, but resuming prospectively thereafter.	Based on run-rate and forecast changes, including expected inflation for the asset life.

FVLCD – key assumptions used

Centrica Business Solutions

A FVLCD calculation has been performed to value the customer CGU within Centrica Business Solutions. Post-tax cash flows used in the FVLCD calculation for the first five years are based on the Group's Board-approved business plans, and strategic shape assumptions and, thereafter, are based on long-term production and cash flow forecasts based on terminal values, which management believes reflects the assumptions of a market participant.

The future post-tax cash flows are discounted using a post-tax nominal discount rate of 7.5% (2018: 8.5%) to determine the FVLCD. The discount rate and inflation rate used in the FVLCD calculation are determined in the same manner as the rates used in the VIU calculations described above, with the exception of the adjustment required to determine an equivalent pre-tax discount rate.

Overlift and underlift

Off-take arrangements for gas and oil produced from joint operations are often such that it is not practical for each participant to receive or sell its precise share of the overall production during the period. This results in short-term imbalances between cumulative production entitlement and cumulative sales, referred to as overlift and underlift.

An overlift payable, or underlift receivable, is recognised at the balance sheet date within trade and other payables or trade and other receivables respectively, and is measured at market value, with movements in the period recognised within cost of sales.

Leases

Details of the Group's accounting policy in respect of the IFRS 16: Leases which applied from 1 January 2019 are given in note 1.

In the prior year the determination of whether an arrangement is, or contains, a lease required an assessment of whether the fulfilment of the arrangement was dependent on the use of a specific asset or assets and whether the arrangement conveyed a right to use the asset or assets. Leases were classified as finance leases whenever the terms of the lease transferred substantially all the risks and rewards of ownership to the lessee. All other leases were classified as operating leases. Assets held under finance leases were capitalised and included in PP&E at their fair value or, if lower, at the present value of the minimum lease payments, each determined at the inception of the lease. The obligations relating to finance leases, net of finance charges in respect of future periods, were included within bank loans and other borrowings, with the amount payable within 12 months included in bank overdrafts, loans and other borrowings within current liabilities.

Lease payments were apportioned between finance charges and the reduction of the finance lease obligation so as to achieve a constant rate of interest on the remaining balance of the liability. Finance charges were charged directly against income.

Payments under operating leases were charged to the Group Income Statement on a straight-line basis over the term of the relevant lease.

Supplementary information continued

S2. Summary of significant accounting policies

Inventories

Inventories of finished goods are valued at the lower of cost (using weighted-average cost) or estimated net realisable value after allowance for redundant and slow-moving items. The cost of inventories includes the purchase price plus costs of conversion incurred in bringing the inventories to their present location and condition.

Inventory of gas in storage is valued either on a weighted-average cost basis or at fair value less any costs to sell depending on the business model for holding the inventory. Changes in fair value less costs to sell are recognised in the Group Income Statement.

Oil inventory is measured at fair value, being the spot price at the balance sheet date.

Decommissioning costs

Provision is made for the net present value of the estimated cost of decommissioning gas and oil production facilities at the end of the producing lives of fields and power stations at the end of their useful lives, based on price levels and technology at the balance sheet date.

When this provision relates to an asset with sufficient future economic benefits, a decommissioning asset is recognised and included as part of the associated PP&E and depreciated accordingly. The asset is subject to impairment review as detailed above. Changes in estimates and discount rates are dealt with prospectively and reflected as an adjustment to the provision and corresponding decommissioning asset included within PP&E. The unwinding of the discount on the provision is included in the Group Income Statement within financing costs.

Non-current assets and disposal groups held for sale and discontinued operations

Non-current assets and disposal groups classified as held for sale are measured at the lower of carrying amount and fair value less costs of disposal. No depreciation is charged in respect of non-current assets classified as held for sale.

Non-current assets and disposal groups are classified as held for sale if their carrying amount will be recovered through a sale transaction rather than through continuing use. This condition is regarded as met only when the sale is highly probable, the asset or disposal group is available for immediate sale in its present condition and the Directors are committed to the sale which should be expected to qualify for recognition as a completed sale within one year from the date of classification.

The profits or losses and cash flows that relate to a major component of the Group that has been sold or is classified as held for sale are presented separately from continuing operations as discontinued operations within the Group Income Statement and Group Cash Flow Statement.

Pensions and other post-employment benefits

The Group operates a number of defined benefit and defined contribution pension schemes. The cost of providing benefits under the defined benefit schemes is determined separately for each scheme using the projected unit credit actuarial valuation method. Actuarial gains and losses are recognised in the period in which they occur in other comprehensive income.

The cost of providing retirement pensions and other benefits is charged to the Group Income Statement over the periods benefiting from employees' service. Past service cost is recognised immediately. Costs of administering the schemes are charged to the Group Income Statement. Net interest, being the change in the net defined benefit liability or asset due to the passage of time, is recognised in the Group Income Statement within net finance cost.

The net defined benefit liability or asset recognised in the Group Balance Sheet represents the present value of the defined benefit obligation of the schemes and the fair value of the schemes' assets. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using interest rates of high-quality corporate bonds that are denominated in the currency in which the benefits are paid, and that have terms of maturity approximating to the terms of the related pension liability.

Payments to defined contribution retirement benefit schemes are recognised in the Group Income Statement as they fall due.

Provisions

Provisions are recognised when the Group has a present obligation (legal or constructive) as a result of a past event, that can be measured reliably, and it is probable that the Group will be required to settle that obligation. Provisions are discounted to present value where the effect is material.

Where discounting is used, the increase in the provision due to the passage of time is recognised in the Group Income Statement within interest expense. Onerous contract provisions are recognised where the unavoidable costs of meeting the obligations under a contract exceed the economic benefits expected to be received under it. Contracts to purchase or sell energy are reviewed on a portfolio basis given the fungible nature of energy, whereby it is assumed that the highest priced purchase contract supplies the highest priced sales contract and the lowest priced sales contract is supplied by the lowest priced purchase contract.

Taxation

Current tax, including UK corporation tax, UK petroleum revenue tax and foreign tax is provided at amounts expected to be paid (or recovered) using the tax rates and laws that have been enacted or substantively enacted by the balance sheet date. From time to time, the Group may have open tax issues with a number of revenue authorities. Where an outflow of funds is believed to be probable and a reliable estimate of the dispute can be made, management provides for its best estimate of the liability. These estimates take into account the specific circumstances of each dispute and relevant external advice as well as the rules and regulations of the relevant tax authority in the jurisdiction of the dispute. Often the Group is unable to predict whether an uncertain tax treatment will be accepted by the relevant authority. In such instances the effects of uncertainty are reflected in management's assessment of the most likely outcome of each issue, as reviewed and updated on a regular basis. Each item is considered separately and on a basis that provides the better prediction of the outcome, unless the Group determines that it is appropriate to group certain items for consideration. See note 9 for further details on uncertain tax provisions.

S2. Summary of significant accounting policies

Deferred tax is recognised in respect of all temporary differences identified at the balance sheet date, except to the extent that the deferred tax arises from the initial recognition of goodwill, or the initial recognition of an asset or liability in a transaction which is not a business combination and at the time of the transaction affects neither accounting profit nor taxable profit and loss. Temporary differences are differences between the carrying amount of the Group's assets and liabilities and their tax base.

Deferred tax liabilities may be offset against deferred tax assets within the same taxable entity or qualifying local tax group. Any remaining deferred tax asset is recognised only when, on the basis of all available evidence, it can be regarded as probable that there will be suitable taxable profits, within the same jurisdiction, in the foreseeable future, against which the deductible temporary difference can be utilised.

Deferred tax is provided on temporary differences arising on subsidiaries, joint ventures and associates, except where the timing of the reversal of the temporary difference can be controlled and it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred tax is measured at the average tax rates that are expected to apply in the periods in which the asset is realised or liability settled, based on tax rates and laws that have been enacted or substantively enacted by the balance sheet date. Measurement of deferred tax liabilities and assets reflects the tax consequences expected from the manner in which the asset or liability is recovered or settled.

Financial instruments

Financial assets and financial liabilities are recognised in the Group Balance Sheet when the Group becomes a party to the contractual provisions of the instrument. Financial assets are derecognised when the Group no longer has the rights to cash flows, the risks and rewards of ownership or control of the asset. Financial liabilities are derecognised when the obligation under the liability is discharged, cancelled or expires.

(a) Trade receivables
Trade receivables are initially recognised at fair value, which is usually the original invoice amount, and are subsequently held at amortised cost using the effective interest method less an allowance for impairment losses. Balances are written off when recoverability is assessed as being remote. If collection is due in one year or less, receivables are classified as current assets. If not, they are presented as non-current assets.

(b) Trade payables
Trade payables are initially recognised at fair value, which is usually the original invoice amount and are subsequently held at amortised cost using the effective interest method. If payment is due within one year or less, payables are classified as current liabilities. If not, they are presented as non-current liabilities.

(c) Share capital
Ordinary shares are classified as equity. Incremental costs directly attributable to the issue of new shares are shown in equity as a deduction from the proceeds received. Own equity instruments that are reacquired (treasury or own shares) are deducted from equity. No gain or loss is recognised in the Group Income Statement on the purchase, sale, issue or cancellation of the Group's own equity instruments.

(d) Cash and cash equivalents
Cash and cash equivalents comprise cash in hand and current balances with banks and similar institutions, which are readily convertible to known amounts of cash and which are subject to insignificant risk of changes in value and have an original maturity of three months or less. Cash and cash equivalents are presented net of outstanding bank overdrafts where there is a legal right of set off and, for the Group's cash pooling arrangements, to the extent the Group expects to settle its subsidiaries' year-end account balances on a net basis.

For the purpose of the Group Cash Flow Statement, cash and cash equivalents consist of cash and cash equivalents as defined above, net of outstanding bank overdrafts.

(e) Interest-bearing loans and other borrowings
All interest-bearing loans and other borrowings with banks and similar institutions are initially recognised at fair value net of directly attributable transaction costs. After initial recognition, interest-bearing loans and other borrowings are subsequently measured at amortised cost using the effective interest method, except when they are hedged items in an effective fair value hedge relationship where the carrying value is also adjusted to reflect the fair value movements associated with the hedged risks. Such fair value movements are recognised in the Group Income Statement. Amortised cost is calculated by taking into account any issue costs, discount or premium.

(f) Financial instruments at fair value through other comprehensive income
Financial assets at fair value through other comprehensive income are equity instruments that the Group has elected to recognise the changes in fair value of in other comprehensive income. They are recognised initially at fair value in the Group Balance Sheet and are re-measured subsequently at fair value with gains and losses arising from changes in fair value recognised directly in equity and presented in other comprehensive income. Accrued interest or dividends arising on these financial assets are recognised in the Group Income Statement.

If the Group assesses the need to recognise a loss allowance on a financial asset carried at fair value through other comprehensive income, the loss allowance is recognised in other comprehensive income; however, the recognition of a loss allowance does not impact the carrying value of the asset on the Group's balance sheet.

Cumulative gains and losses on equity instruments at fair value through other comprehensive income are not recycled to the Group Income Statement.

Supplementary information continued

S2. Summary of significant accounting policies

(g) Financial assets at fair value through profit or loss

The Group holds investments in gilts which it designates at fair value through profit or loss in order to eliminate asymmetry arising from the measurement of an index-linked derivative. Other debt instruments and money market funds are required to be measured at fair value through profit or loss under IFRS 9, as the assets are not held solely for the purpose of collecting contractual cash flows related to principal and interest. Both mandatory and designated instruments are measured at fair value on initial recognition and are re-measured to fair value in each subsequent reporting period. Gains and losses arising from changes in fair value are recognised in the Group Income Statement within investment income or financing costs.

(h) Derivative financial instruments

The Group routinely enters into sale and purchase transactions for physical delivery of gas, power and oil. A portion of these transactions take the form of contracts that were entered into and continue to be held for the purpose of receipt or delivery of the physical commodity in accordance with the Group's expected sale, purchase or usage requirements ('own use'), and are not within the scope of IFRS 9. The assessment of whether a contract is deemed to be 'own use' is conducted on a Group basis without reference to underlying book structures, business units or legal entities.

Certain purchase and sales contracts for the physical delivery of gas, power and oil are within the scope of IFRS 9 due to the fact that they net settle or contain written options. Such contracts are accounted for as derivatives under IFRS 9 and are recognised in the Group Balance Sheet at fair value. Gains and losses arising from changes in fair value on derivatives that do not qualify for hedge accounting are taken directly to the Group Income Statement for the year.

The Group uses a range of derivatives for both trading and to hedge exposures to financial risks, such as interest rates, foreign exchange and energy price risks, arising in the normal course of business. The use of derivative financial instruments is governed by the Group's policies which are approved by the Board of Directors. Further detail on the Group's risk management policies is included within the Strategic Report – Principal Risks and Uncertainties on pages 34 to 43 and in note S3.

The accounting treatment of derivatives is dependent on whether they are entered into for trading or hedging purposes. A derivative instrument is considered to be used for hedging purposes when it alters the risk profile of an underlying exposure of the Group in line with the Group's risk management policies and is in accordance with established guidelines. Certain derivative instruments used for hedging purposes are designated in hedge accounting relationships as described by IAS 39 (the Group has not applied the hedge accounting requirements of IFRS 9). In order to qualify for hedge accounting, the effectiveness of the hedge must be reliably measurable and documentation describing the formal hedging relationship must be prepared at the point of designation. The hedge must be highly effective in achieving its objective. The Group also holds derivatives that are used for hedging purposes which are not designated in hedge accounting relationships and are held for trading.

All derivatives are recognised at fair value on the date on which the derivative is entered into and are re-measured to fair value at each reporting date. Derivatives are carried as assets when the fair value is positive and as liabilities when the fair value is negative. Derivative assets and derivative liabilities are offset and presented on a net basis only when there is a currently enforceable legal right of set-off, and the intention to net settle the derivative contracts is present.

The Group enters into certain energy derivative contracts covering periods for which observable market data does not exist. The fair value of such derivatives is estimated by reference in part to published price quotations from active markets, to the extent that such observable market data exists, and in part by using valuation techniques, the inputs to which include data that is not based on or derived from observable markets. Where the fair value at initial recognition for such contracts differs from the transaction price, a fair value gain or fair value loss will arise. This is referred to as a day-one gain or day-one loss. Such gains and losses are deferred (not recognised) and amortised to the Group Income Statement based on volumes purchased or delivered over the contractual period until such time as observable market data becomes available. When observable market data becomes available, any remaining deferred day-one gains or losses are recognised within the Group Income Statement. Recognition of the gains or losses resulting from changes in fair value depends on the purpose for issuing or holding the derivative. For derivatives that do not qualify for hedge accounting, any gains or losses arising from changes in fair value are taken directly to the Group Income Statement and are included within gross profit or investment income and financing costs. Gains and losses arising on derivatives entered into for speculative energy trading purposes are presented on a net basis within revenue.

Derivatives embedded in other financial instruments or other host contracts are treated as separate derivatives when their risks and characteristics are not closely related to those of the host contracts and the host contracts are not carried at fair value, with gains or losses reported in the Group Income Statement. The closely related nature of embedded derivatives is reassessed when there is a change in the terms of the contract that significantly modifies the future cash flows under the contract. Where a contract contains one or more embedded derivatives, and providing that the embedded derivative significantly modifies the cash flows under the contract, the option to fair value the entire contract may be taken and the contract will be recognised at fair value with changes in fair value recognised in the Group Income Statement.

S2. Summary of significant accounting policies

(i) Hedge accounting

The Group continues to apply the hedge accounting requirements of IAS 39 and has not adopted IFRS 9 hedge accounting.

For the purposes of hedge accounting, hedges are classified as either fair value hedges or cash flow hedges. Note S5 details the Group's accounting policies in relation to derivatives qualifying for hedge accounting under IAS 39.

(j) Impairment of financial assets

In accordance with IFRS 9, the Group has applied the expected credit loss model to financial assets measured at amortised cost and fair value through other comprehensive income.

For trade receivables, contract assets and finance lease receivables, the simplified approach is taken and the lifetime expected credit loss provided for.

For all other in-scope financial assets at the balance sheet date either the lifetime expected credit loss or a 12-month expected credit loss is provided for, depending on the Group's assessment of whether the credit risk associated with the specific asset has increased significantly since initial recognition. As the Group's financial assets are predominantly short term (less than 12 months), the impairment loss recognised is not materially different using either approach. Further details of the assumptions and inputs used to calculate expected credit losses are shown in note 17.

Nuclear activity

The Group's investment in Lake Acquisitions Limited ('Nuclear') is accounted for as an associate. The following accounting policies are specific to this nuclear activity.

(a) Fuel costs – nuclear front end

Front-end fuel costs consist of the costs of procurement of uranium, conversion and enrichment services, and fuel element fabrication. All costs are capitalised into inventory and charged to the Group Income Statement in proportion to the amount of fuel burnt.

(b) Fuel costs – nuclear back end

Advanced gas-cooled reactors (AGR)

Spent fuel extracted from the reactors is sent for reprocessing and/or long-term storage and eventual disposal of resulting waste products. Back-end fuel costs comprise of a loading-related cost per tonne of uranium and a rebate/surcharge to this cost which is dependent on the out-turn market electricity price and the amount of electricity generated from AGR stations in the year. These costs are capitalised into inventory and charged to the Group Income Statement in proportion to the amount of fuel burnt.

Pressurised water reactor (PWR)

Back-end fuel costs are based on wet storage in station ponds followed by dry storage and subsequent direct disposal of fuel. Back-end fuel costs are capitalised into inventory on loading and are charged to the Group Income Statement in proportion to the amount of fuel burnt.

(c) Nuclear property, plant and equipment – depreciation

The majority of the cost of the nuclear fleet is depreciated from the date of the Group acquiring its share of the fleet on a straight-line basis, with remaining depreciable periods currently of up to 16 years.

Other expenditure including amounts spent on major inspections and overhauls of production plant is depreciated over the period until the next outage which for AGR power stations is two to three years and for the PWR power station is 18 months.

(d) Nuclear Liabilities Fund (NLF) funding arrangements

Under the arrangements in place with the Secretary of State, the NLF will fund, subject to certain exceptions, qualifying uncontracted nuclear liabilities and qualifying decommissioning costs.

In part consideration for the assumption of these liabilities by the Secretary of State and the NLF, the former British Energy Group agreed to pay fixed decommissioning contributions each year and £150,000 (indexed to RPI) for every tonne of uranium in PWR fuel loaded into the Sizewell B reactor after the date of these arrangements.

(e) NLF and nuclear liabilities receivables

The UK Government indemnity is provided to indemnify any future shortfall on NLF funding of qualifying uncontracted nuclear liabilities (including PWR back-end fuel services) and qualifying nuclear decommissioning costs such that the receivable equals the present value of the associated qualifying nuclear liabilities (apart from a small timing difference due to timing of receipts from NLF).

(f) Nuclear liabilities

Nuclear liabilities represent provision for liabilities in respect of the costs of waste management of spent fuel and nuclear decommissioning.

(g) Unburnt fuels at shutdown

Due to the nature of the nuclear fuel process there will be quantities of unburnt fuel in the reactors at station closure. The costs relating to this unburnt fuel (final core) are fully provided for at the balance sheet date. The provision is based on a projected value per tonne of fuel remaining at closure, discounted back to the balance sheet date and recorded as a long-term liability.

Supplementary information continued

S3. Financial risk management

The Group's normal operating, investing and financing activities expose it to a variety of financial risks: market risk (including commodity price risk, currency risk and interest rate risk), credit risk and liquidity risk. The Group's overall financial risk management processes are designed to identify, manage and mitigate these risks.

Further detail on the Group's overall risk management processes is included within the Strategic Report – Principal Risks and Uncertainties on pages 34 to 43.

Commodity price risk management is carried out in accordance with individual business unit policies and directives including appropriate escalation routes.

Treasury risk management, including management of currency risk, interest rate risk and liquidity risk is carried out by a central Group Treasury function in accordance with the Group's financing and treasury policy, as approved by the Board.

The wholesale credit risks associated with commodity trading and treasury positions are managed in accordance with the Group's credit risk policy. Downstream customer credit risk management is carried out in accordance with individual business unit credit policies.

Market risk management

Market risk is the risk of loss that results from changes in market prices (commodity prices, foreign exchange rates and interest rates). The level of market risk to which the Group is exposed at a point in time varies depending on market conditions, expectations of future price or market rate movements and the composition of the Group's physical asset and contract portfolios.

(a) Commodity price risk management

The Group is exposed to commodity price risk in its energy procurement and supply activities, production, generation and trading operations and uses specific limits to manage the exposure to commodity prices associated with the Group's activities to an acceptable level. The Group uses Profit at Risk (PaR) limits to control exposures to market prices. These are complemented by other limits including Value at Risk (VaR), volumetric or stop-loss limits to control risk around trading activities.

(i) Energy price exposed business activities

The Group's price exposed business activities consist of equity gas and liquids production, equity power generation, bilateral procurement and sales contracts, market-traded purchase and sales contracts and derivative positions primarily transacted with the intent of securing gas and power for the Group's supply customers, from a variety of sources at an optimal cost. The Group actively manages commodity price risk by optimising its asset and contract portfolios and making use of volume flexibility.

The Group's commodity price risk exposure in its business activities is driven by the cost of procuring gas and electricity to serve its supply customers and selling gas, oil and electricity from its upstream production and generation, which varies with wholesale commodity prices. The primary risk is that market prices for commodities will fluctuate between the time that sales prices are fixed or tariffs are set and the time at which the corresponding procurement cost is fixed, thereby potentially reducing expected margins or making sales unprofitable.

The Group's supply activities are also exposed to volumetric risk in the form of an uncertain consumption profile arising from a range of factors, including the weather, energy consumption changes, customer attrition and the economic climate. There is also risk associated with ensuring that there is sufficient commodity available to secure supply to customers. The Group's production and generation activities are also exposed to volumetric risk in the form of uncertain production profiles.

In order to manage the exposure to market prices associated with the Group's business operations the Group uses a specific set of limits (including VaR and PaR) established by the Board, and sub-delegated downwards through the delegation lines to the commercial leaders.

PaR measures the estimated potential loss in a position or portfolio of positions associated with the movement of a commodity price for a given confidence level, over the remaining term of the position or contract. VaR measures the estimated potential loss for a given confidence level over a predetermined holding period. The standard confidence level used is 95%. In addition, regular stress and scenario tests are performed to evaluate the impact on the portfolio of possible substantial movements in commodity prices.

The Group measures and manages the commodity price risk associated with the Group's entire energy price exposed business portfolio. Only certain of the Group's energy contracts constitute financial instruments under IFRS 9 (see note S6).

As a result, while the Group manages the commodity price risk associated with both financial and non-financial energy procurement, sales and purchase contracts, it is the notional value of energy contracts being carried at fair value that represents the exposure of the Group's energy price exposed business activities to commodity price risk according to IFRS 7: 'Financial instruments: disclosures'. This is because energy contracts that are financial instruments under IFRS 9 are accounted for on a fair value basis and changes in fair value immediately impact profit. Conversely, energy contracts that are not financial instruments under IFRS 9 are accounted for as executory contracts and changes in fair value do not immediately impact profit and, as such, are not exposed to commodity price risk as defined by IFRS 7. So, whilst the PaR or VaR associated with energy procurement and supply contracts that are outside the scope of IFRS 9 are monitored for internal risk management purposes, only those energy contracts within the scope of IFRS 9 are within the scope of the IFRS 7 disclosure requirements.

(ii) Proprietary energy trading

The Group's proprietary energy trading activities consist of physical and financial commodity purchases and sales contracts taken on with the intent of benefiting from changes in market prices or differences between buying and selling prices. The Group conducts its trading activities in the over-the-counter market and through exchanges in the UK, North America and continental Europe. The Group is exposed to commodity price risk as a result of its proprietary energy trading activities because the value of its trading assets and liabilities will fluctuate with changes in market prices for commodities.

S3. Financial risk management

The Group sets volumetric and VaR limits to manage the commodity price risk exposure associated with the Group's proprietary energy trading activities. VaR measures the estimated potential loss at a 95% confidence level over a one-day holding period. The carrying value of energy contracts used in proprietary energy trading activities at 31 December 2019 is disclosed in note 19.

As with any modelled risk measure, there are certain limitations that arise from the assumptions used in the VaR calculation. VaR assumes that historical price behaviours will continue in the future and that the Group's trading positions can be unwound or hedged within the predetermined holding period. Furthermore, the use of a 95% confidence level, by definition, does not take into account changes in value that might occur beyond this confidence level.

(b) Currency risk management

The Group is exposed to currency risk on foreign currency denominated forecast transactions, firm commitments, monetary assets and liabilities (transactional exposure) and on its net investments in foreign operations (translational exposure). IFRS 7 only requires disclosure of currency risk arising on financial instruments denominated in a currency other than the functional currency of the commercial operation transacting. As a result, for the purposes of IFRS 7, currency risk excludes items that are not financial instruments, such as the Group's net investments in international operations as well as foreign currency denominated forecast transactions and firm commitments.

(i) Transactional currency risk

The Group is exposed to transactional currency risk on transactions denominated in currencies other than the underlying functional currency of the commercial operation transacting. The primary functional currencies remain pounds sterling in the UK, Canadian dollars in Canada, US dollars in the US, Norwegian krone in Norway, Danish krone in Denmark and euros in the Netherlands and the Republic of Ireland. The risk is that the functional currency value of cash flows will vary as a result of movements in exchange rates. Transactional exposure arises from the Group's energy procurement, production and generation activities, where many transactions are denominated in foreign currencies. In addition, in order to optimise the cost of funding, the Group has, in certain cases, issued foreign currency denominated debt or entered into foreign currency loans, primarily in US dollars, euros and Japanese yen.

It is the Group's policy to hedge material transactional exposures using derivatives (either applying formal hedge accounting or economic hedge relationships) to fix the functional currency value of non-functional currency cash flows, except where there is an economic hedge inherent in the transaction. At 31 December 2019, there were no material unhedged non-functional currency monetary assets or liabilities, firm commitments or probable forecast transactions (2018: £nil), other than transactions which have an inherent economic hedge and foreign currency borrowings used to hedge translational exposures.

(ii) Translational currency risk

The Group is exposed to translational currency risk as a result of its net investments in North America and Europe. The risk is that the pound sterling value of the net assets of foreign operations will decrease with changes in foreign exchange rates. The Group's policy is to protect the pounds sterling book value of its net investments in foreign operations where appropriate, subject to certain parameters, by holding foreign currency debt, entering into foreign currency derivatives, or a mixture of both.

The Group manages translational currency risk taking into consideration the cash impact of any hedging activity as well as the risk to the net asset numbers in the Group's Financial Statements. The translation hedging programme including the potential cash impact is managed by the Group Treasury function and monitored by the Chief Financial Officer.

(c) Interest rate risk management

In the normal course of business the Group borrows to finance its operations. The Group is exposed to interest rate risk because the fair value of fixed-rate borrowings and the cash flows associated with floating rate borrowings will fluctuate with changes in interest rates. The Group's policy is to manage the interest rate risk on long-term borrowings by ensuring the exposure to floating interest rates remains within a 30% to 70% range, including the impact of interest rate derivatives.

The return generated on the Group's cash balance is also exposed to movements in short-term interest rates. The Group manages cash balances to protect against adverse changes in rates whilst retaining liquidity.

(d) Sensitivity analysis

IFRS 7 requires disclosure of a sensitivity analysis that is intended to illustrate the sensitivity of the Group's financial position and performance to changes in market variables (commodity prices, foreign exchange rates and interest rates) as a result of changes in the fair value or cash flows associated with the Group's financial instruments. The sensitivity analysis provided discloses the effect on profit or loss and equity at 31 December 2019, assuming that a reasonably possible change in the relevant risk variable had occurred at 31 December 2019, and has been applied to the risk exposures in existence at that date to show the effects of reasonably possible changes in price on profit or loss and equity. Reasonably possible changes in market variables used in the sensitivity analysis are based on implied volatilities, where available, or historical data for energy prices and foreign exchange rates. Reasonably possible changes in interest rates are based on management judgement and historical experience.

The sensitivity analysis has been prepared based on 31 December 2019 balances and on the basis that the balances, the ratio of fixed to floating rates of debt and derivatives, the proportion of energy contracts that are financial instruments, the proportion of financial instruments in foreign currencies and the hedge designations in place at 31 December 2019 are all constant. Excluded from this analysis are all non-financial assets and liabilities and energy contracts that are not financial instruments under IFRS 9. The sensitivity to foreign exchange rates relates only to monetary assets and liabilities denominated in a currency other than the functional currency of the commercial operation transacting, and excludes the translation of the net assets of foreign operations to pounds sterling.

Supplementary information continued

S3. Financial risk management

The sensitivity analysis provided is hypothetical only and should be used with caution as the impacts provided are not necessarily indicative of the actual impacts that would be experienced. This is because the Group's actual exposure to market rates is changing constantly as the Group's portfolio of commodity, debt and foreign currency contracts changes. Changes in fair values or cash flows based on a variation in a market variable cannot be extrapolated because the relationship between the change in market variable and the change in fair value or cash flows may not be linear. In addition, the effect of a change in a particular market variable on fair values or cash flows is calculated without considering interrelationships between the various market rates or mitigating actions that would be taken by the Group. The sensitivity analysis provided excludes the impact of proprietary energy trading assets and liabilities because the VaR associated with the Group's proprietary energy trading activities is less than £5 million.

(i) Transactional currency risk

The Group has performed an analysis of the sensitivity of the Group's financial position and performance to changes in foreign exchange rates. The Group deems 10% movements to US dollar, Canadian dollar and euro currency rates relative to pounds sterling to be reasonably possible. The impact of such movements on profit and equity, both before and after taxation, is immaterial.

(ii) Interest rate risk

The Group has performed an analysis of the sensitivity of the Group's financial position and performance to changes in interest rates. The Group deems a one percentage point move in UK, US and euro interest rates to be reasonably possible. The impact of such movements on profit and equity, both after taxation, is immaterial.

(iii) Commodity price risk

The impacts of reasonably possible changes in commodity prices on profit and equity, both after taxation, based on the assumptions set out above are as follows:

Energy prices	2019 Base price (i)	2019 Reasonably possible change in variable (ii) %	2018 Base price (i)	2018 Reasonably possible change in variable (ii) %
UK gas (p/therm)	**40**	**+/-15**	54	+/-14
UK power (£/MWh)	**45**	**+/-13**	54	+/-12
UK emissions (€/tonne)	**25**	**+/-7**	26	+/-22
UK oil (US$/bbl)	**60**	**+/-9**	56	+/-20
North American gas (US cents/therm)	**24**	**+/-4**	27	+/-4
North American power (US$/MWh)	**27**	**+/-6**	34	+/-6

Incremental profit/(loss)	2019 Impact on profit (ii) £m	2018 Impact on profit (ii) £m
UK energy prices (combined) – increase/(decrease)	**39/(43)**	18/(9)
North American energy prices (combined) – increase/(decrease)	**287/(287)**	280/(280)

(i) The base price represents the average forward market price over the duration of the active market curve used in the sensitivity analysis provided.
(ii) The reasonably possible change in variable and the impact on profit are calculated using both the active and inactive market curves for all UK energy prices.

The impact on other comprehensive income of such price changes is immaterial.

Credit risk management

Credit risk is the risk of loss associated with a counterparty's inability or failure to discharge its obligations under a contract.

The Group continually reviews its rating thresholds for relevant counterparty credit limits and updates these as necessary, based on a consistent set of principles. It continues to operate within its limits. In respect of trading activities for both the US and Europe there is an effort to maintain a balance between exchange-based trading and bilateral transactions. This allows for a reasonable balance between counterparty credit risk and potential liquidity requirements. In addition, the Group actively manages the trade-off between credit and liquidity risks by optimising the use of contracts with collateral obligations and physically settled contracts without collateral obligations.

S3. Financial risk management

The Group is exposed to credit risk in its treasury, trading, energy procurement and downstream activities. The maximum exposure to credit risk for financial instruments at fair value is equal to their carrying value and is shown by counterparty credit rating in the table below. Further details of other collateral and credit security not offset against these amounts is shown in note S6.

	2019				2018			
	Financial assets at amortised cost		Financial assets at fair value		Financial assets at amortised cost		Financial assets at fair value	
31 December	Receivables including treasury, trading and energy procurement counterparties £m	Cash and cash equivalents £m	Cash and cash equivalents £m	Derivative financial instruments with positive fair values £m	Receivables including treasury, trading and energy procurement counterparties £m	Cash and cash equivalents £m	Cash and cash equivalents £m	Derivative financial instruments with positive fair values £m
AAA to AA	148	–	621	31	82	–	781	13
AA– to A–	268	699	–	487	580	454	–	655
BBB+ to BBB–	580	8	–	763	601	15	–	738
BB+ to BB–	123	–	–	331	375	–	–	154
B+ or lower	10	–	–	32	15	–	–	61
Unrated (i)	3,981	14	–	169	4,151	18	–	57
	5,110	721	621	1,813	5,804	487	781	1,678

(i) The unrated counterparty receivables primarily comprise amounts due from downstream customers, subsidiaries of rated entities, exchanges or clearing houses.

Details of how credit risk is managed across the asset categories are provided below:

(a) Treasury, trading and energy procurement activities

Wholesale counterparty credit exposures are monitored by individual counterparty and by category of credit rating, and are subject to approved limits. The Group uses master netting agreements to reduce credit risk and net settles payments with counterparties where net settlement provisions exist (see note S6 for details of amounts offset). In addition, the Group employs a variety of other methods to mitigate credit risk: margining, various forms of bank and parent company guarantees and letters of credit. See note 24 for details of cash posted or received under margin or collateral agreements.

100% of the Group's credit risk associated with its treasury, trading and energy procurement activities is with counterparties in related energy industries or with financial institutions. The impairment considerations of IFRS 9 are applicable to financial assets arising from treasury, trading and energy procurement activities that are carried at amortised cost and equity instruments that are carried at fair value through other comprehensive income (FVOCI). Equity instruments measured at FVOCI are not material for further disclosure.

Included in the table above within receivables including treasury, trading and energy procurement counterparties is £1,246 million of treasury, trading and energy procurement assets. The Group's risk assessment procedures and counterparty selection process ensure that the credit risk on this type of financial asset is always low at initial recognition, and is expected to continue to be assessed as low throughout the asset life. Therefore, the assumption that there has been no significant increase in credit risk since initial recognition applies, and accordingly the expected credit loss modelled is the 12-month expected credit loss, and is not material for further disclosure.

Included within the table above is information about the exposure to credit risk arising from only certain of the Group's energy procurement contracts – those in the scope of IFRS 9. Whilst the Group manages the credit risk associated with both financial and non-financial energy procurement contracts, it is the carrying value of financial assets within the scope of IFRS 9 (note S6) that represents the maximum exposure to credit risk in accordance with IFRS 7.

(b) Trade receivables and contract assets

The simplified approach of measuring lifetime expected credit losses has been applied to trade receivables and contract asset balances, which are the focus of this disclosure. Therefore, consideration of the significance of any change in credit risk since initial recognition for the purpose of applying this model is not required for any material component of the receivables balance.

In the case of business customers, credit risk is managed by checking a company's creditworthiness and financial strength both before commencing trade and during the business relationship. For residential customers, creditworthiness is ascertained normally before commencing trade to determine the payment mechanism required to reduce credit risk to an acceptable level. Certain customers will only be accepted on a prepayment basis or with a security deposit. In some cases, an ageing of receivables is monitored and used to manage the exposure to credit risk associated with both business and residential customers. In other cases, credit risk is monitored and managed by grouping customers according to method of payment or profile.

A sensitivity analysis on the further credit deterioration of receivables greater than 90 days past their due date is provided in note 17.

Liquidity risk management and going concern

Liquidity risk is the risk that the Group is unable to meet its financial obligations as they fall due. The Group experiences significant movements in its liquidity position due primarily to the seasonal nature of its business and margin cash arrangements associated with certain wholesale commodity contracts. To mitigate this risk the Group maintains significant committed facilities and holds cash on deposit. See note 24 for further information.

Supplementary information continued

S3. Financial risk management

Maturity profiles

Maturities of derivative financial instruments, provisions, borrowings and leases are provided in the following tables (all amounts are remaining contractual undiscounted cash flows):

Due for payment 2019	**<1 year £m**	**1 to 2 years £m**	**2 to 3 years £m**	**3 to 4 years £m**	**4 to 5 years £m**	**>5 years £m**
Energy and interest derivatives in a loss position that will be settled on a net basis	**(353)**	**(59)**	**(30)**	**(8)**	**(5)**	**(14)**
Gross energy procurement contracts and other derivative buy trades carried at fair value (i)	**(4,506)**	**(2,651)**	**(1,763)**	**(1,812)**	**(2,033)**	**(1,602)**
Foreign exchange derivatives that will be settled on a gross basis:						
Outflow	**(4,378)**	**(1,721)**	**(345)**	**(34)**	**(2)**	**(59)**
Inflow	**4,367**	**1,818**	**341**	**32**	**–**	**96**
Financial liabilities within provisions	**(152)**	**(28)**	**(29)**	**(10)**	**(7)**	**(23)**
Borrowings (bank loans, bonds, overdrafts and interest)	**(808)**	**(834)**	**(469)**	**(391)**	**(154)**	**(4,473)**
Leases: (ii)						
Minimum lease payments	**(171)**	**(132)**	**(65)**	**(37)**	**(30)**	**(95)**
Capital elements of leases	**(163)**	**(127)**	**(61)**	**(35)**	**(28)**	**(89)**

Due for payment 2018	<1 year £m	1 to 2 years £m	2 to 3 years £m	3 to 4 years £m	4 to 5 years £m	>5 years £m
Energy and interest derivatives in a loss position that will be settled on a net basis	(193)	(90)	(10)	(4)	(1)	4
Gross energy procurement contracts and other derivative buy trades carried at fair value (i)	(4,323)	(3,280)	(2,363)	(1,756)	(2,018)	(3,629)
Foreign exchange derivatives that will be settled on a gross basis:						
Outflow	(4,630)	(1,001)	(910)	(120)	(2)	(61)
Inflow	4,638	995	1,041	113	–	102
Financial liabilities within provisions	(109)	(68)	(34)	(23)	(6)	(6)
Borrowings (bank loans, bonds, overdrafts and interest)	(435)	(267)	(875)	(472)	(401)	(4,669)
Finance leases: (ii)						
Minimum lease payments	(68)	(76)	(59)	(19)	(14)	(2)
Capital elements of leases	(59)	(68)	(57)	(19)	(13)	(2)

(i) Proprietary energy trades are excluded from this maturity analysis as the Group does not take physical delivery of volumes traded under these contracts. The associated cash flows are expected to be equal to the contract fair value at the balance sheet date. See note 19 for further details.

(ii) The difference between the total minimum lease payments and the total capital elements of leases is due to future finance charges.

S4. Other equity

This section summarises the Group's other equity reserve movements.

	Cash flow hedging reserve £m	Foreign currency translation reserve £m	Actuarial gains and losses reserve £m	Financial asset at FVOCI reserve £m	Treasury and own shares reserve £m	Share-based payments reserve £m	Merger, capital redemption and other reserves £m	Total £m
1 January 2018	2	(172)	(1,286)	31	(142)	100	517	(950)
Adjustment on adoption of IFRS 9	–	–	–	(28)	–	–	–	(28)
Actuarial gain	–	–	792	–	–	–	–	792
Employee share schemes:								
Increase in own shares	–	–	–	–	(11)	–	–	(11)
Exercise of awards	–	–	–	–	46	(51)	–	(5)
Value of services provided	–	–	–	–	–	43	–	43
Impact of cash flow hedging	11	–	–	–	–	–	–	11
Taxation on above items	(2)	–	(135)	–	–	–	–	(137)
Share of other comprehensive loss of joint ventures and associates, net of taxation	–	–	(1)	–	–	–	–	(1)
Exchange adjustments	–	104	1	–	–	–	–	105
Other movements	–	–	–	(1)	–	–	8	7
31 December 2018	11	(68)	(629)	2	(107)	92	525	(174)
Actuarial loss	–	–	(465)	–	–	–	–	**(465)**
Employee share schemes:								
Exercise of awards	–	–	–	–	70	(60)	–	**10**
Value of services provided	–	–	–	–	–	41	–	**41**
Impact of cash flow hedging	(6)	–	–	–	–	–	–	**(6)**
Taxation on above items	2	–	78	–	–	–	–	**80**
Share of other comprehensive income of joint ventures and associates, net of taxation	–	–	29	–	–	–	–	**29**
Exchange differences on translation of foreign operations	–	(110)	–	–	–	–	–	**(110)**
Exchange differences reclassified to Group Income Statement on disposal	–	(18)	–	–	–	–	–	**(18)**
Other movements	–	–	–	2	–	–	2	**4**
31 December 2019	**7**	**(196)**	**(987)**	**4**	**(37)**	**73**	**527**	**(609)**

Merger, capital redemption and other reserves

During February 1997, BG plc (formerly British Gas plc) demerged certain businesses (grouped together under GB Gas Holdings Limited (GBGH)) to form Centrica plc. Upon demerger, the share capital of GBGH was transferred to Centrica plc and was recorded at the nominal value of shares issued to BG plc shareholders. In accordance with the Companies Act 1985, no premium was recorded on the shares issued. On consolidation, the difference between the nominal value of the Company's shares issued and the amount of share capital and share premium of GBGH at the date of demerger was credited to a merger reserve.

On 8 December 2017, the Group's existing exploration and production business was combined with that of Bayerngas Norge AS to form the Spirit Energy business. The Group acquired 69% of the Spirit Energy business and Bayerngas Norge's former shareholders acquired 31%. The non-controlling interest established on acquisition has been based on its share of the carrying value of the combined business, with the other reserve representing the difference between the fair value and this carrying value.

In accordance with the Companies Act 1985, the Company has transferred to the capital redemption reserve an amount equal to the nominal value of shares repurchased and subsequently cancelled. Up to 31 December 2019 the cumulative nominal value of shares repurchased and subsequently cancelled was £28 million (2018: £26 million).

Own shares reserve

The own shares reserve reflects the cost of shares in the Company held in the Centrica employee share ownership trusts to meet the future requirements of the Group's share-based payment plans.

Treasury shares reserve

Treasury shares are acquired equity instruments of the Company.

Supplementary information continued

S5. Hedge accounting

The Group applies hedge accounting to address interest rate and foreign currency risk on borrowings.

For the purposes of hedge accounting, hedges are classified either as fair value hedges, cash flow hedges or, in previous periods, hedges of net investments in foreign operations.

The fair values of derivatives and primary financial instruments in hedge accounting relationships at 31 December were as follows:

		2019			2018		
31 December	Hedge	**Assets £m**	**Liabilities £m**	**Change in fair value £m**	Assets £m	Liabilities £m	Change in fair value £m
Interest rate risk	Fair value	**105**	**(2)**	**55**	59	(10)	3
Foreign exchange risk	Cash flow hedge	**131**	**(2)**	**(44)**	185	(1)	22

2019	**Hedge**	**Timing of nominal amount**	**Average rate**	**Nominal value**	**Hedged item**	**Change in fair value of hedged item in year £m**	**Cumulative amount of fair value hedge adjustments on hedged item £m**	**Accumulated foreign exchange gain/(losses) in CFHR (i) £m**
Interest rate risk	Fair value	**2022 – 2033**	**Fixed to floating at LIBOR/US IBOR + 1% - 5%**	**£50 million - £550 million, $250 million**	**Bonds (ii)**	**(57)**	**(85)**	**N/A**
Foreign exchange risk	Cash flow hedge	**2021 – 2032**	**GBP to Euro at 1.356**	**€50 million, €750 million**	**Euro bonds**	**42**	**N/A**	**25**
	Cash flow hedge	**2036 – 2038**	**GBP to Yen at 151.49**	**¥20 billion**	**Yen bank loans**	**1**	**N/A**	**(18)**

2018	Hedge	Timing of nominal amount	Average rate	Nominal value	Hedged item	Change in fair value of hedged item in year £m	Cumulative amount of fair value hedge adjustments on hedged item £m	Accumulated foreign exchange gain/(losses) in CFHR (i) £m
Interest rate risk	Fair value	2022 – 2033	Fixed to floating at LIBOR/US IBOR + 1% - 5%	£50 million - £550 million, $250 million	Bonds (ii)	2	(28)	N/A
Foreign exchange risk	Cash flow hedge	2021 – 2032	GBP to Euro at 1.356	€50 million, €750 million	Euro bonds	(12)	N/A	30
	Cash flow hedge	2036 – 2038	GBP to Yen at 151.49	¥20 billion	Yen bank loans	(11)	N/A	(17)

(i) In the years presented all amounts related to continuing cash flow hedge relationships.
(ii) The carrying amount of bonds designated as hedged items in hedging relationships is disclosed in note 24.

The Group's accounting policies in relation to derivatives qualifying for hedge accounting under IAS 39 are described below.

Fair value hedges

A derivative is designated as a hedging instrument and its relationship to a recognised asset or liability is classified as a fair value hedge when it hedges the exposure to changes in the fair value of that recognised asset or liability. The Group's fair value hedges consist of interest rate swaps used to protect against changes in the fair value of fixed-rate, long-term debt due to movements in market interest rates. Any gain or loss from re-measuring the hedging instrument to fair value is recognised immediately in the Group Income Statement. Any gain or loss on the hedged item attributable to the hedged risk is adjusted against the carrying amount of the hedged item and recognised in the Group Income Statement within net finance cost. The Group discontinues fair value hedge accounting if the hedging instrument expires or is sold, terminated or exercised, the hedge no longer qualifies for hedge accounting or the Group revokes the designation. Any adjustment to the carrying amount of a hedged financial instrument for which the effective interest method is used is amortised to the Group Income Statement. Amortisation may begin as soon as an adjustment exists and shall begin no later than when the hedged item ceases to be adjusted for changes in its fair value attributable to the risk being hedged.

Impact of interest rate benchmark reform

The Group has elected to early adopt amendments to IFRS 9, IAS 39 and IFRS 7: 'Interest rate benchmark reform' during the year. The amendments permit continuation of hedge accounting even if, in the future, the benchmark interest rate applicable to the hedge may not be separately identifiable.

The Group has monitored developments and considered the impact of reform, concluding that the primary impact relates to fair value hedging relationships in which fixed interest rates on bonds are swapped for floating interest rates linked to GBP and USD LIBOR, as detailed in the above table.

S5. Hedge accounting

The Group will continue to apply the amendments until the uncertainty arising from the interest rate benchmark reforms with respect to the timing and amount of the underlying cash flows to which the Group is exposed ends. The Group has assumed that the uncertainty will not end until the Group's contracts that reference IBORs are amended and appropriate fall-back language is introduced into relevant contracts. Discussions with counterparties are in the early stages and will continue during 2020, along with the Group's activities to ensure systems and processes are ready and able to accommodate the changes.

Cash flow hedges

A derivative is classified as a cash flow hedge when it hedges exposure to variability in cash flows that is attributable to a particular risk either associated with a recognised asset, liability or a highly probable forecast transaction. The Group's cash flow hedges consist primarily of:

- forward foreign exchange contracts used to protect against the variability of functional currency denominated cash flows associated with non-functional currency denominated highly probable forecast transactions; and
- cross-currency interest rate swaps and forward foreign exchange contracts used to protect against the variability in cash flows associated with borrowings denominated in non-functional currencies.

The portion of the gain or loss on the hedging instrument which is effective is recognised directly in equity while any ineffectiveness is recognised in the Group Income Statement. The gains or losses that are initially recognised in the cash flow hedging reserve through other comprehensive income are transferred to the Group Income Statement in the period in which the highly probable forecast transaction affects income. Where the hedged item is the cost of a non-financial asset or liability, the amounts taken to equity are transferred to the initial carrying amount of the non-financial asset or liability on its recognition. Hedge accounting is discontinued when the hedging instrument expires or is sold, terminated or exercised without replacement or rollover, no longer qualifies for hedge accounting or the Group revokes the designation. At that point in time, any cumulative gain or loss on the hedging instrument recognised in equity remains in equity until the highly probable forecast transaction occurs. If the transaction is no longer expected to occur, the cumulative gain or loss recognised in equity is recognised in the Group Income Statement.

Note S4 details movements in the cash flow hedging reserve. The ineffective portion of gains and losses on cash flow hedging is immaterial and is recognised immediately in the Group Income Statement.

Supplementary information continued

S6. Fair value of financial instruments

The fair value of a financial instrument is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The Group has documented internal policies for determining fair value, including methodologies used to establish valuation adjustments required for credit risk.

(a) Fair value hierarchy

Financial assets and financial liabilities measured and held at fair value are classified into one of three categories, known as hierarchy levels, which are defined according to the inputs used to measure fair value as follows:

- Level 1: fair value is determined using observable inputs that reflect unadjusted quoted market prices for identical assets and liabilities;
- Level 2: fair value is determined using significant inputs that may be directly observable inputs or unobservable inputs that are corroborated by market data; and
- Level 3: fair value is determined using significant unobservable inputs that are not corroborated by market data and may be used with internally developed methodologies that result in management's best estimate of fair value.

	2019				2018			
31 December	Level 1 £m	Level 2 £m	Level 3 £m	**Total £m**	Level 1 £m	Level 2 £m	Level 3 £m	Total £m
Financial assets								
Derivative financial instruments:								
Energy derivatives	1	1,241	228	**1,470**	6	1,248	150	1,404
Interest rate derivatives	–	108	–	**108**	–	59	–	59
Foreign exchange derivatives	–	235	–	**235**	–	215	–	215
Treasury gilts designated FVTPL	124	–	–	**124**	126	–	–	126
Debt instruments	77	–	–	**77**	68	–	–	68
Equity instruments	26	–	28	**54**	20	–	25	45
Cash and cash equivalents	–	621	–	**621**	–	781	–	781
Total financial assets at fair value	**228**	**2,205**	**256**	**2,689**	220	2,303	175	2,698
Financial liabilities								
Derivative financial instruments:								
Energy derivatives	(146)	(1,778)	(90)	**(2,014)**	(42)	(1,390)	(59)	(1,491)
Interest rate derivatives	–	(25)	–	**(25)**	–	(36)	–	(36)
Foreign exchange derivatives	–	(106)	–	**(106)**	–	(39)	–	(39)
Total financial liabilities at fair value	**(146)**	**(1,909)**	**(90)**	**(2,145)**	(42)	(1,465)	(59)	(1,566)

S6. Fair value of financial instruments

The reconciliation of the Level 3 fair value measurements during the year is as follows:

	2019		2018	
	Financial assets £m	**Financial liabilities £m**	Financial assets £m	Financial liabilities £m
Level 3 financial instruments				
1 January	**175**	**(59)**	59	(33)
Total realised and unrealised gains/(losses):				
Recognised in Group Income Statement	**17**	**(10)**	79	(11)
Purchases, sales, issuances and settlements (net)	**28**	**(26)**	24	(4)
Transfers between Level 2 and Level 3 [(i)]	**38**	**5**	12	(8)
Foreign exchange movements	**(2)**	**–**	1	(3)
31 December	**256**	**(90)**	175	(59)
Total (losses)/gains for the year for Level 3 financial instruments held at the end of the reporting year	**(14)**	**(2)**	71	(32)

(i) Transfers between levels are deemed to occur at the beginning of the reporting period.

(b) Valuation techniques used to derive Level 2 and Level 3 fair values and Group valuation process

Level 2 interest rate derivatives and foreign exchange derivatives comprise interest rate swaps and forward foreign exchange contracts. Interest rate swaps are fair valued using forward interest rates extracted from observable yield curves. Forward foreign exchange contracts are fair valued using forward exchange rates that are quoted in an active market, with the resulting market value discounted back to present value using observable yield curves.

Level 2 energy derivatives are fair valued by comparing and discounting the difference between the expected contractual cash flows for the relevant commodities and the quoted prices for those commodities in an active market. The average discount rate applied to value this type of contract during the year was 1% (Europe) and 3% (North America) per annum (31 December 2018 average discount rate of 1% (Europe) and 3% (North America) per annum).

For Level 3 energy derivatives, the main input used by the Group pertains to deriving expected future commodity prices in markets that are not active as far into the future as some of our contractual terms. This applies to certain contracts within Europe and North America. Fair values are then calculated by comparing and discounting the difference between the expected contractual cash flows and these derived future prices using an average discount rate of 2% (Europe) and 3% (North America) per annum (31 December 2018 average discount rate of 2% (Europe) and 3% (North America) per annum).

Active period of markets	Gas	Power	Coal	Emissions	Oil
UK (years)	**3**	**3**	**3**	**3**	**3**
North America (years)	**5**	**Up to 5**	**N/A**	**Up to 5**	**3**

Because the Level 3 energy derivative valuations involve the prediction of future commodity market prices, sometimes a long way into the future, reasonably possible alternative assumptions for gas, power, coal, emissions or oil prices may result in a higher or lower fair value for Level 3 financial instruments. Given the relative size of the volumetric exposures and these fair values, it is unlikely that the impact of these reasonably possible changes would be significant when judged in relation to the Group's profit and loss or total asset value.

It should be noted that the fair values disclosed in the tables above only concern those contracts entered into which are within the scope of IFRS 9. The Group has numerous other commodity contracts which are outside of the scope of IFRS 9 and are not fair valued. The Group's actual exposure to market rates is constantly changing as the Group's portfolio of energy contracts changes.

The Group's valuation process includes specific teams of individuals that perform valuations of the Group's derivatives for financial reporting purposes, including Level 3 valuations. The Group has an independent team that derives future commodity price curves based on available external data and these prices feed into the energy derivative valuations, subject to adjustments to ensure they are compliant with IFRS 13: 'Fair value measurement'. The price curves are subject to review and approval by the Group's Executive Committee and valuations of all derivatives, together with other contracts that are not within the scope of IFRS 9, are also reviewed regularly as part of the overall risk management process.

Where the fair value at initial recognition for contracts which extend beyond the active period differs from the transaction price, a day-one gain or loss will arise. Such gains and losses are deferred and amortised to the Group Income Statement based on volumes purchased or delivered over the contractual period until such time as observable market data becomes available (see note S2 for further detail). The amount that has yet to be recognised in the Group Income Statement relating to the differences between the transaction prices and the amounts that would have arisen had valuation techniques used for subsequent measurement been applied at initial recognition, less subsequent releases, is immaterial.

Supplementary information continued

S6. Fair value of financial instruments

(c) Fair value of financial assets and liabilities held at amortised cost

The carrying value of the Group's financial assets and liabilities measured at amortised cost are approximately equal to their fair value except as listed below:

31 December		Notes	2019 Carrying value £m	2019 Fair value £m	2019 Fair value hierarchy	2018 Carrying value £m	2018 Fair value £m	2018 Fair value hierarchy
Bank loans		24(d)	**(144)**	**(176)**	**Level 2**	(149)	(165)	Level 2
Bonds	Level 1	24(d)	**(3,963)**	**(4,595)**	**Level 1**	(4,057)	(4,432)	Level 1
	Level 2	24(d)	**(102)**	**(138)**	**Level 2**	(105)	(128)	Level 2
Obligations under leases		24(d)	**(503)**	**(510)**	**Level 2**	(218)	(226)	Level 2

Financial liabilities

The fair values of bonds classified as Level 1 within the fair value hierarchy are calculated using quoted market prices. The fair values of Level 2 bonds and bank loans have been determined by discounting cash flows with reference to relevant market rates of interest. The fair values of overdrafts and short-term loans are assumed to equal their book values due to the short-term nature of these amounts. The fair values of obligations under leases have been determined by discounting contractual cash flows with reference to the Group's cost of borrowing.

Other financial instruments

Due to their nature and/or short-term maturity, the fair values of trade and other receivables, cash and cash equivalents, trade and other payables and provisions are estimated to approximate their carrying values.

(d) Financial assets and liabilities subject to offsetting, master netting arrangements and similar arrangements

31 December 2019	**Gross amounts of recognised financial instruments £m**	**Gross amounts of recognised financial instruments offset in the Group Balance Sheet £m**	**Net amounts presented in the Group Balance Sheet £m**	**Related amounts not offset in the Group Balance Sheet (i): Financial instruments £m**	**Related amounts not offset in the Group Balance Sheet (i): Collateral £m**	**Net amount £m**
Derivative financial assets	**9,072**	**(7,259)**	**1,813**	**(505)**	**(35)**	**1,273**
Derivative financial liabilities	**(9,404)**	**7,259**	**(2,145)**	**505**	**181**	**(1,459)**
			(332)			**(186)**
Balances arising from commodity contracts:						
Accrued and unbilled downstream and energy income	**5,625**	**(3,280)**	**2,345**	**(186)**	**–**	**2,159**
Accruals for commodity costs	**(5,146)**	**3,280**	**(1,866)**	**186**	**–**	**(1,680)**
Cash and financing arrangements:						
Cash and cash equivalents	**1,353**	**(11)**	**1,342**	**(548)**	**–**	**794**
Bank loans and overdrafts	**(703)**	**11**	**(692)**	**548**	**–**	**(144)**
Securities	**255**	**–**	**255**	**–**	**(26)**	**229**

31 December 2018	Gross amounts of recognised financial instruments £m	Gross amounts of recognised financial instruments offset in the Group Balance Sheet £m	Net amounts presented in the Group Balance Sheet £m	Related amounts not offset in the Group Balance Sheet (i): Financial instruments £m	Related amounts not offset in the Group Balance Sheet (i): Collateral £m	Net amount £m
Derivative financial assets	7,630	(5,952)	1,678	(292)	(157)	1,229
Derivative financial liabilities	(7,518)	5,952	(1,566)	292	472	(802)
			112			427
Balances arising from commodity contracts:						
Accrued and unbilled downstream and energy income	6,994	(4,129)	2,865	(264)	–	2,601
Accruals for commodity costs	(6,604)	4,129	(2,475)	264	–	(2,211)
Cash and financing arrangements:						
Cash and cash equivalents	1,289	(21)	1,268	(140)	–	1,128
Bank loans and overdrafts	(310)	21	(289)	140	–	(149)
Securities	307	–	307	–	(26)	281

(i) The Group has arrangements in place with various counterparties in respect of commodity trades which provide for a single net settlement of all financial instruments covered by the arrangement in the event of default or termination, or other circumstances arising whereby either party is unable to meet its obligations. The above table shows the potential impact of these arrangements being enforced by offsetting the relevant amounts within each Group Balance Sheet class of asset or liability, but does not show the impact of offsetting across Group Balance Sheet classes where the offsetting Group Balance Sheet class is not included within the above table.

S7. Fixed-fee service and insurance contracts

This section includes fixed-fee service (FFS) and insurance contract disclosures for services related to UK Home and North America Home.

FFS contracts in North America are entered into with home and business services customers. Insurance contracts in North America are entered into with home services customers.

FFS contracts in the UK are entered into with home services customers by British Gas Services Limited (BGSL) and with business customers by British Gas Services (Commercial) Limited. Insurance contracts in the UK are entered into with home services customers by British Gas Insurance Limited (BGIL), authorised by the PRA and regulated by the FCA and the PRA.

Product offerings include central heating, boiler and controls, plumbing and drains and electrical appliance insurance cover.

FFS contracts continue until cancelled by either party; insurance contracts normally provide cover for 12 months with the option of renewal.

The contracts which protect policyholders against the risk of breakdowns result in the transfer of risk to the contract provider. Benefits provided to customers vary in accordance with terms and conditions of the contracts entered into. However, they generally include maintenance, repair and/or replacement of the items affected.

The levels of risk exposure and service provision to customers under the contract terms are dependent on the occurrence of uncertain future events, in particular the nature and frequency of faults, and the cost of repair or replacement of the items affected. Accordingly, the timing and amount of future cash outflows associated with the contracts is uncertain. As the Group's insurance contract portfolio is comprised of a large number of contracts with small individual values, a high volume of claims with a relatively low unit cost results. The characteristics of the business mean that material concentrations or aggregations of risk are relatively remote. The key terms and conditions that affect future cash flows are as follows:

- provision of labour and parts for repairs, dependent on the agreement and associated level of service;
- a specified number of safety and maintenance inspections are carried out as set out in the agreement (usually once a year);
- no limit to the number of call-outs to carry out repair work; and
- limits on certain maintenance and repair costs.

The most significant insurance risk is an extreme weather event for an extended period, which has the propensity to increase claim frequencies. The Group regularly assesses insurance risk sensitivities, the most significant relating to increases in breakdown frequency and increases in the average cost of repair. A reasonably possible increase in either would not have a material impact on the results of the Group.

Revenue is recognised over the life of contracts (usually twelve months) having regard to the incidence of risk, in particular the seasonal propensity of claims which span the life of the contract as a result of emergency maintenance being available throughout the contract term. Costs incurred to settle claims represent principally the engineer workforce employed by the Group within home services and the cost of parts utilised in repair or maintenance. These costs are accounted for over a 12-month period with adjustments made to reflect the seasonality of workload over a given year.

Weather conditions and the seasonality of repairs both affect the profile of the workload and associated costs incurred across the year.

The risk exposure of these uncertain events is actively managed by undertaking the following risk mitigation activities:

- an initial service visit is provided to customers taking up most central heating contracts and in some instances pre-existing faults may lead to the contract being cancelled and no further cover being provided;
- an annual maintenance inspection is performed as part of most central heating contracts to help identify and prevent issues developing into significant maintenance or breakdown claims; and
- contract limits are applied to certain types of maintenance and repair work considered to be higher risk in terms of frequency and cost.

The costs of FFS claims and insurance claims incurred during the year were £20 million (2018: £18 million) and £341 million (2018: £398 million) respectively and are included in the table below in 'Expenses relating to FFS and insurance contracts'. All claims are settled immediately and in full. Due to the short average lead time between claims occurrence and settlement, no material provisions were outstanding at the balance sheet date (2018: £nil).

	2019 £m	2018 £m
Total revenue	**1,118**	1,142
Expenses relating to FFS and insurance contracts	**(949)**	(1,019)
Deferred income	**(86)**	(83)
Accrued income	**33**	32

The Group also considers whether estimated future cash flows under the contracts will be sufficient to meet expected future costs. Any deficiency is charged immediately to the Group Income Statement. Claims frequency is sensitive to the reliability of appliances as well as the impact of weather conditions. The contracts are not exposed to any interest rate risk or significant credit risk and do not contain any embedded derivatives.

Supplementary information continued

S8. Related party transactions

The Group's principal related party is its investment in Lake Acquisitions Limited, which owns the existing EDF UK nuclear fleet. The disclosures below, including comparatives, only refer to related parties that were related in the current reporting period.

During the year, the Group entered into the following arm's length transactions with related parties who are not members of the Group, and had the following associated balances:

	2019		2018	
	Purchase of goods and services £m	**Amounts owed to £m**	Purchase of goods and services £m	Amounts owed to £m
Associates:				
Nuclear	**(454)**	**(51)**	(476)	(42)
Joint Ventures	**(16)**	**(1)**	(17)	(2)
	(470)	**(52)**	(493)	(44)

During the year, there were no material changes to commitments in relation to joint ventures and associates.

At the balance sheet date, the Group committed facilities to the Lake Acquisition Group totalling £120 million, although nothing has been drawn at 31 December 2019.

Key management personnel comprise members of the Board and Executive Committee, a total of 17 individuals at 31 December 2019 (2018: 18).

Remuneration of key management personnel Year ended 31 December	**2019 £m**	2018 £m
Short-term benefits	**7.9**	10.1
Post-employment benefits	**1.0**	1.2
Share-based payments	**4.1**	1.6
	13.0	12.9

Remuneration of the Directors of Centrica plc Year ended 31 December	**2019 £m**	2018 (restated) (i) £m
Total emoluments (ii)	**4.0**	6.0
Amounts receivable under long-term incentive schemes	**–**	0.7
Contributions into pension schemes	**0.5**	0.8

(i) Comparatives have been restated. Further detail is provided in the Remuneration Report on pages 82 to 93.
(ii) These emoluments were paid for services performed on behalf of the Group. No emoluments related specifically to services performed for the Company.

Directors' interests in shares are given in the Remuneration Report on pages 82 to 93

S9. Auditors' remuneration

Year ended 31 December	**2019 £m**	2018 £m
Fees payable to the Company's auditors for the audit of the Company's individual and consolidated:		
Financial Statements (i)	**6.0**	5.6
Audit of the Company's subsidiaries	**1.7**	1.7
Total fees related to the audit of the parent and subsidiary entities	**7.7**	7.3
Fees payable to the Company's auditors and its associates for other services:		
Audit-related assurance services (ii)	**0.8**	0.8
All other services	**–**	0.4
	8.5	8.5
Fees in respect of pension scheme audits (iii)	**0.1**	0.1

(i) Including £0.3 million (2018: £0.3 million) for the audit of the Ofgem Consolidated Segmental Statement.
(ii) Predominantly relates to the review of the condensed interim Financial Statements included in the interim results.
(iii) The pension scheme audit continues to be performed by PricewaterhouseCoopers LLP.

S10. Related undertakings

The Group has a large number of related undertakings principally in the UK, US, Norway, Canada, Denmark, the Netherlands and the Republic of Ireland. These are listed below.

(a) Subsidiary undertakings

Investments held directly by Centrica plc with 100% voting rights

31 December 2019	Principal activity	Country of incorporation/ registered address key (i)	Class of shares held
Centrica Beta Holdings Limited	Holding company	United Kingdom / A	Ordinary shares
Centrica Holdings Limited	Holding company	United Kingdom / A	Ordinary shares
Centrica Trading Limited	Dormant	United Kingdom / A	Ordinary shares
Rhodes Holdings HK Limited (i)	Holding company	Hong Kong /AQ	Ordinary shares

(i) Established in 2019.

Investments held indirectly by Centrica plc with 100% voting rights

31 December 2019	Principal activity	Country of incorporation/ registered address key (i)	Class of shares held
5016892 Ontario Ltd. (ii) (iii)	Gas and/or oil exploration and production and/ or trading	Canada / B	Ordinary shares
Accord Energy (Trading) Limited	Dormant	United Kingdom / A	Ordinary shares
Accord Energy Limited	Dormant	United Kingdom / A	Ordinary shares
Airtron Inc. (iv)	Home and/or commercial services	United States / C	Ordinary shares
Alertme.com GmbH	Non-trading	Germany / D	Ordinary shares
Alertme.com Inc.	Energy management products and services	United States / E	Ordinary shares
Astrum Solar Inc.	Home and/or commercial services	United States / F	Ordinary shares
Atform Limited	Dormant	United Kingdom / A	Ordinary shares
AWHR America's Water Heater Rentals LLC	Home and/or commercial services	United States / C	Membership interest
Bord Gáis Energy Limited	Energy supply and power generation	Republic of Ireland / G	Ordinary shares
Bounce Energy Inc.	Energy supply	United States / C	Ordinary shares
Brae Canada Ltd. (iii)	Gas and/or oil exploration and production	Canada / B	Ordinary and preference shares
British Gas Energy Procurement Limited	Energy supply	United Kingdom / A	Ordinary shares
British Gas Finance Limited	Vehicle leasing	United Kingdom / A	Ordinary shares
British Gas Insurance Limited	Insurance provision	United Kingdom / A	Ordinary shares
British Gas Limited	Dormant	United Kingdom / A	Ordinary shares
British Gas New Heating Limited	Electrical and gas installations	United Kingdom / A	Ordinary shares
British Gas Services (Commercial) Limited	Servicing and installation of heating systems	United Kingdom / A	Ordinary shares
British Gas Services Limited	Home services	United Kingdom / A	Ordinary shares
British Gas Social Housing Limited	Servicing and installation of heating systems	United Kingdom / A	Ordinary shares
British Gas Solar Limited	Dormant	United Kingdom / A	Ordinary shares
British Gas Trading Limited	Energy supply	United Kingdom / A	Ordinary shares
British Gas X Limited (v)	Energy supply	United Kingdom / A	Ordinary shares
Business Gas Limited	Dormant	United Kingdom / A	Ordinary shares
Caythorpe Gas Storage Limited	Gas storage	United Kingdom / H	Ordinary shares
CBS US Solar Fund 1, LLC	Distributed energy and power	United States / C	Membership interest
Centrica (IOM) Limited	Dormant	Isle of Man / I	Ordinary shares
Centrica (Lincs) Wind Farm Limited	Holding company	United Kingdom / A	Ordinary shares
Centrica Alpha Finance Limited	Dormant	United Kingdom / A	Ordinary shares
Centrica America Limited	Dormant	United Kingdom / A	Ordinary shares
Centrica Barry Limited	Power generation	United Kingdom / A	Ordinary shares
Centrica Brigg Limited	Power generation	United Kingdom / A	Ordinary shares
Centrica Business Solutions (Generation) Limited	Power generation	United Kingdom / A	Ordinary shares
Centrica Business Solutions Asset Management LLC (v)	Energy management products and services	United States / C	Ordinary shares
Centrica Business Solutions Belgium NV (ii)	Demand response aggregation	Belgium / J	Ordinary shares
Centrica Business Solutions BV	Energy management products and services	Netherlands / K	Ordinary shares

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Supplementary information continued

S10. Related undertakings

31 December 2019	Principal activity	Country of incorporation/ registered address key (i)	Class of shares held
Centrica Business Solutions Canada Inc	Energy management products and services	Canada / B	Ordinary shares
Centrica Business Solutions Delivery LLC (v)	Energy management products and services	United States / C	Ordinary shares
Centrica Business Solutions Deutschland GmbH (ii)	Demand response aggregation	Germany / L	Ordinary shares
Centrica Business Solutions France SASU (ii)	Demand response aggregation	France / M	Ordinary shares
Centrica Business Solutions International Limited	Holding company	United Kingdom / A	Ordinary shares
Centrica Business Solutions Ireland Limited (v)	Holding company	Ireland / N	Ordinary shares
Centrica Business Solutions Italia Srl	Energy management products and services	Italy / O	Ordinary shares
Centrica Business Solutions Management Limited (v)	Holding company	United Kingdom / A	
Centrica Business Solutions México S.A. de C.V.	Energy management products and services	Mexico / P	Ordinary shares
Centrica Business Solutions Romania Srl (ii)	Energy management products and services	Romania / Q	Ordinary shares
Centrica Business Solutions UK Limited	Energy management products and services	United Kingdom / A	Ordinary shares
Centrica Business Solutions UK Optimisation Limited (ii)	Demand response aggregation	United Kingdom / A	Ordinary shares
Centrica Business Solutions US Inc	Energy management products and services	United States / C	Ordinary shares
Centrica Business Solutions Zrt	Energy management products and services	Hungary / R	Ordinary shares
Centrica Combined Common Investment Fund Limited	Dormant	United Kingdom / A	Ordinary shares
Centrica Delta Limited	Dormant	Isle of Man / S	Ordinary shares
Centrica Directors Limited	Dormant	United Kingdom / A	Ordinary shares
Centrica Distributed Generation Limited	Power generation	United Kingdom / A	Ordinary shares
Centrica Energy (Trading) Limited	Wholesale energy trading	United Kingdom / A	Ordinary shares
Centrica Energy Limited	Wholesale energy trading	United Kingdom / A	Ordinary shares
Centrica Energy Marketing Limited	Wholesale energy trading	United Kingdom / A	Ordinary shares
Centrica Energy Operations Limited	Dormant	United Kingdom / A	Ordinary shares
Centrica Energy Renewable Investments Limited	Dormant	United Kingdom / A	Ordinary shares
Centrica Energy Trading A/S (ii)	Energy Services and wholesale energy trading	Denmark / T	Ordinary shares
Centrica Energy Trading GmbH (ii)	Energy Services and wholesale energy trading	Germany / U	Ordinary shares
Centrica Energy Trading Pte. Ltd. (ii)	Energy Services and wholesale energy trading	Singapore / V	Ordinary shares
Centrica Engineers Pension Trustees Limited	Dormant	United Kingdom / A	Ordinary shares
Centrica Finance (Canada) Limited	Holding company	United Kingdom / A	Ordinary shares
Centrica Finance (Scotland) Limited	Holding company	United Kingdom / W	Ordinary shares
Centrica Finance (US) Limited	Holding company	United Kingdom / A	Ordinary shares
Centrica Finance Investments Limited	Dormant	United Kingdom / A	Ordinary shares
Centrica Finance Norway Limited	Group financing	Jersey / X	Ordinary shares
Centrica Gamma Holdings Limited	Holding company	United Kingdom / A	Ordinary shares
Centrica Hive Canada Inc.	Energy management products and services	Canada / B	Ordinary shares
Centrica Hive Limited	Energy management products and services	United Kingdom / A	Ordinary shares
Centrica Hive SAS	Energy management products and services	France / Y	Ordinary shares
Centrica Hive Srl	Energy management products and services	Italy / Z	Ordinary shares
Centrica Hive US Inc.	Energy management products and services	United States / C	Ordinary shares
Centrica HoldCo GP LLC	Holding company	United States / C	Membership interest
Centrica Ignite GP Limited	Investment company	United Kingdom / A	Ordinary shares
Centrica Ignite LP Limited	Investment company	United Kingdom / A	Ordinary shares
Centrica India Offshore Private Limited	Business services	India / AA	Ordinary shares
Centrica Infrastructure Limited	Dormant	United Kingdom / W	Ordinary shares
Centrica Innovations UK Limited	Investment company	United Kingdom / A	Ordinary shares
Centrica Innovations US Inc.	Investment company	United States / C	Ordinary shares
Centrica Insurance Company Limited	Insurance provision	Isle of Man / I	Ordinary and preference shares
Centrica Jersey Limited	Dormant	Jersey / AB	Ordinary shares
Centrica KL Limited	Power generation	United Kingdom / A	Ordinary shares
Centrica KPS Limited	Power generation	United Kingdom / A	Ordinary shares
Centrica Lake Limited	Holding company	United Kingdom / A	Ordinary shares

S10. Related undertakings

31 December 2019	Principal activity	Country of incorporation/ registered address key (i)	Class of shares held
Centrica Leasing (KL) Limited	Dormant	United Kingdom / A	Ordinary shares
Centrica LNG Company Limited	LNG trading	United Kingdom / A	Ordinary shares
Centrica LNG UK Limited	LNG trading	United Kingdom / A	Ordinary shares
Centrica Nederland BV	Holding company	Netherlands /AC	Ordinary shares
Centrica NewCo 123 Limited	Dormant	United Kingdom / A	Ordinary shares
Centrica Nigeria Limited	Holding company	United Kingdom / A	Ordinary shares
Centrica No.12 Limited	Dormant	United Kingdom / A	Ordinary shares
Centrica Nominees No.1 Limited	Dormant	United Kingdom / A	Ordinary shares
Centrica Offshore UK Limited	Gas and/or oil exploration and production	United Kingdom / H	Ordinary shares
Centrica Onshore Processing UK Limited	Dormant	United Kingdom / H	Ordinary shares
Centrica Overseas Holdings Limited	Holding company	United Kingdom / A	Ordinary shares
Centrica PB Limited	Power generation	United Kingdom / A	Ordinary shares
Centrica Pension Plan Trustees Limited	Dormant	United Kingdom / A	Limited by guarantee
Centrica Pension Trustees Limited	Dormant	United Kingdom / A	Ordinary shares
Centrica Production Limited	Dormant	United Kingdom / W	Ordinary shares
Centrica Renewable Energy Limited	Holding company	United Kingdom / A	Ordinary shares
Centrica Resources (Nigeria) Limited	Non-trading	Nigeria /AD	Ordinary shares
Centrica Resources (UK) Limited	Dormant	United Kingdom / A	Ordinary shares
Centrica Resources Petroleum UK Limited	Dormant	United Kingdom / A	Ordinary shares
Centrica Secretaries Limited	Dormant	United Kingdom / A	Ordinary shares
Centrica Services Limited	Business services	United Kingdom / A	Ordinary shares
Centrica Storage Holdings Limited	Holding company	United Kingdom / H	Ordinary shares
Centrica Storage Limited	Gas production and processing	United Kingdom / H	Ordinary shares
Centrica Trinidad and Tobago Limited	Business services	Trinidad and Tobago /AE	Ordinary shares
Centrica Trust (No.1) Limited	Dormant	United Kingdom / A	Ordinary shares
Centrica Upstream Investment Limited	Dormant	United Kingdom / W	Ordinary shares
Centrica US Holdings Inc.	Holding company	United States / C	Ordinary shares
CH4 Energy Limited	Dormant	United Kingdom / A	Ordinary shares
CID1 Limited	Dormant	United Kingdom / A	Ordinary shares
CIU1 Limited	Dormant	United Kingdom / A	Ordinary shares
CSA Offshore Services (Proprietary) Limited	Business services	South Africa /AF	Ordinary shares
DEML Investments Limited	Holding company	Canada /AG	Ordinary shares
DER Development No.10 Ltd.	Holding company	Canada / B	Ordinary shares
Direct Energy (B.C.) Limited	Energy supply and/or services	Canada /AH	Ordinary shares
Direct Energy Business LLC	Energy supply and/or services	United States / C	Membership interest
Direct Energy Business Marketing LLC	Energy supply and/or services	United States / C	Membership interest
Direct Energy GP LLC	Holding company	United States / C	Membership interest
Direct Energy Holdings (Alberta) Inc.	Home and/or commercial services	Canada / B	Ordinary shares
Direct Energy HVAC Services Ltd.	Home and/or commercial services	Canada / B	Ordinary shares
Direct Energy Leasing LLC	Home and/or commercial services	United States / C	Membership interest
Direct Energy Marketing Inc.	Wholesale energy trading	United States / C	Ordinary and preference shares
Direct Energy Marketing Limited	Energy supply and/or services	Canada /AG	Ordinary shares
Direct Energy Operations LLC	Energy supply and/or services	United States / C	Membership interest
Direct Energy Services LLC	Energy supply and/or services	United States / C	Membership interest
Distributed Energy Asset Solutions Limited	Dormant	United Kingdom / A	Ordinary shares
Distributed Energy Customer Solutions Limited	Energy Management products and services	United Kingdom / A	Ordinary shares
Drips Limited	Dormant	United Kingdom / A	Ordinary shares
Dyno Developments Limited	Dormant	United Kingdom / A	Ordinary shares
Dyno-Plumbing Limited	Dormant	United Kingdom / A	Ordinary shares
Dyno-Rod Limited	Operation of a franchise network	United Kingdom / A	Ordinary shares

Supplementary information continued

S10. Related undertakings

31 December 2019	Principal activity	Country of incorporation/ registered address key (i)	Class of shares held
Dyno-Security Services Limited	Dormant	United Kingdom / A	Ordinary shares
Dyno-Services Limited	Dormant	United Kingdom / A	Ordinary shares
ECL Contracts Limited	Dormant	United Kingdom / A	Ordinary shares
ECL Investments Limited	Dormant	United Kingdom / A	Ordinary shares
Electricity Direct (UK) Limited	Dormant	United Kingdom / A	Ordinary shares
ENER-G Cogen International Limited	Holding company	United Kingdom / A	Ordinary shares
ENER-G Nagykanizsa Kft	Energy management products and services	Hungary / R	Ordinary shares
ENER-G Power2 Limited	Holding company	United Kingdom / A	Ordinary shares
ENER-G Rudox LLC	Energy management products and services	United States / C	Membership interest
Energy For Tomorrow	Not-for-profit energy services	United Kingdom / A	Limited by guarantee
FES Energy Solutions Limited (v)	Energy supply and/or services	Ireland / G	Ordinary shares
First Choice Power LLC	Energy supply and/or services	United States / AI	Membership interest
Gateway Energy Services Corporation	Energy supply	United States / AJ	Ordinary shares
GB Gas Holdings Limited	Holding company	United Kingdom / A	Ordinary shares
Generation Green Solar Limited	Dormant community benefit society	United Kingdom / A	Ordinary shares
GF One Limited (vi)	In liquidation	United Kingdom / AK	Ordinary shares
GF Two Limited (vi)	In liquidation	United Kingdom / AK	Ordinary shares
Goldbrand Development Limited	Dormant	United Kingdom / A	Ordinary shares
Hillserve Limited	Dormant	United Kingdom / A	Ordinary shares
Home Assistance UK Limited	Non-trading	United Kingdom / A	Ordinary shares
Home Warranty Holdings Corp.	Insurance provision	United States / C	Ordinary shares
Home Warranty of America Inc. (vii)	Home and/or commercial services	United States / AL	Ordinary shares
Home Warranty of America Inc. (vii)	Home and/or commercial services	United States / AM	Ordinary shares
Io-Tahoe LLC	Data management	United States / C	Membership interest
Io-Tahoe UK Limited	Data management	United Kingdom / A	Ordinary shares
Io Tahoe Ukraine LLC	Data management	Ukraine / AN	Ordinary shares
Masters Inc.	Home and/or commercial services	United States / F	Ordinary shares
Neas Energy Limited	Energy services and wholesale energy trading	United Kingdom / A	Ordinary shares
Neas Invest A/S	Dormant	Denmark / T	Ordinary shares
Newco One Limited	Dormant	United Kingdom / A	Ordinary shares
North Sea Infrastructure Partners Limited	Dormant	United Kingdom / W	Ordinary shares
NSIP (Holdings) Limited	Dormant	United Kingdom / W	Ordinary shares
P.H. Jones Facilities Management Ltd	Servicing and maintenance of heating systems	United Kingdom / A	Ordinary shares
P.H Jones Group Limited	Holding company	United Kingdom / A	Ordinary shares
Panoramic Power Ltd.	Energy management products and services	Israel / AO	Ordinary shares
Pioneer Shipping Limited	LNG vessel chartering	United Kingdom / A	Ordinary Shares
Repair and Care Limited	Dormant	United Kingdom / A	Ordinary shares
REstore North America LLC	Demand response aggregation	United States / AP	Membership interest
RSG Holding Corp.	Holding company	United States / C	Ordinary shares
SmartWatt Energy Inc. (v)	Energy supply and/or services	United States / C	Ordinary shares
Solar Technologies Group Limited	Dormant	United Kingdom / A	Ordinary shares
Solar Technologies Limited	Dormant	United Kingdom / A	Ordinary shares
Soren Limited	Dormant	United Kingdom / A	Ordinary shares
South Energy Investments LLC (v)	Investment company	United States / AR	Membership interest
Vista Solar, Inc	Distributed energy and power	United States / AS	Ordinary shares

S10. Related undertakings

Investments held indirectly by Centrica plc with 69% voting rights

31 December 2019	Principal activity	Country of incorporation/ registered address key (i)	Class of shares held
Bayerngas Norge AS	Holding company	Norway / AT	Ordinary shares
Bayerngas Produksjon Norge AS	Finance company	Norway / AT	Ordinary shares
Bowland Resources (No.2) Limited	Gas and/or oil exploration and production	United Kingdom / AU	Ordinary shares
Bowland Resources Limited	Gas and/or oil exploration and production	United Kingdom / AU	Ordinary shares
Elswick Energy Limited	Gas and/or oil exploration and production	United Kingdom / AU	Ordinary shares
NSGP (Ensign) Limited	Gas and/or oil exploration and production	Jersey / AV	Ordinary shares
Spirit Energy Danmark ApS	Gas and/or oil exploration and production	Denmark / AW	Ordinary shares
Spirit Energy Hedging Holding Limited	Dormant	United Kingdom / AU	Ordinary shares
Spirit Energy Hedging Limited	Dormant	United Kingdom / AU	Ordinary shares
Spirit Energy Limited	Holding company	United Kingdom / AU	Ordinary and deferred shares
Spirit Energy Nederland BV	Gas and/or oil exploration and production	Netherlands / AX	Ordinary shares
Spirit Energy Norge AS	Gas and/or oil exploration and production	Norway / AY	Ordinary shares
Spirit Energy North Sea Limited	Gas and/or oil exploration and production	United Kingdom / AU	Ordinary shares
Spirit Energy North Sea Oil Limited	Gas and/or oil exploration and production	United Kingdom / AZ	Ordinary shares
Spirit Energy Petroleum Danmark AS (viii)	Gas and/or oil exploration and production	Norway / AT	Ordinary shares
Spirit Energy Production UK Limited	Gas and/or oil exploration and production	United Kingdom / AU	Ordinary shares
Spirit Energy Resources Limited	Gas and/or oil exploration and production	United Kingdom / AU	Ordinary shares
Spirit Energy Southern North Sea Limited	Gas and/or oil exploration and production	United Kingdom / AU	Ordinary shares
Spirit Energy Treasury Limited	Finance company	United Kingdom / AU	Ordinary shares
Spirit Energy WOS Limited	Gas and/or oil exploration and production	United Kingdom / AU	Ordinary shares
Spirit Europe Limited	Holding company	United Kingdom / AU	Ordinary shares
Spirit Infrastructure BV	Construction, ownership and exploitation of infrastructure	Netherlands / AX	Ordinary shares
Spirit North Sea Gas Limited	Gas and/or oil exploration and production	United Kingdom / AZ	Ordinary shares
Spirit Norway Limited	Gas and/or oil exploration and production	United Kingdom / AU	Ordinary shares
Spirit Production (Services) Limited	Business services	United Kingdom / AZ	Ordinary shares
Spirit Resources (Armada) Limited	Gas and/or oil exploration and production	United Kingdom / AU	Ordinary shares

(i) For list of registered addresses, refer to note S10(d).
(ii) The following name changes were made during the year: 1773648 Alberta Ltd. to 5016892 Ontario Ltd., REstore NV to Centrica Business Solutions Belgium NV, REstore Deutschland GmbH to Centrica Business Solutions Deutschland GmbH, REstore France SAS to Centrica Business Solutions France SASU, ENER-G Technologii Energetice Srl to Centrica Business Solutions Romania Srl, REstore Flexpond UK Limited to Centrica Business Solutions UK Optimisation Limited, Neas Energy A/S to Centrica Energy Trading A/S, Neas Energy GmbH to Centrica Energy Trading GmbH, Neas Energy Singapore Pte. Ltd to Centrica Energy Trading Pte. Ltd.
(iii) On 1 January 2020 5016892 Ontario Ltd. and Brae Canada Ltd. were merged into Direct Energy Marketing Limited.
(iv) During 2019 T.A. Kaiser Heating & Air, Inc. was merged into its parent Airtron Inc.
(v) Acquired or established in 2019.
(vi) GF One Limited and GF Two Limited are 75% indirectly owned by Centrica plc.
(vii) Home Warranty of America Inc. is registered as separate entities in the states of California and Illinois.
(viii) Spirit Energy Petroleum Danmark AS principally operates in Denmark.

Supplementary information continued

S10. Related undertakings

(b) Subsidiary undertakings – partnerships held indirectly by Centrica plc with 100% voting rights

31 December 2019	Principal activity	Country of incorporation/ registered address key (i)	Class of shares held
CF 2016 LLP	Group financing	United Kingdom / A	Membership interest
CFCEPS LLP	Group financing	United Kingdom / A	Membership interest
CFCPP LLP	Group financing	United Kingdom / A	Membership interest
CPL Retail Energy LP	Energy supply	United States / C	Membership interest
Direct Energy LP	Energy supply	United States / AI	Membership interest
Direct Energy Partnership	Energy supply	Canada / B	Membership interest
Direct Energy Resources Partnership	Holding entity	Canada / B	Membership interest
Finance Scotland 2016 Limited Partnership	Group financing	United Kingdom / W	Membership interest
Finance Scotland CEPS Limited Partnership	Group financing	United Kingdom / W	Membership interest
Finance Scotland CPP Limited Partnership	Group financing	United Kingdom / W	Membership interest
Ignite Social Enterprise LP	Social enterprise investment fund	United Kingdom / A	Membership interest
WTU Retail Energy LP	Energy supply	United States / C	Membership interest

(i) For list of registered addresses, refer to note S10(d).

The following partnerships are fully consolidated into the Group Financial Statements and the Group has taken advantage of the exemption (as confirmed by regulation 7 of the Partnerships (Accounts) Regulations 2008) not to prepare or file separate accounts for these entities:

- Finance Scotland 2016 Limited Partnership;
- Finance Scotland CEPS Limited Partnership;
- Finance Scotland CPP Limited Partnership;
- Finance Scotland CPS Limited Partnership; and
- Ignite Social Enterprise LP.

(c) Joint arrangements and associates

31 December 2019	Principal activity	Country of incorporation/ registered address key (i)	Class of shares held	Indirect interest and voting rights (%)
Joint ventures (ii)				
Allegheny Solar 1 LLC	Energy supply and/or services	United States / BA	Membership interest	40.0%
Barrow Shipping Limited	Energy supply and/or services	United Kingdom / BB	Ordinary shares	50.0%
Celtic Array Limited	Development of an offshore windfarm	United Kingdom / A	Ordinary shares	50.0%
Eurowind Polska VI Sp z.o.o.	Operation of an onshore windfarm	Poland / BC	Ordinary shares	50.0%
Greener Ideas Limited	Development of flexible power generation sites	Republic of Ireland / G	Ordinary shares	50.0%
Rhiannon Wind Farm Limited	Dormant	United Kingdom / A	Ordinary shares	50.0%
Three Rivers Solar 1 LLC	Energy supply and/or services	United States / BC	Membership interest	40.0%
Three Rivers Solar 2 LLC	Energy supply and/or services	United States / BC	Membership interest	40.0%
Three Rivers Solar 3 LLC	Energy supply and/or services	United States / BC	Membership interest	40.0%
Vindpark Keblowo ApS	Operation of an onshore windfarm	Denmark / BD	Ordinary shares	50.0%
Associates (ii)				
Better Home Care Services Limited (iii)	Other information technology service activities	United Kingdom /BE	Ordinary shares	43.7%
C2 Centrica MT LLC (iii)	Energy supply and/or services	United States /BF	Membership interest	50.0%
Lake Acquisitions Limited	Holding company	United Kingdom / BG	Ordinary shares	20.0%
Veolia CHP Ireland Limited	Energy supply and power generation	Republic of Ireland / BH	Ordinary shares	20.0%

(i) For list of registered addresses, refer to note S10(d).
(ii) Further information on the principal joint ventures and associate investments held by the Group is disclosed in notes 6 and 14.
(iii) Acquired or established in 2019.

All Group companies principally operate within their country of incorporation unless noted otherwise.

S10. Related undertakings

(d) List of registered addresses

Registered address key	Address
A	Millstream, Maidenhead Road, Windsor, SL4 5GD, United Kingdom
B	350 7th Avenue SW, Suite 3400, Calgary AB T2P3N9, Canada (i)
C	3411 Silverside Road, Suite 104, Tatnall Building, Wilmington, DE 19810, United States
D	Thomas-Wimmer-Ring 1-3, 80539, Munich, Germany
E	1521 Concord Pike #303, Wilmington, DE 19803, United States
F	2 Wisconsin Circle #700, Chevy Chase, MD 20815, United States
G	1 Warrington Place, Dublin 2, Republic of Ireland (ii)
H	Woodland House, Woodland Park, Hessle, HU13 0FA, United Kingdom
I	Third Floor, St George's Court, Upper Church Street, Douglas, IM1 1EE, Isle of Man
J	Posthofbrug 12, 2600 Antwerp, Belgium
K	Wiegerbruinlaan 2A, 1422 CB Uithoorn, Netherlands
L	Neuer Wall 10, 20354 Hamburg, Germany (iii)
M	Place de la Défense 12, Maison de la Défense, 92974 Paris, France
N	1 The Seapoint Building, Clontarf, Dublin 3, Republic of Ireland
O	Milan (MI), Via Emilio Cornalia 26, Italy
P	Presidente Masaryk no. 61, Piso 7, Mexico, D.f. CP 11570, Mexico (iv)
Q	Strada Martir Colonel Ioan Uta nr.28 camera 1, Municipiul Timisoara judet Timis, Romania (v)
R	H-1106 Budapest Jászberényi út 24-36, Hungary
S	33-37 Athol Street, Douglas, IM1 1LB, Isle of Man
T	Skelagervej 1, DK 9000 Aalborg, Denmark
U	Gustav-Mahler-Platz 1, 20354 Hamburg, Germany (vi)
V	220 Orchard Road, #05-01 Midpoint Orchard, Singapore 238852, Republic of Singapore
W	1 Waterfront Avenue, Edinburgh, Scotland EH5 1SG (vii)
X	47 Esplanade, St Helier, JE1 0BD, Jersey
Y	3 Boulevard de Sebastopol, 75001, Paris, France
Z	Via Paleocapa Pietro 4, 20121, Milano, Italy
AA	G-74, LGF, Kalkaji, New Delhi, South Delhi, Delhi, 110019, India
AB	26 New Street, St Helier, JE2 3RA, Jersey
AC	Wiegerbruin laan 2a, 1422 CB Uithoorn, Netherlands (viii)
AD	Sterling Towers, 20 Marina, Lagos, Nigeria
AE	48-50 Sackville Street, Port of Spain, Trinidad and Tobago
AF	No.12A Sooty Street, Cnr Reddersburg & Virginia Street, Amberfield Glen, Rooihuiskraal, North Centurion Gauteng, 0175, South Africa
AG	333 Bay Street, Suite 400, Toronto ON, M5H 2R2, Canada
AH	500 Burrard Street, Suite 2900, Vancouver BC V6C A3, Canada (ix)
AI	2425 W. Loop South, #200, TX 77027, United States
AJ	15 North Mill Street, Nyack, NY 10960, United States
AK	1 More London Place, London, SE1 2AF, United Kingdom
AL	1430 Truxtun Avenue, 5th floor, Bakersfield, CA 93301, United States
AM	350 S. Northwest Highway #300, Park Ridge, IL 60068, United States
AN	20 A Heroiev Stalingrada Avenue, Kyiv 04210, Ukraine
AO	15 Atir Yeda Street, Kfar Saba, 44643, Israel
AP	WTS LLC, 67 East Park Place, Morristown, New Jersey 07960, United States
AQ	Level 54, Hopewell Centre, 183 Queens Road East, Hong Kong
AR	6 Landmark Square, 4th Floor, Stamford CT 06901, United States
AS	4640 Admiralty Way, 5th floor, Marine del Rey, California 90292, United States
AT	Lilleakerveien 8, 0283 Oslo, Norway
AU	First Floor, 20 Kingston Road, Staines-upon-Thames, TW18 4LG, United Kingdom
AV	Sanne, IFC5, St Helier, JE1 1ST, Jersey (x)
AW	Rådhuspladsen 16, 1550 København V, Denmark
AX	Transpolis Building, Polarisavenue 39, 2132 JH Hoofddorp, Netherlands
AY	Veritasvien 25, 4007 Stavanger, Norway
AZ	IQ Building, 15 Justice Mill Lane, Aberdeen, AB11 6EQ, United Kingdom
BA	1209 Orange Street, Wilmington, New Castle County, DE 19801, United States
BB	C/O Wilkin Chapman LLP, The Maltings, 11-15 Brayford Wharf East, Lincoln, LN5 7AY, United Kingdom

Supplementary information continued

S10. Related undertakings

Registered address key	Address
BC	Ul. Wysogotowska 23, 62-081 Przezmierowo, Wielkpolskie, Poland
BD	Mariagervej 58B, DK 9500 Hobro, Denmark
BE	24 Park Road South, Havant, Hampshire, PO19 1HB
BF	850 New Burton Road, Suite 201, Dover, DE 19904
BG	90 Whitfield Street, London, W1T 4EZ, United Kingdom
BH	Innovation House, DCU Innovation Campus, 11 Old Finglas Road, Glasnevin, Dublin 11, Republic of Ireland

(i) 5016892 Ontario Ltd., Brae Canada Ltd., Centrica Business Solutions Canada Inc, DER Development No.10 Ltd., Direct Energy Holdings (Alberta) Inc., Direct Energy HVAC Services Ltd., Direct Energy Partnership and Direct Energy Resources Partnership changed their registered address during the year from 2323 32nd Avenue N.E., Suite 260, Calgary, AB T2E 6Z3, Canada to the address listed above.
(ii) Greener Ideas Limited changed their registered address during the year from Webworks, Eglinton Street, Cork, Republic of Ireland to the address listed above.
(iii) Centrica Business Solutions Deutschland GmbH changed their registered address during the year from Graf-Adolf-Platz 12, 40213 Düsseldorf, Germany to the address listed above.
(iv) Centrica Business Solutions México S.A. de C.V. changed their registered address during the year from Av. Presidente Masaryk No 61 Int 503 Col Chapultepec Morales, Miguel Hidalgo Ciudad de Mexico, Mexico 11570 to the address listed above.
(v) Centrica Business Solutions Romania Srl changed their registered address during the year from 15-23 Bucuresti Nord Street, Windsor Building, Ground Floor, Office No.1 Voluntari, Ilfov County, Romania to the address listed above.
(vi) Centrica Energy Trading GmbH changed their registered address during the year from Schillerstr.7, 40721 Hilden (bei Düsseldorf), Germany to the address listed above.
(vii) Centrica Production Limited, Centrica Upstream Investment Limited, Finance Scotland 2016 Limited Partnership, Finance Scotland CEPS Limited Partnership and Finance Scotland CPP Limited Partnership changed their registered address during the year from IQ Building, 15 Justice Mill Lane, Aberdeen, AB11 6EQ, United Kingdom to the address listed above.
(viii) Centrica Nederland BV changed their registered address during the year from Transpolis Building, Polarisavenue 39, 2132 JH Hoofddorp, Netherlands to the address listed above.
(ix) Direct Energy (B.C.) Limited changed their registered address during the year from 1185 West Georgia Street, Suite 1700, Vancouver BC, V6E 4E6, Canada to the address listed above.
(x) NSGP (Ensign) Limited changed their registered address during the year from 13 Castle Street, St Helier, JE4 5UT, Jersey to the address listed above.

(e) Summarised financial information

Material associates and joint arrangements

Management has determined that the investment in Lake Acquisitions Limited is sufficiently material to warrant further disclosure on an individual basis. Accordingly, the Group presents summarised financial information, along with reconciliations to the amounts included in the consolidated Group Financial Statements, for this investee.

Lake Acquisitions Limited

Summarised statement of total comprehensive income

	2019				2018			
Year ended 31 December	**Associate information reported to Group £m**	**Unadjusted 20% share £m**	**Fair value and other adjustments £m**	**Group share £m**	Associate information reported to Group £m	Unadjusted 20% share £m	Fair value and other adjustments £m	Group share £m
Revenue	**2,463**	**493**	**–**	**493**	2,446	489	–	489
Operating profit before interest and tax	**268**	**54**	**(58)**	**(4)**	233	46	(66)	(20)
Profit for the year	**166**	**33**	**(46)**	**(13)**	153	31	(49)	(18)
Other comprehensive income	**145**	**29**	**–**	**29**	(6)	(1)	–	(1)
Total comprehensive income	**311**	**62**	**(46)**	**16**	147	30	(49)	(19)

Summarised balance sheet

	2019				2018			
31 December	**Associate information reported to Group £m**	**Unadjusted 20% share £m**	**Fair value and other adjustments (i) £m**	**Group share £m**	Associate information reported to Group £m	Unadjusted 20% share £m	Fair value and other adjustments (i) £m	Group share £m
Non-current assets	**18,558**	**3,712**	**702**	**4,414**	15,209	3,042	758	3,800
Current assets	**3,426**	**685**	**(1)**	**684**	3,237	648	(1)	647
Current liabilities	**(674)**	**(135)**	**–**	**(135)**	(670)	(134)	–	(134)
Non-current liabilities	**(13,057)**	**(2,611)**	**(105)**	**(2,716)**	(9,833)	(1,967)	(115)	(2,082)
Net assets	**8,253**	**1,651**	**596**	**2,247**	7,943	1,589	642	2,231

(i) Before cumulative impairments of £958 million (2018: £586 million) of the Group's associate investment.

During the year, dividends of £nil (2018: £20 million) were paid by the associate to the Group.

Joint operations – fields/assets

31 December 2019	Location	Percentage holding
Cygnus	UK North Sea	61%

S11. Non-controlling interests

The Group has one subsidiary undertaking with a non-controlling interest: Spirit Energy Limited, through which the Group carries out the majority of its exploration and production activities.

31 December	2019 Non-controlling interests %	2019 Loss for the year £m	2019 Total comprehensive loss £m	2019 Total equity £m	2019 Distributions to non-controlling interests £m	2018 Non-controlling interests %	2018 Profit for the year £m	2018 Total comprehensive income £m	2018 Total equity £m	2018 Distributions to non-controlling interests £m
Spirit Energy Limited	**31%**	**(80)**	**(96)**	**583**	**124**	31%	59	60	803	–

Summarised financial information

The summarised financial information disclosed is shown on a 100% basis. It represents the consolidated position of Spirit Energy Limited and its subsidiaries that would be shown in its consolidated financial statements prepared in accordance with IFRS under Group accounting policies before intercompany eliminations.

Summarised statement of total comprehensive income

Year ended 31 December	2019 £m	2018 £m
Revenue	**1,579**	1,854
(Loss)/profit for the year	**(258)**	191
Other comprehensive (loss)/income	**(52)**	3
Total comprehensive (loss)/income	**(310)**	194

Summarised balance sheet

31 December	2019 £m	2018 £m
Non-current assets	**4,200**	4,775
Current assets	**932**	1,243
Assets of disposal groups classified as held for sale	**11**	–
Current liabilities	**(606)**	(949)
Liabilities of disposal groups classified as held for sale	**(6)**	–
Non-current liabilities	**(2,651)**	(2,479)
Net assets	**1,880**	2,590

Summarised cash flow

Year ended 31 December	2019 £m	2018 £m
Net (decrease)/increase in cash and cash equivalents	**(57)**	37

Company Statement of Changes in Equity

	Share capital £m	Share premium £m	Capital redemption reserve £m	Retained earnings £m	Other equity (note II) £m	Total equity £m
1 January 2018	348	2,121	26	2,745	(92)	5,148
Adjustment on adoption of IFRS 9	–	–	–	(14)	(28)	(42)
Profit for the year	–	–	–	634	–	634
Other comprehensive income	–	–	–	–	117	117
Employee share schemes	–	–	–	3	27	30
Scrip dividend	6	119	–	–	–	125
Dividends paid to equity holders	–	–	–	(673)	–	(673)
31 December 2018	354	2,240	26	2,695	24	5,339
Profit for the year	–	–	–	567	–	**567**
Other comprehensive loss	–	–	–	–	(59)	**(59)**
Employee share schemes and other share transactions	–	–	2	(10)	51	**43**
Scrip dividend	6	90	–	–	–	**96**
Dividends paid to equity holders	–	–	–	(561)	–	**(561)**
31 December 2019	**360**	**2,330**	**28**	**2,691**	**16**	**5,425**

As permitted by section 408(3) of the Companies Act 2006 no Income Statement or Statement of Comprehensive Income is presented.

The Directors propose a final dividend of 3.50 pence per share (totalling £204 million) for the year ended 31 December 2019. Details of the dividends are given in note 11 to the consolidated Group Financial Statements.

Details of the Company's share capital are provided in the Group Statement of Changes in Equity and note 25 to the consolidated Group Financial Statements.

The notes on pages 198 to 207 form part of these Financial Statements, along with note 25 to the consolidated Group Financial Statements.

Company Balance Sheet

31 December	Notes	2019 £m	2018 £m
Non-current assets			
Property, plant and equipment	IV	**15**	24
Investments	V	**2,262**	2,258
Trade and other receivables	VI	**71**	44
Derivative financial instruments	VII	**241**	208
Retirement benefit assets	XII	**108**	154
Securities		**103**	216
		2,800	2,904
Current assets			
Trade and other receivables	VI	**13,770**	13,422
Derivative financial instruments	VII	**109**	76
Current tax assets		**11**	11
Cash and cash equivalents		**434**	713
Securities		**124**	–
		14,448	14,222
Total assets		**17,248**	17,126
Current liabilities			
Derivative financial instruments	VII	**(104)**	(34)
Trade and other payables	IX	**(6,651)**	(7,049)
Provisions for other liabilities and charges		**(1)**	(2)
Bank overdrafts, loans and other borrowings	XI	**(631)**	(203)
		(7,387)	(7,288)
Non-current liabilities			
Deferred tax liabilities	X	**(11)**	(20)
Derivative financial instruments	VII	**(36)**	(44)
Trade and other payables	IX	**(168)**	(134)
Provisions for other liabilities and charges		**(1)**	–
Retirement benefit liabilities	XII	**(62)**	(63)
Bank loans and other borrowings	XI	**(4,158)**	(4,238)
		(4,436)	(4,499)
Total liabilities		**(11,823)**	(11,787)
Net assets		**5,425**	5,339
Share capital		**360**	354
Share premium		**2,330**	2,240
Capital redemption reserve		**28**	26
Retained earnings [(i)]		**2,691**	2,695
Other equity	II	**16**	24
Total shareholders' equity		**5,425**	5,339

(i) Retained earnings includes a net profit after taxation of £567 million (2018: £634 million).

The Financial Statements on pages 196 to 207, of which the notes on pages 198 to 207 form part, along with note 25 to the consolidated Group Financial Statements, were approved and authorised for issue by the Board of Directors on 12 February 2020 and were signed on its behalf by:

Iain Conn
Group Chief Executive

Chris O'Shea
Group Chief Financial Officer

Notes to the Company Financial Statements

I. General information and principal accounting policies of the Company

General information

The Company is a public company limited by shares, incorporated and domiciled in the UK, and registered in England and Wales. The registered office is Millstream, Maidenhead Road, Windsor, Berkshire, SL4 5GD.

The Company Financial Statements are presented in pounds sterling with all values rounded to the nearest million pounds. Pounds sterling is the functional currency of the Company.

Basis of preparation

The Company Financial Statements 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, measurement and disclosure requirements of International Financial Reporting Standards as adopted by the EU (Adopted IFRSs) but makes amendments where necessary in order to comply with Companies Act 2006 and sets out below where advantage of the FRS 101 disclosure exemptions has been taken.

From 1 January 2019, the following standard, amendments and interpretations are effective in the Company's Financial Statements:
- IFRS 16, 'Leases';
- Amendments to IAS 19, 'Plan Amendment, Curtailment or Settlement'.

The adoption of IFRS 16 had a minimal impact on the Company's Financial Statements. The amendments to IAS 19 are detailed in note 1 of the Group Financial Statements.

Other amendments effective during the year did not have any impact on the Company's Financial Statements.

In these Financial Statements, the Company has applied the exemptions available under FRS 101 in respect of the following disclosures:
- the requirements of IAS 7: 'Statement of cash flows';
- the statement of compliance with Adopted IFRSs;
- the effects of new but not yet effective IFRSs;
- prior year reconciliations for property, plant and equipment and intangible assets;
- the prior year reconciliation in the number of shares outstanding at the beginning and at the end of the year for share capital;
- disclosures in respect of related party transactions with wholly owned subsidiaries in a group;
- disclosures in respect of the compensation of key management personnel; and
- disclosures in respect of capital management.

As the consolidated Financial Statements of Centrica plc, which are available from the registered office, include the equivalent disclosures, the Company has also taken the exemptions under FRS 101 available in respect of the following disclosures:
- IFRS 2: 'Share-based payment' in respect of Group-settled share-based payments; and
- certain disclosures required by IFRS 13: 'Fair value measurement' and the disclosures required by IFRS 7: 'Financial instruments: disclosures' have not been provided apart from those which are relevant for the financial instruments which are held at fair value.

Measurement convention

The Company Financial Statements have been prepared on the historical cost basis except for: investments in subsidiaries that have been recognised at deemed cost on transition to FRS 101; derivative financial instruments, financial instruments designated at fair value through profit or loss on initial recognition or required to be measured at fair value through profit or loss or other comprehensive income on initial recognition, and the assets of the defined benefit pension schemes that have been measured at fair value; the liabilities of the defined benefit pension schemes that have been measured using the projected unit credit valuation method; and the carrying values of recognised assets and liabilities qualifying as hedged items in fair value hedges that have been adjusted from cost by the changes in the fair values attributable to the risks that are being hedged.

Going concern

The accounts have been prepared on a going concern basis, as described in the Directors' Report and note 24(b) of the consolidated Group Financial Statements.

Critical accounting judgements and key sources of estimation uncertainty

The Company does not have any critical accounting judgements. It is subject to estimation uncertainty related to its share of the Group's pension scheme surplus/deficit, as detailed further in note 22 of the consolidated Group Financial Statements. The valuation of the Company's investments is also a key source of estimation uncertainty. The Company's net assets were higher than its market capitalisation on 31 December 2019, and this was an indicator of impairment. However, the estimate of the recoverable amounts of these investments were in excess of their carrying values and as a result, no impairment has been reflected.

I. General information and principal accounting policies of the Company

Principal accounting policies

The accounting policies set out below have, unless otherwise stated, been applied consistently to all periods presented in these Company Financial Statements.

Employee share schemes

The Group has a number of employee share schemes under which it makes equity-settled share-based payments as detailed in the Remuneration Report on pages 82 to 93 and in note S2 to the consolidated Group Financial Statements. Equity-settled share-based payments are measured at fair value at the date of grant (excluding the effect of non-market-based vesting conditions). The fair value determined at the grant date is expensed on a straight-line basis together with a corresponding increase in equity over the vesting period, based on the Group's estimate of the number of awards that will vest and adjusted for the effect of non-market-based vesting conditions. The issue of share incentives by the Company to employees of its subsidiaries represents additional capital contributions. When these costs are recharged to the subsidiary undertaking, the investment balance is reduced accordingly.

Fair value is measured using methods detailed in note S2 to the consolidated Group Financial Statements.

Foreign currencies

The Company's functional and presentational currency is pounds sterling. Transactions in foreign currencies are translated at the rate of exchange ruling at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are translated into pounds sterling at closing rates of exchange. Exchange differences on monetary assets and liabilities are taken to the Income Statement.

Property, plant and equipment

PP&E is included in the Balance Sheet at cost, less accumulated depreciation and any provisions for impairment. The initial cost of an asset comprises purchase price and construction cost and any costs directly attributable to bringing the asset into operation. The purchase price or construction cost is the aggregate amount paid and the fair value of any other consideration given to acquire the asset.

Depreciation is charged so as to write off the cost of assets over their estimated useful lives, on a straight-line basis, over a period of 3 to 10 years.

Investments

Fixed asset investments in subsidiaries' shares are held at deemed cost on transition to FRS 101 and at cost in accordance with IAS 27: 'Separate financial statements', less any provision for impairment as necessary for any subsequent investments.

Impairment

The Company's accounting policies in respect of impairment of property, plant and equipment, intangible assets and financial assets are consistent with those of the Group.

The carrying values of investments in subsidiary undertakings are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, then the asset's recoverable amount is estimated.

The recoverable amount of an investment in a subsidiary undertaking is the greater of its value in use and its fair value less costs of disposal. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. The Company's impairment policies in relation to financial assets are consistent with those of the Group, with additional consideration given to amounts owed by Group undertakings. Except for certain loans due in greater than one year, all outstanding receivable balances are repayable on demand and arise from funding provided by the Company to its subsidiaries. The Company deems it unlikely that net receivers of funding would be able to repay loan balances in full at the end of the reporting period if the debt was called upon and in such circumstances the counterparty would either negotiate extended credit terms with the Company or obtain external financing to repay the balance. As such, the expected credit loss is either considered immaterial based on discounting the loan over the extended payment term, or has been calculated by applying a default loss rate based on the actual or proxy credit rating of the counterparty. No change in credit risk is deemed to have occurred since initial recognition for amounts not repayable and therefore a 12-month expected credit loss has been calculated based on the assessed probability of default.

The Company has applied the impairment requirements of IFRS 9 to financial guarantees issued to its subsidiary undertakings. Expected credit losses on such arrangements have been calculated according to the nature of the guarantee and the Company's perceived exposure at the balance sheet date.

I. General information and principal accounting policies of the Company

Leases

At inception of a contract, the Company assesses whether a contract is, or contains, a lease. A contract is, or contains, a lease, if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. To assess whether a contract conveys the right to control the use of an identified asset, the Company assesses whether:

- the contract involves the use of an identified asset;
- the Company has the right to obtain substantially all the economic benefits from use of the asset throughout the period of use; and
- the Company has the right to direct the use of the asset.

As a lessee

The Company recognises a right-of-use asset and a lease liability at the lease commencement date. The right-of-use asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located, less any lease incentives received. The right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the earlier of the end of the useful life of the right-of-use asset or the end of the lease term. The estimated useful lives of right-of-use assets are determined on the same basis as those of property and equipment. In addition, the right-of-use asset is periodically reduced by impairment losses, if any, and adjusted for certain re-measurements of the lease liability.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounting using the interest rate implicit in the lease or, if that rate cannot be readily determined, the Company's incremental borrowing rate.

Lease payments included in the measurement of the lease liability comprise: fixed payments (including in-substance fixed payments), variable lease payments that depend on an index or a rate (initially measured using the index or rate as at the commencement date), amounts expected to be payable under a residual value guarantee, and the exercise price under a purchase option that the Company is reasonably certain to exercise, lease payments in an optional renewal period if the Company is reasonably certain to exercise an extension option, and penalties for early termination of a lease unless the Company is reasonably certain not to terminate early. Variable lease payments that do not depend on an index or rate are recognised in profit or loss in the period in which the event or condition that triggers those payments occurs. The lease liability is subsequently measured at amortised cost using the effective interest method. It is re-measured when there is a change in future lease payments arising from a change in an index or rate, if there is a change in the Company's estimate of the amount expected to be payable under a residual value guarantee, or if the Company changes its assessment of whether it will exercise a purchase, lease-term extension or termination option. When the lease liability is re-measured in this way, a corresponding adjustment is made to the carrying amount of the right-of-use asset or is recorded in profit or loss if the carrying amount of the right-of-use asset has been reduced to zero.

In the prior year, the determination of whether an arrangement is, or contains, a lease was based on the substance of the arrangement and required an assessment of whether the fulfilment of the arrangement was dependent on the use of a specific asset or assets and whether the arrangement conveyed a right to use the asset or assets. Leases were classified as finance leases whenever the terms of the lease transferred substantially all of the risks and rewards of ownership to the lessee. All other leases were classified as operating leases.

Pensions and other post-employment benefits

The Company's employees participate in a number of the Group's defined benefit pension schemes. The total Group cost of providing benefits under defined benefit schemes is determined separately for each of the Group's schemes under the projected unit credit actuarial valuation method. Actuarial gains and losses are recognised in full in the period in which they occur. The key assumptions used for the actuarial valuation are based on the Group's best estimate of the variables that will determine the ultimate cost of providing post-employment benefits, on which further detail is provided in notes 3(b) and 22 to the consolidated Group Financial Statements.

The Company's share of the total Group surplus or deficit at the end of the reporting period for each scheme is calculated in proportion to the Company's share of ordinary employer contributions to that scheme during the year; ordinary employer contributions are determined by the pensionable pay of the Company's employees within the scheme and the cash contribution rates set by the scheme trustees. Note that as a participant in these multi-employer schemes, the Company could be liable for other entities' obligations (for example under section 75 of the Pensions Act). See note 22 of the consolidated Group Financial Statements for details of the overall scheme obligations. Current service cost is calculated with reference to the pensionable pay of the Company's employees. The Company's share of the total Group interest on scheme liabilities, expected return on scheme assets and actuarial gains or losses is calculated in proportion to ordinary employer contributions in the prior accounting period. Changes in the surplus or deficit arising as a result of the changes in the Company's share of total ordinary employer contributions are also treated as actuarial gains or losses.

I. General information and principal accounting policies of the Company

Taxation

Current tax, including UK corporation tax, is provided at amounts expected to be paid (or recovered) using the tax rates and laws that have been enacted or substantively enacted by the balance sheet date.

Deferred tax is recognised in respect of all temporary differences identified at the balance sheet date, except for differences arising on:

- the initial recognition of an asset or liability in a transaction which is not a business combination and which at the time of the transaction affects neither accounting profit nor taxable profit; and
- investments in subsidiaries where the Company is able to control the timing of the reversal of the difference and it is probable that the difference will not reverse in the foreseeable future.

Temporary differences are differences between the carrying amount of the Company's assets and liabilities and their tax base.

Deferred tax assets and liabilities are offset when the Company has a legally enforceable right to offset current tax assets and liabilities and the deferred tax assets and liabilities relate to taxes levied by the same tax authority.

Deferred tax assets that are not eligible for offset against deferred tax liabilities are recognised only when, on the basis of all available evidence, it can be regarded as probable that there will be suitable taxable profits in the foreseeable future, against which the deductible temporary difference can be utilised.

Deferred tax is measured at the average tax rates that are expected to apply in the periods in which the asset is realised or the liability is settled, based on tax rates and laws that have been enacted or substantively enacted by the balance sheet date. Measurement of deferred tax liabilities and assets reflects the tax consequences expected from the manner in which the asset or liability is recovered or settled.

The tax expense for the year comprises current and deferred tax. Tax is recognised in the Income Statement, except to the extent that it relates to items recognised in other comprehensive income or directly in equity. In this case, the tax is also recognised in other comprehensive income or directly in equity, respectively.

Financial instruments

The Company's accounting policies for financial instruments are consistent with those of the Group as disclosed in note S2 to the consolidated Group Financial Statements. The Company's financial risk management policies are consistent with those of the Group and are described in the Strategic Report – Principal Risks and Uncertainties on pages 34 to 43 and in note S3 to the Group Financial Statements.

Presentation of derivative financial instruments

In line with the Group's accounting policy for derivative financial instruments, the Company has classified those derivatives held for the purpose of treasury management as current or non-current, based on expected settlement dates.

II. Other equity

	Cash flow hedging reserve £m	Actuarial gains and losses reserve £m	Financial asset at FVOCI reserve (previously AFS) £m	Treasury and own shares reserve £m	Share-based payments reserve £m	Total £m
1 January 2018	(1)	(82)	33	(142)	100	(92)
Adjustment on adoption of IFRS 9	–	–	(28)	–	–	(28)
Losses on revaluation of equity investments measured at fair value through other comprehensive income	–	–	(2)	–	–	(2)
Actuarial gain	–	133	–	–	–	133
Employee share schemes:						
Increase in own shares	–	–	–	(11)	–	(11)
Exercise of awards	–	–	–	46	(51)	(5)
Value of services provided	–	–	–	–	43	43
Cash flow hedges:						
Net gains	22	–	–	–	–	22
Transferred to income and expense	(10)	–	–	–	–	(10)
Taxation on above items	(2)	(25)	1	–	–	(26)
31 December 2018	9	26	4	(107)	92	24
Gains on revaluation of equity investments measured at fair value through other comprehensive income	–	–	4	–	–	**4**
Actuarial loss	–	(72)	–	–	–	**(72)**
Employee share schemes:						
Exercise of awards	–	–	–	70	(60)	**10**
Value of services provided	–	–	–	–	41	**41**
Cash flow hedges:						
Net losses	(6)	–	–	–	–	**(6)**
Transferred to income and expense	2	–	–	–	–	**2**
Taxation on above items	–	13	–	–	–	**13**
31 December 2019	**5**	**(33)**	**8**	**(37)**	**73**	**16**

III. Directors and employees

Employee costs

Year ended 31 December	**2019 £m**	2018 £m
Wages and salaries	**(21)**	(20)
Other	**(18)**	(16)
	(39)	(36)

Average number of employees during the year

Year ended 31 December	**2019 Number**	2018 Number
Administration	**82**	66
Power	**74**	79
	156	145

IV. Property, plant and equipment

	2019 £m
Cost	
1 January	**29**
Re-measurement of right-of-use asset	**(2)**
Disposals	**(1)**
31 December	**26**
Accumulated depreciation	
1 January	**(5)**
Charge for year	**(6)**
31 December	**(11)**
NBV at 31 December	**15**

Included within the above balance is £15 million of assets held as right-of-use assets (2018: £23 million of assets held under finance leases).

V. Investments in subsidiaries

	2019 (i) £m	2018 (i) £m
Cost		
1 January	**2,258**	2,286
Employee share scheme net capital movement (i)	**4**	(28)
31 December	**2,262**	2,258

(i) Employee share scheme movement is the net change in shares to be awarded under employee share schemes to employees of Group undertakings. Direct investments are held in Centrica Holdings Limited, Centrica Trading Limited and Centrica Beta Holdings Limited, all of which are incorporated in England, and Rhodes Holdings HK Limited, which is incorporated in Hong Kong. Related undertakings are listed in note S10 to the consolidated Group Financial Statements.

The Directors believe that the carrying value of the investments is supported by their realisable value.

VI. Trade and other receivables

31 December	2019 Current (i) £m	2019 Non-current (ii) £m	2018 Current (i) £m	2018 Non-current (ii) £m
Amounts owed by Group undertakings	**13,763**	**65**	13,414	39
Prepayments	**7**	**6**	8	5
	13,770	**71**	13,422	44

(i) The amounts receivable by the Company include £12,383 million (2018: £12,398 million) that bears interest at a quarterly rate determined by Group treasury and linked to the Group cost of funds. The quarterly rates ranged between 3.0% and 6.3% per annum during 2019 (2018: 2.8% and 5.7%). The other amounts receivable from Group undertakings are interest free. All amounts receivable from Group undertakings are unsecured and repayable on demand. Amounts receivable by the Company are stated net of provisions of £418 million (2018: £128 million).

(ii) The amounts receivable by the Company due after more than one year include £20 million (2018: £20 million) that bears interest at a quarterly rate determined by Group treasury and linked to the Group cost of funds. The quarterly rates ranged between 4.4% and 4.9% per annum during 2019 (2018: 3.7% and 4.1%). The other amounts receivable from Group undertakings are interest-free. All amounts receivable from Group undertakings are unsecured and repayable in two to three years.

VII. Derivative financial instruments

31 December	2019 Current £m	2019 Non-current £m	2019 Total £m	2018 Current £m	2018 Non-current £m	2018 Total £m
Derivative financial assets	**109**	**241**	**350**	76	208	284
Derivative financial liabilities	**(104)**	**(36)**	**(140)**	(34)	(44)	(78)

VIII. Financial instruments

(a) Determination of fair values

The Company's policy for the classification and valuation of financial instruments carried at fair value into one of the three hierarchy levels determined in accordance with IFRS 13 are consistent with those of the Group, as detailed in note S6 to the Group Financial Statements.

(b) Financial instruments carried at fair value

31 December	Level 1 £m	Level 2 £m	2019 Total £m	Level 1 £m	Level 2 £m	2018 Total £m
Financial assets						
Derivative financial assets held for trading:						
Foreign exchange derivatives	–	113	**113**	–	42	42
Derivative financial assets in hedge accounting relationships:						
Interest rate derivatives	–	108	**108**	–	59	59
Foreign exchange derivatives	–	129	**129**	–	183	183
Treasury gilts designated FVTPL	124	–	**124**	126	–	126
Debt instruments	77	–	**77**	68	–	68
Equity instruments designated FVOCI	26	–	**26**	22	–	22
Cash and cash equivalents	–	432	**432**	–	699	699
Total financial assets at fair value	**227**	**782**	**1,009**	216	983	1,199
Financial liabilities						
Derivative financial liabilities held for trading:						
Interest rate derivatives	–	(23)	**(23)**	–	(26)	(26)
Foreign exchange derivatives	–	(115)	**(115)**	–	(42)	(42)
Derivative financial liabilities in hedge accounting relationships:						
Interest rate derivatives	–	(2)	**(2)**	–	(10)	(10)
Total financial liabilities at fair value	–	**(140)**	**(140)**	–	(78)	(78)

IX. Trade and other payables

31 December	2019 Current (i) £m	2019 Non-current (ii) £m	2018 Current (i) £m	2018 Non-current (ii) £m
Amounts owed to Group undertakings	**(6,616)**	**(158)**	(7,004)	(114)
Accruals and other creditors	**(35)**	**(10)**	(45)	(20)
	(6,651)	**(168)**	(7,049)	(134)

(i) The amounts payable by the Company include £5,120 million (2018: £7,004 million) that bears interest at a quarterly rate determined by Group treasury and linked to the Group cost of funds. The quarterly rates ranged between 3.0% and 6.3% per annum during 2019 (2018: 2.8% and 5.7%). Other amounts payable by the Company are interest free.

(ii) The amounts payable by the Company due after more than one year include £120 million (2018: £100 million) that bears interest at the prevailing LIBOR rate less 0.05%. These amounts payable are due in over five years. Other amounts payable by the Company are interest free.

X. Deferred tax

	Retirement benefit obligation £m	Other £m	Total £m
1 January 2018	7	(7)	**–**
Credit/(charge) to income	8	(2)	**6**
Charge to equity	(25)	(1)	**(26)**
31 December 2018	(10)	(10)	**(20)**
(Charge)/credit to income	(6)	3	**(3)**
Credit to equity	12	–	**12**
31 December 2019	**(4)**	**(7)**	**(11)**

Other deferred tax liabilities primarily relate to other temporary differences. All deferred tax crystallises in over one year.

XI. Bank overdrafts, loans and other borrowings

31 December	2019 Current £m	2019 Non-current £m	2018 Current £m	2018 Non-current £m
Bank loans and overdrafts	**(483)**	**(144)**	(22)	(149)
Bonds	**(60)**	**(4,005)**	(90)	(4,072)
Interest accruals	**(82)**	**–**	(85)	–
Lease obligations (2018: finance lease obligations)	**(6)**	**(9)**	(6)	(17)
	(631)	**(4,158)**	(203)	(4,238)

Disclosures in respect of the Group's financial liabilities are provided in note 24 to the Group Financial Statements.

XII. Pensions

(a) Summary of main schemes

The Company's employees participate in the following Group defined benefit pension schemes: Centrica Pension Plan (CPP), Centrica Pension Scheme (CPS) and Centrica Unfunded Pension Scheme. Its employees also participate in the defined contribution section of the Centrica Pension Scheme. Information on these schemes is provided in note 22 to the Group Financial Statements.

Together with the Centrica Engineers Pensions Scheme (CEPS), CPP and CPS form the significant majority of the Group's and Company's defined benefit obligation and are referred to below and in the Group Financial Statements as the 'Registered Pension Schemes'.

(b) Accounting assumptions, risks and sensitivity analysis

The accounting assumptions, risks and sensitivity analysis for the Registered Pension Schemes are provided in note 22 to the consolidated Group Financial Statements.

(c) Movements in the year

	2019		2018	
	Pension liabilities £m	**Pension assets £m**	Pension liabilities £m	Pension assets £m
1 January	**(1,370)**	**1,461**	(1,082)	1,052
Items included in the Company Income Statement:				
Current service cost	**(11)**	**–**	(14)	–
Past service credit/(cost)	**29**	**–**	(18)	–
Interest on scheme liabilities	**(39)**	**–**	(28)	–
Expected return on scheme assets	**–**	**43**	–	28
Items included in the Company Statement of Comprehensive Income:				
Actuarial (loss)/gain	**(75)**	**3**	(255)	388
Other movements:				
Employer contributions	**–**	**32**	–	25
Benefits paid from schemes	**47**	**(47)**	32	(32)
Transfers	**(27)**	**–**	(5)	–
31 December	**(1,446)**	**1,492**	(1,370)	1,461

Presented in the Company Balance Sheet as:

31 December	**2019 £m**	2018 £m
Retirement benefit pension assets	**108**	154
Retirement benefit pension liabilities	**(62)**	(63)
	46	91

Of the pension schemes liabilities, £62 million (2018: £63 million) relates to the Centrica Unfunded Pension Scheme.

(d) Analysis of the actuarial losses recognised in reserves (note II)

Year ended 31 December	**2019 £m**	2018 £m
Actuarial gain (actual return less expected return on pension scheme assets)	**3**	388
Experience gain/(loss) arising on the scheme liabilities	**42**	(3)
Changes in assumptions underlying the present value of the schemes' liabilities	**(117)**	(252)
Actuarial (loss)/gain recognised in reserves before adjustment for taxation	**(72)**	133
Cumulative actuarial gains/(losses) recognised in reserves at 1 January, before adjustment for taxation	**32**	(101)
Cumulative actuarial (losses)/gains recognised in reserves at 31 December, before adjustment for taxation	**(40)**	32

XII. Pensions

(e) Defined benefit pension scheme contributions

Note 22 to the Group Financial Statements provides details of the triennial review carried out at 31 March 2018 in respect of the UK Registered Pension Schemes and the future pension scheme contributions, including asset-backed arrangements, agreed as part of this review. Under IAS 19, the Company's contribution and trustee interest in the Scottish Limited Partnerships are recognised as scheme assets.

The Company estimates that it will pay £9 million of employer contributions during 2020 at an average rate of 19% of pensionable pay together with contributions via the salary sacrifice arrangement of £3 million.

(f) Pension scheme assets

	2019			2018		
31 December	Quoted £m	Unquoted £m	Total £m	Quoted £m	Unquoted £m	Total £m
Equities	188	346	534	1,991	351	2,342
Corporate bonds	2,646	–	2,646	1,118	–	1,118
High-yield debt	1,015	1,288	2,303	595	1,360	1,955
Liability matching assets	1,430	1,075	2,505	1,581	994	2,575
Property	–	316	316	–	395	395
Cash pending investment	695	–	695	102	–	102
Asset-backed contribution assets	–	738	738	–	802	802
Group pension scheme assets (i)	5,974	3,763	9,737	5,387	3,902	9,289

	2019 £m	2018 £m
Company share of the above	1,492	1,461

(i) Total pension scheme assets for the UK pension schemes.

XIII. Commitments

At 31 December 2019, the Company had commitments of £101 million (2018: £135 million) relating to contracts for outsourced services. The Company's commitment in respect of its agreement with Cheniere is detailed in note 23 to the consolidated Group Financial Statements.

In 2019 Centrica LNG Company Limited and the Company executed an agreement to transfer the LNG Sale and Purchase Agreement with Sabine Pass Liquefaction from the Company to Centrica LNG Company Limited. No commitment in respect to this agreement remains in the Company.

XIV. Related parties

During the year the Company accepted cash deposits on behalf of the Spirit Energy group of companies giving rise to a Trade and other payables balance of £312 million (2018: £532 million).

Gas and Liquids Reserves (Unaudited)

The Group's estimates of reserves of gas and liquids are reviewed as part of the full year reporting process and updated accordingly.

A number of factors affect the volumes of gas and liquids reserves, including the available reservoir data, commodity prices and future costs. Due to the inherent uncertainties and the limited nature of reservoir data, estimates of reserves are subject to change as additional information becomes available.

The Group discloses 2P gas and liquids reserves, representing the central estimate of future hydrocarbon recovery. Reserves for Centrica operated fields are estimated by in-house technical teams composed of geoscientists and reservoir engineers. Reserves for non-operated fields are estimated by the operator, but are subject to internal review and challenge.

As part of the internal control process related to reserves estimation, an assessment of the reserves, including the application of the reserves definitions, is undertaken by an independent technical auditor. An annual reserves assessment has been carried out by Gaffney, Cline & Associates for the Group's global reserves. Reserves are estimated in accordance with a formal policy and procedure standard.

The Group has estimated 2P gas and liquids reserves in Europe.

The principal fields in Spirit Energy are Kvitebjørn, Statfjord, Ivar Aasen, Cygnus, Maria, South and North Morecambe, Rhyl and Chiswick. The principal non-Spirit Energy field is Rough. The European reserves estimates are consistent with the guidelines and definitions of the Society of Petroleum Engineers, the Society of Petroleum Evaluation Engineers and the World Petroleum Council's Petroleum Resources Management System using accepted principles.

Estimated net 2P reserves of gas (billion cubic feet)	Spirit Energy (i)	Rough	**Total**
1 January 2019	698	103	**801**
Revisions of previous estimates (ii)	128	–	**128**
Disposals of reserves in place (iii)	(14)	–	**(14)**
Production (iv)	(129)	(40)	**(169)**
31 December 2019	683	63	**746**

Estimated net 2P reserves of liquids (million barrels)	Spirit Energy (i)	Rough	**Total**
1 January 2019	69	–	**69**
Revisions of previous estimates (ii)	23	–	**23**
Production (iv)	(10)	–	**(10)**
31 December 2019	82	–	**82**

Estimated net 2P reserves (million barrels of oil equivalent)	Spirit Energy (i)	Rough	**Total**
31 December 2019 (v)	196	10	**206**

(i) The movements represent Centrica's 69% interest in Spirit Energy.
(ii) Revision of previous estimates include those associated with North and South Morecambe, North Sea fields and Norwegian fields.
(iii) Reflects the disposal of interests in the Valemon and Sindre assets.
(iv) Represents total sales volumes of gas and oil produced from the Group's reserves.
(v) Includes the total of estimated gas and liquids reserves at 31 December 2019 in million barrels of oil equivalent.

Liquids reserves include oil, condensate and natural gas liquids.

Five Year Summary (Unaudited)

Year ended 31 December	2015 (restated) (i) (ii) (iii) £m	2016 (restated) (i) (ii) (iii) £m	2017 (restated) (i) (ii) (iii) £m	2018 (restated) (i) (ii) (iii) £m	**2019 (ii) £m**
Group revenue included in business performance (i)	27,971	27,102	28,035	27,831	**26,825**
Operating profit before exceptional items and certain re-measurements:					
Centrica Consumer (iii) (iv)	938	899	885	750	**505**
Centrica Business (iii) (iv)	159	369	99	75	**217**
Upstream (iii) (iv)	301	199	256	567	**179**
	1,398	1,467	1,240	1,392	**901**
Exceptional items and certain re-measurements after taxation	(1,717)	777	(407)	(416)	**(1,531)**
(Loss)/profit attributable to owners of the parent	(747)	1,672	328	183	**(1,023)**
	Pence	Pence	Pence	Pence	**Pence**
Earnings per ordinary share	(14.9)	31.4	5.9	3.3	**(17.8)**
Adjusted earnings per ordinary share	17.2	16.8	12.5	11.2	**7.3**
Dividend per share declared in respect of the year	12.0	12.0	12.0	12.0	**5.0**

Assets and liabilities

31 December	2015 (ii) £m	2016 (ii) £m	2017 (ii) £m	2018 (ii) £m	**2019 £m**
Goodwill and other intangible assets	3,824	4,383	4,326	4,456	**4,033**
Other non-current assets (i)	7,790	8,218	7,190	7,435	**5,826**
Net current (liabilities)/assets (i)	(521)	1,220	1,705	284	**(696)**
Non-current liabilities	(9,718)	(11,173)	(9,789)	(8,227)	**(7,474)**
Net (liabilities)/assets of disposal groups held for sale	(33)	196	–	–	**106**
Net assets	1,342	2,844	3,432	3,948	**1,795**
Net debt (note 24)	(4,747)	(3,473)	(2,596)	(2,656)	**(3,181)**

Cash flows

Year ended 31 December	2015 £m	2016 £m	2017 £m	2018 £m	**2019 £m**
Cash flow from operating activities before exceptional payments	2,278	2,669	2,016	2,182	**1,548**
Payments relating to exceptional charges in operating costs	(81)	(273)	(176)	(248)	**(298)**
Net cash flow from investing activities	(611)	(803)	32	(1,007)	**(503)**
Cash flow before cash flow from financing activities	1,586	1,593	1,872	927	**747**

(i) 2018 Group revenue included in business performance has been restated to include the net result of certain commodity purchases and sales trades that are deemed to be speculative in nature. Further details are given in note 1. Earlier periods have not been restated and therefore are not presented on a comparable basis.

(ii) Results for the years ended 2019, 2018 and 2017 are presented in accordance with IFRS 15: 'Revenue from contracts with customers'. Results for earlier periods have not been restated and therefore are not presented on a comparable basis.

(iii) Results have been restated to reflect the new operating structure of the Group. See note 1 for further details.

(iv) Adjusted operating profit has been restated to include the impact of business performance interest and taxation of joint ventures and associates.

Ofgem Consolidated Segmental Statement

Independent Auditor's Report to the Directors of Centrica plc and its Licensees

In our opinion the accompanying statement (the 'Ofgem Consolidated Segmental Statement' or 'CSS') of Centrica plc and its Licensees for the year ended 31 December 2019 is prepared, in all material respects, in accordance with:

- the requirements of Ofgem's Standard Condition 19A of the Electricity and Gas Supply Licences and Standard Condition 16B of the Electricity Generation Licences established by the regulator Ofgem; and
- the basis of preparation on pages 217 to 219.

We have audited the Ofgem Consolidated Segmental Statement of Centrica plc and its Licensees (as listed in footnote (i)) (the Group) for the year ended 31 December 2019 in accordance with the terms of our engagement letter dated 22 July 2019. The Ofgem Consolidated Segmental Statement has been prepared by the Directors of Centrica plc and its Licensees based on the requirements of Ofgem's Standard Condition 19A and the Electricity and Gas Supply Licenses and Standard Condition 16B of the Electricity Generation Licences (together, the 'Licences') and the basis of preparation on pages 217 to 219.

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 CSS section of our report.

We are independent of the Company in accordance with the ethical requirements that are relevant to our audit of the CSS in the United Kingdom, including the Financial Reporting Council's (the 'FRC's') Ethical Standard, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Emphasis of matter – basis of accounting

We draw attention to pages 217 to 219 of the CSS which describes the basis of accounting. The CSS is prepared to assist the Company in complying with the requirements of Ofgem's Standard Condition 19A of the Electricity and Gas Supply Licences and Standard Condition 16B of the Electricity Generation Licences established by the regulator Ofgem. The basis of preparation is not the same as segmental reporting under IFRS and/or statutory reporting. As a result, the CSS may not be suitable for another purpose. Our opinion is not modified in respect of this matter.

Conclusions relating to going concern

We are required by ISAs (UK) to report in respect of the following matters where:

- the Directors' use of the going concern basis of accounting in preparation of the CSS is not appropriate; or
- the Directors have not disclosed in the CSS any identified material uncertainties that may cast significant doubt about the Group's ability to continue to adopt the going concern basis of accounting for a period of at least twelve months from the date when the CSS is authorised for issue.

We have nothing to report in respect of these matters.

Other information

The Directors are responsible for the other information. The other information comprises the information included in the annual report, other than the CSS and our auditor's report thereon. Our opinion on the CSS does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the CSS, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the CSS or our knowledge obtained in the audit or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether there is a material misstatement in the CSS or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact.

We have nothing to report in respect of these matters.

Responsibilities of the Directors

The Directors are responsible for the preparation of the CSS in accordance with the Licences and the basis of preparation on pages 217 to 219 and for such internal control as the Directors determine is necessary to enable the preparation of the CSS that are free from material misstatement, whether due to fraud or error.

In preparing the CSS, the Directors are responsible for assessing the Group'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 to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities for the audit of the CSS

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

A further description of our responsibilities for the audit of the CSS is located on the Financial Reporting Council's website at: frc.org.uk/auditorsresponsibilities. This description forms part of our auditor's report.

Independent Auditor's Report to the Directors of Centrica plc and its Licensees

Use of this report

This report is made solely to the Company's Directors, as a body, in accordance with our engagement letter dated 22 July 2019 and solely for the purpose of assisting the Directors in reporting on the CSS to the Regulator Ofgem. We permit this report to be displayed on the Centrica plc website www.centrica.com and within the December 2019 Annual Report & Accounts (see footnote (ii)) to enable the Directors to show they have addressed their governance responsibilities by obtaining an independent assurance report in connection with the CSS. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Directors as a body and Centrica plc, for our work or this report, or for the opinions we have formed. The materiality level we used in planning and performing our audit was £20 million.

The engagement partner on the audit resulting in this independent auditor's report is Dean Cook.

Deloitte LLP
12 February 2020
London

(i) British Gas Trading Limited, Neas Energy Limited, Centrica Barry Limited, Centrica KPS Limited, Centrica PB Limited and Centrica KL Limited.
(ii) The maintenance and integrity of Centrica plc's website is the responsibility of the Directors of Centrica plc; the work carried out by the auditors does not involve consideration of these matters and accordingly, the auditors accept no responsibility for any changes that may have occurred to the CSS since it was initially presented on the website.

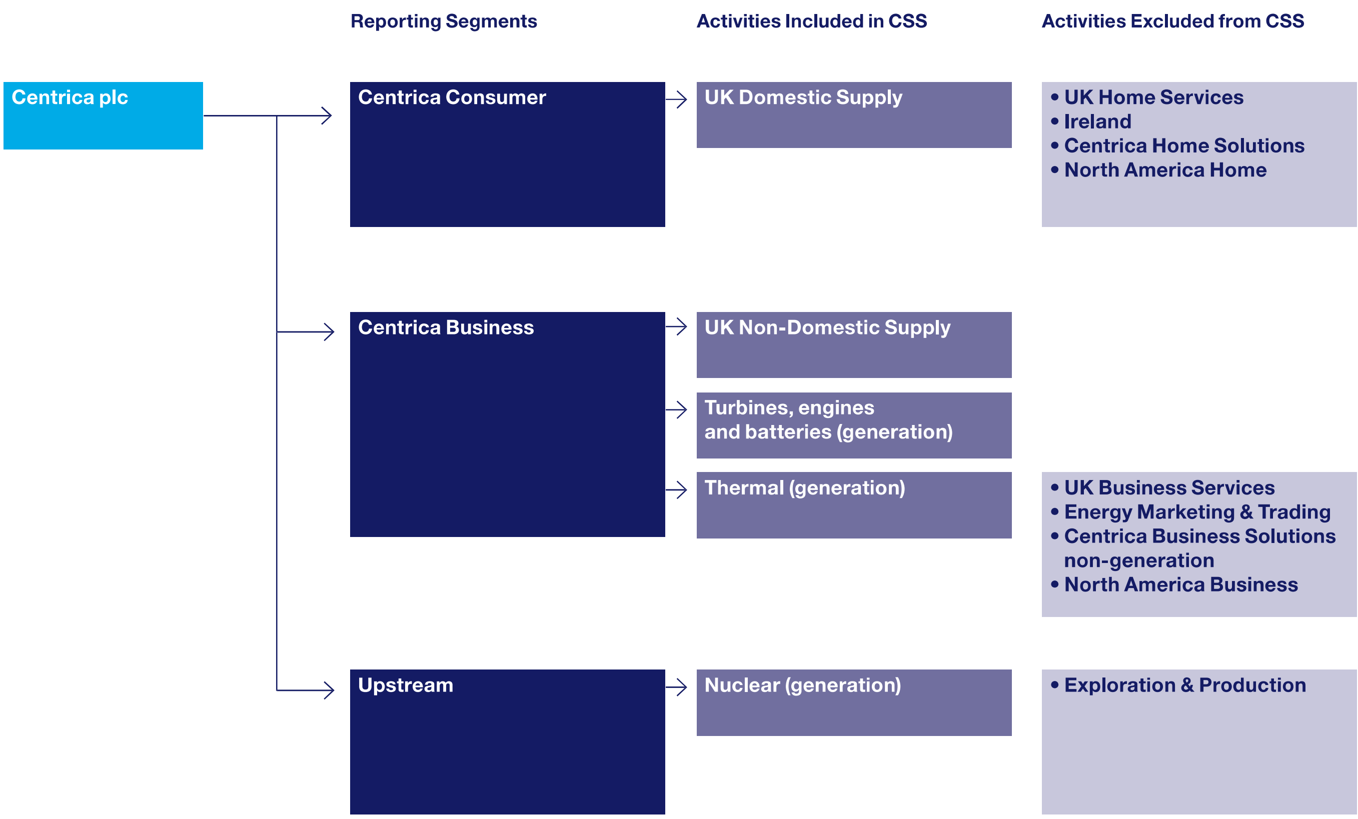
Introduction

The Ofgem Consolidated Segmental Statement (CSS) and required regulatory information on pages 212 to 221 are provided in order to comply with Standard Condition 16B of the Electricity Generation Licences and Standard Condition 19A of the Electricity and Gas Supply Licences.

The CSS and supporting information is prepared by the Directors in accordance with the Segmental Statements Guidelines issued by Ofgem. The CSS has been derived from and reconciled to the Centrica plc Annual Report and Accounts for the year ended 31 December 2019, which have been prepared in accordance with International Financial Reporting Standards (IFRS) adopted by the European Union (EU) and therefore comply with Article 4 of the EU IAS Regulation and those parts of the Companies Act 2006 applicable to companies reporting under IFRS.

Centrica plc operational reporting structure

Below is a summary of the Centrica plc Group's (Group) operational reporting structure. The CSS financial data has been extracted from the Centrica plc Annual Report and Accounts 2019 operating segments rather than with reference to specific legal entities. Certain activities included in the Group's operating segments have been excluded from the Generation and Supply segments of the CSS on the basis they are non-licensed activities (for example Business Services and trading activity unrelated to Generation or Supply) as illustrated below. The Centrica plc Annual Report and Accounts 2019 provides operating segment results in note 4. A full reconciliation between the relevant operating segment results and those disclosed for 'Domestic Supply', 'Non-Domestic Supply' and 'Generation' in this CSS is provided at the end of the report.



Centrica plc operational reporting structure

Centrica plc is the ultimate parent company of all 100% owned licensees. The individual supply and generation licences are held in legal entities whose licensed activities are reported as part of the Centrica plc Annual Report and Accounts 2019 within the operating segments shown above. The individual supply and generation licences held in subsidiaries, joint ventures or associates of Centrica plc during 2019 are detailed below:

Licensee	Licence	Ownership
British Gas Trading Limited	Supply	100%
Neas Energy Limited [i]	Supply	100%
Centrica Brigg Limited	Exempt	100%
Centrica Barry Limited	Generation	100%
Centrica KPS Limited	Generation	100%
Centrica Distributed Generation Limited	Exempt	100%
Centrica PB Limited	Generation	100%
Centrica KL Limited	Generation	100%
EDF Energy Nuclear Generation Limited [ii]	Generation	20% Associate

(i) Neas Energy holds a supply licence but currently does not supply any UK customers.
(ii) The Group holds a 20% investment in Lake Acquisitions Limited which indirectly owns 100% of EDF Energy Nuclear Generation Limited.

Financial statements

Ofgem consolidated segmental statement

Year ended 31 December 2019

	Unit	Electricity Generation		Aggregate Generation Business	Electricity Supply		Gas Supply		Aggregate Supply Business
		Nuclear	Thermal		Domestic	Non-Domestic	Domestic	Non-Domestic	
Total revenue	**£m**	**534.8**	**262.5**	**797.3**	**3,166.3**	**1,574.1**	**3,642.0**	**467.2**	**8,849.6**
Sales of electricity & gas	£m	496.5	232.1	**728.6**	3,088.2	1,574.1	3,569.0	467.2	**8,698.5**
Other revenue	£m	38.3	30.4	**68.7**	78.1	–	73.0	–	**151.1**
Total operating costs	**£m**	**(358.3)**	**(244.3)**	**(602.6)**	**(3,157.7)**	**(1,547.5)**	**(3,415.6)**	**(424.3)**	**(8,545.1)**
Direct fuel costs	£m	(90.7)	(144.9)	**(235.6)**	(1,093.3)	(601.3)	(1,678.6)	(248.1)	**(3,621.3)**
Direct costs	£m	(214.4)	(91.4)	**(305.8)**	(1,516.0)	(804.0)	(1,045.6)	(112.7)	**(3,478.3)**
Network costs	£m	(45.1)	(0.2)	**(45.3)**	(731.0)	(354.7)	(938.6)	(92.4)	**(2,116.7)**
Environmental and social obligation costs	£m	–	(58.5)	**(58.5)**	(722.4)	(423.0)	(41.9)	–	**(1,187.3)**
Other direct costs	£m	(169.3)	(32.7)	**(202.0)**	(62.6)	(26.3)	(65.1)	(20.3)	**(174.3)**
Indirect costs	£m	(53.2)	(8.0)	**(61.2)**	(548.4)	(142.2)	(691.4)	(63.5)	**(1,445.5)**
WACOF/E/G	**£/MWh, P/th**	**(8.9)**	**(48.4)**	**N/A**	**(65.9)**	**(55.7)**	**(60.3)**	**(51.2)**	**N/A**
EBITDA	**£m**	**176.5**	**18.2**	**194.7**	**8.6**	**26.6**	**226.4**	**42.9**	**304.5**
DA	£m	(149.4)	(50.0)	**(199.4)**	(44.2)	(10.8)	(54.3)	(4.4)	**(113.7)**
EBIT	**£m**	**27.1**	**(31.8)**	**(4.7)**	**(35.6)**	**15.8**	**172.1**	**38.5**	**190.8**
Volume	TWh, MThms	10.2	4.2	N/A	16.6	10.8	2,783.2	484.3	N/A
Average customer numbers/sites	'000s	N/A	N/A	N/A	5,359.0	463.3	6,586.0	189.0	N/A

	Unit	Electricity Supply Domestic	Electricity Supply Non-Domestic	Gas Supply Domestic	Gas Supply Non-Domestic	Aggregate Supply Business
Supply EBIT	**margin**	**(1.1)%**	**1.0%**	**4.7%**	**8.2%**	**2.2%**
Supply PAT	**£m**	**(28.7)**	**12.7**	**139.1**	**31.2**	**154.3**
Supply PAT	**margin**	**(0.9)%**	**0.8%**	**3.8%**	**6.7%**	**1.7%**

2018 Summarised CSS

Year ended 31 December 2018

	Unit	Electricity Generation		Aggregate Generation Business	Electricity Supply		Gas Supply		Aggregate Supply Business
		Nuclear	Thermal		Domestic	Non-Domestic	Domestic	Non-Domestic	
Total revenue	£m	540.8	236.7	777.5	3,054.9	1,393.4	3,860.3	431.2	8,739.8
EBIT	£m	45.7	(28.3)	17.4	48.4	10.7	417.8	28.8	505.7

	Unit	Electricity Supply Domestic	Electricity Supply Non-Domestic	Gas Supply Domestic	Gas Supply Non-Domestic	Aggregate Supply Business
Supply EBIT	margin	1.6%	0.8%	10.8%	6.7%	5.8%
Supply PAT	£m	39.4	8.6	337.6	23.9	409.5
Supply PAT	margin	1.3%	0.6%	8.7%	5.5%	4.7%

Glossary of terms

- 'WACOF/E/G' is weighted average cost of fuel (nuclear), electricity (supply) and gas (thermal and supply) calculated by dividing direct fuel costs by volumes. For the Thermal sub-segment, the cost of carbon emissions is added to direct fuel costs before dividing by the generated volume.
- 'EBITDA' is earnings before interest, tax, depreciation and amortisation, and is calculated by subtracting total operating costs from revenue.
- 'DA' is depreciation and amortisation.
- 'EBIT' is earnings before interest and tax, and is calculated by subtracting total operating costs, depreciation and amortisation from total revenue.
- 'Supply EBIT margin' is a profit margin expressed as a percentage and calculated by dividing EBIT by total revenue and multiplying by 100 for the Supply segment.
- 'Supply PAT' is profit after tax but before interest and is calculated by subtracting Group adjusted tax from EBIT for the Supply segment.
- 'Supply PAT margin' is a profit margin expressed as a percentage and calculated by dividing Supply PAT by total revenue and multiplying by 100 for the Supply segment.
- 'Volume' for Supply is supplier volumes at the meter point (i.e. net of losses); Generation volume is the volume of power that can actually be sold in the wholesale market (i.e. generation volumes after losses up to the point where power is received under the Balancing and Settlement Code but before subsequent losses).
- 'Average customer numbers/sites' are calculated by adding average monthly customer numbers/sites (as defined in the basis of preparation) and dividing by 12.
- 'Scheduling decisions' means the decision to run individual generation units.
- 'Responsible for interactions with the Balancing Market' means interactions with the Balancing Mechanism in electricity.
- 'Interacts with wider market participants to buy/sell energy' means the business unit is responsible for interacting with wider market participants to buy/sell energy, not the entity responsible for the buy/sell decision itself, which falls under 'Responsible for implementing hedging policy/makes decisions to buy/sell energy'.
- 'Matches own generation with own supply' means where there is some internal matching of generation and supply before either generation or supply interact with the wider market.
- 'Forecasts total system demand' means forecasting total system electricity demand or total system gas demand.
- 'Forecasts customer demand' means forecasting the total demand of own supply customers.
- 'Bears shape risk after initial hedge until market allows full hedge' means the business unit which bears financial risk associated with hedges made before the market allows fully shaped hedging.
- 'Bears short-term risk for variance between demand and forecast' means the business unit which bears financial risk associated with too little or too much supply for own customer demand.

Business functions table

Year ended 31 December 2019 – analysis of business functions [(i)]

The table below illustrates where the business functions reside.

	Generation	Supply	Another part of business
Operates and maintains generation assets	✓	–	–
Responsible for scheduling decisions	✓	–	–
Responsible for interactions with the Balancing Market	✓	✓	–
Responsible for determining hedging policy	✓ (output)	✓ (demand)	–
Responsible for implementing hedging policy/makes decision to buy and sell energy	✓ (output)	✓ (demand)	–
Interacts with wider market participants to buy/sell energy	✓ (bilateral)	✓ (market and bilateral)	✓ (market and bilateral) [(ii)]
Holds unhedged positions (either short or long)	✓	✓	✓ [(ii)]
Procures fuel for generation	✓	–	–
Procures allowances for generation	✓	–	–
Holds volume risk on positions sold (either internal or external)	✓	✓	–
Matches own generation with own supply	–	–	✓ [(ii) (iii)]
Forecasts total system demand	–	✓	–
Forecasts wholesale price	✓ [(iv)]	✓ [(iv)]	✓ [(iv)]
Forecasts customer demand	–	✓	–
Determines retail pricing and marketing strategies	–	✓	–
Bears shape risk after initial hedge until market allows full hedge	✓	✓	–
Bears short-term risk for variance between demand and forecast	–	✓	–

(i) The table reflects the business functions that impact our UK segments.
(ii) The Group's Supply and Generation businesses are separately managed. Both businesses independently enter into commodity purchases and sales with the market via Centrica Energy Limited (CEL), our market-facing legal entity. CEL forms part of our non-licensed element of Energy Marketing & Trading function, part of Centrica Business, and also conducts trading for the purpose of making profits in its own right. The Supply segment is also able to enter into market trades directly as part of its within day balancing activities (as well as external bilateral contracts).
(iii) 'Matches own generation with own supply' is undertaken in 'Another part of the business' (by CEL at market referenced prices), outside of the Generation and Supply segments.
(iv) A separate team forecasts the wholesale price for the benefit and use of the entire Group. This team does not formally reside in any particular segment but their costs are recharged across the Group.

Key:

✓ Function resides and profit/loss recorded in segment.
– Neither function nor profit/loss reside in segment.

Basis of preparation

The following notes provide a summary of the basis of preparation of the 2019 submission.

The Ofgem CSS segments our Supply and Generation activities and provides a measure of profitability, weighted average cost of fuel, and volumes, in order to increase energy market transparency for consumers and other stakeholders.

These statements have been prepared by the Directors of Centrica plc and its Licensees in accordance with Standard Condition 16B of the Electricity Generation Licences and Standard Condition 19A of the Electricity and Gas Supply Licences and the basis of preparation. Throughout the basis of preparation the first paragraph number relates to the generation licence and the second to the supply licence conditions respectively.

The financial data provided has been taken from the relevant licensee's and affiliate's financial information for the year ended 31 December 2019, included in the Centrica plc Annual Report and Accounts 2019 which have been prepared under IFRS as adopted by the EU (in accordance with paragraph 3/19A.3).

The CSS has been prepared on a going concern basis, as described in the Directors' Report and note 24 in the Centrica plc Annual Report and Accounts 2019.

For the Generation segment, we have included the financial results from all activities that relate to our generation licences. For clarity the following judgements have been made:

- the Group has a long-term tolling contract in respect of the Spalding power station, but does not specifically hold the generation licence. This arrangement provides the Group with the right to nominate 100% of the plant capacity in return for a mix of capacity payments and operating payments. We do not own the power station and the Group does not control the physical dispatch of the asset. This contractual arrangement has been accounted for as a lease (under IFRS) and therefore the financial result and volume has been included in the Thermal sub-segment, within the Generation segment;
- Brigg and Roosecote power stations had their licences revoked on 2 July 2015 (at their request) because they no longer required an electricity generation licence and are now exempt. Whilst we do not specifically hold a generation licence for these power stations, the financial results from these businesses have been included in the Thermal sub-segment and hence within the Generation segment;
- the Group has a 20% equity interest in Lake Acquisitions Limited, which owns eight nuclear power stations (through its indirect investment in EDF Energy Nuclear Generation Limited). Although we do not specifically hold a generation licence for any of the nuclear stations, our gross share of the financial result from this business (including any contractual arrangements) has been included in the Nuclear sub-segment and hence within the Generation segment; and
- where power is purchased from third parties (for example from wind farms, power stations or other bilateral arrangements) and we do not have an equity interest in, or a leasing arrangement (from an IFRS perspective) over the assets that generate this power, the result related to these activities is excluded from the Generation segment. In all cases, the Generation segment reports direct fuel costs and generation volumes on a consistent basis (if the purchase cost is a direct fuel cost, then the electricity generated is reported in volume).

Domestic Supply represents the revenue and associated costs in supplying gas and electricity to residential customers in the UK. Non-Domestic Supply represents the revenue and associated costs in supplying gas and electricity to business customers in the UK.

As a voluntary disclosure, to aid comparability, a summarised 2018 CSS with margins has been included within the report.

Revenues

Revenues, costs and profits of the Licensees have been defined below and prepared in compliance with the Group's accounting policies as detailed in notes 2, 3 and S2 of the Centrica plc Annual Report and Accounts 2019, except for joint ventures and associates which are presented gross (in accordance with paragraph 4(a)/19A.4(a)).

- Revenue from sales of electricity and gas for the Supply segment is recognised on the basis of gas and electricity supplied during the year to both domestic and non-domestic customers.
- Revenue from sales of electricity and gas includes an assessment of energy supplied to customers between the date of the last meter reading and the year end (unread). For the respective Supply segments this means electricity and gas sales. Revenue for domestic supply is after deducting dual fuel discounts where applicable, with the discount split evenly between electricity and gas. Government mandated social tariffs and discounts, such as the Warm Home Discount, and other social discounts, have also been deducted from Domestic Supply revenues directly, charged specifically to each fuel.
- Revenue from sales of electricity for the Generation segment is recognised on the basis of power supplied during the year. Power purchases and sales entered into to optimise the performance of each of the power Generation segments are presented net within revenue.

Basis of preparation

- The financial risks and rewards of owning and using the Group's power stations reside entirely in the reported Generation segment.
- Other respective segmental revenues not related to the sale of gas or power have been separately disclosed. Other revenues include:
  - £78.1 million (2018: £89.0 million) in Domestic Electricity Supply and £73.0 million (2018: £80.4 million) in Domestic Gas Supply primarily relating to New Housing Connections and smart meter installations;
  - £30.4 million (2018: £19.5 million) in Thermal principally relating to Supplementary Balancing Reserve (SBR), Short Term Operating Reserve (STOR), Triad revenue and Capacity Market income; and
  - £38.3 million (2018: £13.3 million) revenue in Nuclear not directly related to energy sales, such as capacity market income and provision of miscellaneous services.

Direct fuel costs

Direct fuel costs for both Generation and Supply include electricity, gas, nuclear fuel and imbalance costs.

- Energy supply to Domestic and Non-Domestic energy customers is procured at a market referenced price, through a combination of bilateral, over-the-counter (OTC) and exchange-based trades/contracts (see table below). Where energy is procured from within the Group it is also at a market referenced price on an OTC basis. The market referenced prices used are those prevailing at the time of procurement, which may differ from the price prevailing at the time of supply.
- Domestic and Non-Domestic fixed price products are hedged based upon anticipated demand at the start of the contract period. The majority of the gas and power for Non-Domestic energy and Domestic energy tariff products is purchased in advance (see table below).
- The exact Domestic and Non-Domestic purchasing patterns vary in response to the outlook for commodity markets and commercial factors.
- The Generation segment purchases gas and sells all of its energy at market referenced prices. Gas for turbines/engines is procured at market referenced prices through a combination of OTC and exchange-based trades/contracts. The cost to the power stations will reflect market referenced prices at the time of procurement, and so may differ from the price prevailing at the time of physical supply.

How we procure electricity, gas and carbon:

Long form bilateral contracts ('bilateral')	Individually negotiated contracts with non-standardised terms and conditions which may relate to size, duration or flexibility. Pricing is predominantly indexed to published market referenced prices, adjusted for transfer of risks, cost of carry and administration.
OTC	Broker supported market of standardised products, predominantly performed via screen-based trading. These transactions are between two parties, leaving both parties exposed to the other's default with no necessary intermediation of any exchange. An internal OTC price may be provided where market liquidity prevents external trading, with prices that are reflective of market conditions at the time of execution.
Exchange	Regulated electronic platform (notably ICE, APX, and N2EX) where standardised products are traded on exchange through the intermediary of the clearing house which becomes the counterparty to the trade. Membership of a clearing house is required which entails posting of cash or collateral as margin.

WACOF/WACOE/WACOG

- For Generation this represents a proxy for the weighted average input cost of gas, carbon and nuclear fuel, shown as £/MWh, used by the Generation business. Gas for turbines/engines is procured at market referenced prices through a combination of OTC and exchange-based trades/contracts. The cost to the power stations will reflect market referenced prices at the time of procurement, and so may differ from the price prevailing at the time of physical supply.
- For Supply this covers the wholesale energy cost, the energy element of reconciliation by difference (RBD) costs and balancing and shaping costs incurred by the Supply licensees. Again, gas and electricity is procured at market referenced prices through a combination of bilateral, OTC and exchange-based trades/contracts. The cost for the Supply business will reflect market referenced prices at the time of procurement, and so may differ from the price prevailing at the time of physical supply. Where gas is procured using (predominantly indexed) bilateral contracts, the fuel cost is then allocated between Domestic and Non-Domestic Supply using annually updated fixed percentages based on the historical split of tariff book volumes. Gas and Electricity balancing costs are allocated between Domestic and Non-Domestic Supply based on their respective volumes multiplied by an appropriate industry referenced price (for example APX or SAP).
- For electricity Supply the weighted average cost of electricity is shown as £/MWh. For gas Supply, the weighted average cost of gas is shown as p/th.

Direct costs

Direct costs for Supply and Generation are broken down into network costs, environmental and social obligation costs and other direct costs.

- Network costs for Supply and Generation include transportation costs, BSUOS and the transport element of RBD costs. Supply transportation costs include transportation and LNG costs, including £35.7 million incurred by Gas Domestic Supply in 2019, which enables the segment to secure supply by giving the ability to bring gas into the UK from overseas (2018: £38.3 million).
- Environmental and social obligation costs for Domestic Supply include ROCs, FIT, ECO and UK Capacity Market costs. Non-Domestic Supply includes the cost of LECs, ROCs, FIT and UK Capacity Market costs. Within the Domestic and Non-Domestic segments, the costs of LECs, FIT, ROCs and UK Capacity Market costs are included within Electricity, and ECO is allocated between Electricity and Gas based on the relevant legislation. Environmental and social obligation costs for the Generation segment relate to EU ETS carbon emission costs and carbon tax.
- Other direct costs for Generation include employee and maintenance costs.

Basis of preparation

- Other direct costs for Supply include brokers' costs and sales commissions when the costs have given rise directly to revenue, that is, producing a sale. They also include Elexon and Xoserve market participation and wider Smart metering programme costs.

Indirect costs

Indirect costs for Supply and Generation include operating costs such as sales and marketing, bad debt costs, costs to serve, IT, HR, finance, property, staffing and billing and metering costs (including smart meter costs).

- Indirect costs for the Generation, Domestic and Non-Domestic Supply segments (including corporate and business unit recharges) are allocated based on relevant drivers, which include turnover, headcount, operating profit, net book value of fixed assets and proportionate use/benefit. For Supply, indirect costs (including corporate recharges but excluding bad debt costs) are primarily allocated between Electricity and Gas on the basis of customer numbers (Domestic) and sites (Non-Domestic). Bad debt costs are allocated between Electricity and Gas on the basis of actual bad debt cost by individual contract in the billing system (Domestic) and on the basis of revenues (Non-Domestic).

Other

- For Supply, depreciation and amortisation is allocated between Electricity and Gas on the basis of customer numbers (Domestic) and sites (Non-Domestic).
- For the purposes of Supply PAT, tax is allocated between Gas and Electricity within both Domestic and Non-Domestic Supply based on their relative proportions of EBIT.
- For the Domestic Supply segment, customer numbers are stated based on the number of district meter point reference numbers (MPRNs) and meter point administration numbers (MPANs) in our billing system (for gas and electricity respectively), where it shows an active point of delivery and a meter installation. As a result, our customer numbers do not include those meter points where a meter may recently have been installed but the associated industry registration process has yet to complete, as the meter information will not be present in our billing system.
- For the Non-Domestic Supply segment, sites are based on the number of distinct MPRNs and MPANs in our billing system for gas and electricity respectively.

Transfer pricing for electricity, gas and generation licensees in accordance with paragraph 4(d)/19A.4(d)

There are no specific energy supply agreements between the Generation and Supply segments.

The Group continues to ensure transfer pricing methodologies are appropriate and up to date. In order to meet this requirement, the Group ensured all transfer pricing and cost allocation methodologies were internally reviewed, updated and collated in a central repository.

Treatment of joint ventures and associates

The share of results of joint ventures and associates for the year ended 31 December 2019 principally arises from the Group's interests in the entities listed on page 213.

Under paragraph 5 of the Conditions, the information provided in the CSS includes our gross share of revenues, costs, profits and volumes of joint ventures and associates. In preparing the CSS, joint ventures and associates (which hold a UK generation licence or exemption) are accounted for as follows:

- our proportionate share of revenues of joint ventures and associates has been included within revenue;
- our proportionate share of the profit before tax of joint ventures and associates has been included within EBIT and EBITDA; and
- our proportionate share of the generation volumes of joint ventures and associates has been included within the generation volumes.

For each of the above items, our share of the income and expenses of the joint ventures or associates has been combined line-by-line within the relevant item of the CSS.

Exceptional items and certain re-measurements

Restructuring costs, impairment charges and onerous provisions that have been identified as exceptional items, and mark-to-market adjustments in the Centrica plc Annual Report and Accounts 2019, are excluded from the CSS. For further details of excluded exceptional items and certain re-measurements see note 7 in the Centrica plc Annual Report and Accounts 2019.

A reconciliation of the Segmental Statement revenue, EBIT and depreciation to the 2019 audited Centrica plc Annual Report and Accounts has been included in accordance with paragraphs 4(b) & (c)/19A.4(b) & (c) and 6/19A.6.

Reconciliation to Centrica plc Annual Report and Accounts

The reconciliation refers to the segmental analysis of the 2019 Centrica plc Annual Report and Accounts in note 4.

Revenue (£m)

	Notes	Generation segment 2019	Supply segment – Domestic – Electricity 2019	Supply segment – Domestic – Gas 2019	Supply segment – Non-Domestic – Electricity 2019	Supply segment – Non-Domestic – Gas 2019
Centrica plc Annual Report and Accounts Segmental Analysis [i]		**Upstream**	**Consumer**		**Business**	
Segment revenue		2,290.4	11,956.0		13,759.4	
Less non-UK and non-Generation/Supply	1	(1,793.9)	(5,147.7)		(11,455.6)	
Segment revenue after non-UK and non-Generation/Supply		496.5	6,808.3		2,303.8	
Reallocate Centrica Business Generation element	2	262.5	–		(262.5)	
Segment revenue after non-UK and non-Generation/Supply and reallocation of Generation element from Centrica Business to Upstream		759.0	6,808.3		2,041.3	
Gas and Electricity allocation	3	–	3,166.3	3,642.0	1,574.1	467.2
Include share of JVs and associates	4	492.6	–	–	–	–
Exclude intra-segment revenues	5	(454.3)	–	–	–	–
Ofgem Consolidated Segmental Statement		**797.3**	**3,166.3**	**3,642.0**	**1,574.1**	**467.2**

EBIT (£m)

	Notes	Generation segment 2019	Supply segment – Domestic – Electricity 2019	Supply segment – Domestic – Gas 2019	Supply segment – Non-Domestic – Electricity 2019	Supply segment – Non-Domestic – Gas 2019
Centrica plc Annual Report and Accounts Segmental Analysis [i]						
Segment EBIT		179.0	505.0		217.1	
Less non-UK and non-Generation/Supply	1	(160.5)	(368.5)		(194.6)	
Segment EBIT after non-UK and non-Generation/Supply		18.5	136.5		22.5	
Reallocate Centrica Business Generation element	2	(31.8)	–		31.8	
Segment EBIT after non-UK and non-Generation/Supply and reallocation of Generation element from Centrica Business to Upstream		(13.3)	136.5		54.3	
Gas and Electricity allocation	3	–	(35.6)	172.1	15.8	38.5
Exclude share of JVs' and associates' interest and tax	4	8.6	–	–	–	–
Ofgem Consolidated Segmental Statement		**(4.7)**	**(35.6)**	**172.1**	**15.8**	**38.5**

Reconciliation to Centrica plc Annual Report and Accounts

Depreciation and amortisation (£m)

	Notes	Generation segment 2019	Supply segment – Domestic – Electricity 2019	Supply segment – Domestic – Gas 2019	Supply segment – Non-Domestic – Electricity 2019	Supply segment – Non-Domestic – Gas 2019
Centrica plc Annual Report and Accounts Segmental Analysis [(i)]		**Upstream**	**Consumer**		**Business**	
Segment depreciation and amortisation		(753.0)	(218.0)		(145.4)	
Less non-UK and non-Generation/Supply	1	(753.0)	119.5		80.2	
Segment depreciation and amortisation after non-UK and non-Generation/Supply		–	(98.5)		(65.2)	
Reallocate Centrica Business Generation element	2	(50.0)	–		50.0	
Segment depreciation and amortisation after non-UK and non-Generation/Supply and reallocation of Generation element from Centrica Business to Upstream		(50.0)	(98.5)		(15.2)	
Gas and Electricity allocation	3	–	(44.2)	(54.3)	(10.8)	(4.4)
Include share of JVs and associates	4	(149.4)	–	–	–	–
Ofgem Consolidated Segmental Statement		**(199.4)**	**(44.2)**	**(54.3)**	**(10.8)**	**(4.4)**

(i) The tables reconcile the Generation segment to Upstream, the Domestic Supply segment to Centrica Consumer and the Non-Domestic Supply segment to Centrica Business from note 4 to the 2019 Centrica plc Annual Report and Accounts. Also included in note 4 is a reconciliation to the IFRS compliant statutory result reported by the Centrica plc Group.

Notes:

1. UK Home includes Home Services and UK Business includes Business Services which are non-licensed activities and have been deducted to reconcile these CSS numbers.
2. Centrica Business includes generation activity from the Group's thermal power assets.
3. The share of Domestic and Non-Domestic Revenues, Operating Profit (EBIT) and Depreciation (including amortisation) as provided in note 4 of the Centrica plc Annual Report and Accounts 2019, has been split between Gas and Electricity.
4. £492.6 million of revenues relating to the Group's share of joint ventures and associates in Generation are included in the CSS for Nuclear revenues. £(2.5) million of EBIT in the Generation segment relates to losses from associates for Nuclear. Additionally, costs relating to the Group's share of joint ventures and associates: £90.7 million direct fuel costs, £214.4 million direct costs, £40.6 million indirect costs and £149.4 million depreciation and amortisation are included. Note also that financing costs and tax of £8.6 million are initially included in the Upstream segmental EBIT associated with nuclear. The results of joint ventures and associates are shown separately in the Centrica plc Annual Report and Accounts 2019 in notes 6 and 14.
5. £454.3 million of intra-segment revenues between the joint ventures and associates and the Generation segment (included in the £492.6 million of joint venture and associate revenues) are excluded from the CSS.