Registration number: 03476201 (England and Wales)

Northern Powergrid Holdings Company

Annual Report and Consolidated Financial Statements

for the Year Ended 31 December 2022

Northern Powergrid Holdings Company
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Northern Powergrid Holdings Company
Company Information

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Northern Powergrid Holdings Company
Strategic Report for the Year Ended 31 December 2022

The directors present their annual report and audited consolidated financial statements for the year ended 31 December 2022 of Northern Powergrid Holdings Company (the "Company"), which have been drawn up and are presented in accordance with the Companies Act 2006.

Business model

The Company is the parent undertaking for the Northern Powergrid group of companies (the “Group”) and its main subsidiary companies are Northern Powergrid (Northeast) plc ("NPg Northeast"), Northern Powergrid (Yorkshire) plc ("NPg Yorkshire"), Integrated Utility Services Limited, registered in the United Kingdom, ("IUS"), CalEnergy Resources Limited ("CE Resources"), Integrated Utility Services Limited, registered in the Republic of Ireland ("IUS Ireland") and Northern Powergrid Metering Limited ("NPg Metering").

NPg Northeast and NPg Yorkshire (together "Northern Powergrid") are distribution network operators ("DNOs") and hold electricity distribution licences granted by the Secretary of State. Northern Powergrid is regulated by the Office of Gas and Electricity Markets (“Ofgem”), which in turn, is governed by the Gas and Electricity Markets Authority (“GEMA”). Ofgem require the DNOs to operate within a regulatory framework known as a price control, the purpose of which is to protect the interests of end consumers by setting an upper limit on the amount the DNOs can charge for the use of their networks. The completion of the 2021/22 Regulatory Year (on 31 March 2022) which occurred during the financial year, represented the end of year seven of the current RIIO-ED1 price control, which became effective on 1 April 2015 and ended on 31 March 2023 (the “ED1 period”).

During the year, Northern Powergrid distributed electricity to approximately 3.9 million customers connected to the electricity distribution networks in the northeast of England and Yorkshire. Northern Powergrid's combined distribution networks (the “Network”) include over 17,000 miles of overhead lines, 43,400 miles of underground cables and 823 major substations. Electricity is received from the National Grid's transmission system and from generators connected directly to the network and then distributed at voltages of up to 132 kilovolts.

The majority of revenue generated by Northern Powergrid is controlled by a distribution price control formula which is set out in the electricity distribution licence. The price control formula does not directly constrain profits from year to year, but is a control on revenue that operates independently of a significant portion of Northern Powergrid’s costs. Allowed revenue is recovered from electricity suppliers via the application of Distribution use of System charges. These charges account for approximately 15% of the electricity end user’s overall electricity bill. Northern Powergrid’s opening base allowed revenue (excluding the effects of incentive schemes and any deferred revenues from the prior price control) has been set to remain constant for each Regulatory Year from 1 April 2016 through to 31 March 2023. Nominal opening base allowed revenues will increase in line with inflation (as measured by the United Kingdom's Retail Prices Index (“RPI”)).

IUS and IUS Ireland provide engineering contracting services, CE Resources holds interests in hydrocarbon permits and renewables projects in Australia, Poland and the United Kingdom, and NPg Metering rents meters to energy suppliers.

As Northern Powergrid is the largest contributor to the Group in terms of revenue and profit, the Strategic Report predominantly concentrates on the performance and progress of those entities throughout the reporting year.

STRATEGY

The Group operates a strategy based on six core principles (the "Core Principles") which comprise Financial Strength, Customer Service, Operational Excellence, Employee Commitment, Environmental Respect and Regulatory Integrity. The Core Principles (which are applied by the Group’s parent company, Berkshire Hathaway Energy Company ("Berkshire Hathaway Energy")), set out the basis on which the Company and Group generates shareholder value over the longer-term and defines the standards by which the Group holds itself accountable. Each Core Principle is defined by a strategic objective which is intrinsically linked to the commitments made in Northern Powergrid’s 2015 to 2023 regulatory well-justified business plan (“Business Plan”).

Submitted to Ofgem in March 2014, the Business Plan described the long-term strategy and commitments that Northern Powergrid would achieve during the ED1 period in order to deliver sustainable growth with regard to those with whom Northern Powergrid interacted and served. Developed after a period of consultation with stakeholders, the Business Plan focussed on a number of priorities (described throughout the Strategic Report) including minimising costs, improving flood defences, enhancing customer service, prioritising employee safety, supporting vulnerable customers, protecting the environment and transitioning to low carbon technologies. The directors refer to the values established by the Core Principles and the commitments contained within the Business Plan when considering the consequence of decisions they make.

Following the publication of RIIO-ED2 (“ED2”) Business Planning guidance by Ofgem in August 2020, the Company commenced the development of its regulatory business plan for the ED2 period (1 April 2023 to 31 March 2028) (the “ED2 Plan”), which was submitted to Ofgem on 1 December 2021 (a copy of which can be found on Group’s website).

As part of the development of the ED2 Plan, the Company worked with the Customer Engagement Group (“CEG”), which was established for the purpose of providing independent scrutiny and challenge to ensure that customers’ interests were adequately reflected in the ED2 Plan. Ahead of the implementation of the ED2 Plan on 1 April 2023, the Group participated in open hearings with Ofgem and interested stakeholders and consultations before Ofgem published its final determination in December 2022 (for further detail, see Regulatory Integrity).

The delivery of the Business Plan is supported by an annual business plan (the “Annual Plan”) which is submitted to the Group’s shareholder each financial year and is designed to phase progress towards the achievement of each commitment over the duration of the ED1 period. The phasing ensures that the deliverables in both plans can be measured effectively by using a mix of financial and non-financial Key Performance Indicators (“KPI”).

The Strategic Report focuses on each Core Principle and the performance of each KPI throughout the year in order to provide a summary of the success in achieving each strategic objective, progress made against certain Business Plan commitments and performance in relation to the Annual Plan.

FINANCIAL STRENGTH

Strategic objective: Strong finances that enable improvement and growth.

KPI	**2022**	**2021**
Operating profit	£422.6m	£382.2m
Cash from operating activities	£624.3m	£544.2m
Cash used in investing activities	£568.0m	£518.5m
Credit Rating (Standard & Poor's)	A	A

Business Plan commitment: To build on the efficiencies achieved to date and in doing so, reduce base costs by 3.1% in 2015 to 2023 compared to the previous price control period.

Performance during the year: The Group continued to maintain good control in respect of both its capital and operating costs by effectively managing the financial risks that could have had an adverse impact on its business. Seven years through the ED1 period, Northern Powergrid had implemented efficiencies equivalent to a 4% reduction in base costs relative to the prior regulatory period.

Revenue: The Group's revenue at £1,148.8 million was £230.5 million higher than the prior year due to higher distribution system revenues, including the recovery of payments made under the supplier of last resort process, higher smart metering revenue and higher contracting volumes as well as the gas coming on stream in March 2022 and the revenue generated following the acquisition of the solar farms in June 2022.

Operating profit and position at the year-end: The Group's operating profit of £422.6 million was £40.4 million higher than the previous year, primarily driven by higher gross margin (£112.5 million) and lower bad debts (£10.3 million). This increase was partially offset by higher depreciation (£66.2 million) and higher pension costs (£13.4 million). The statement of financial position on pages 37 and 38 shows that, as at 31 December 2022, the Group had total equity of £3,308.1 million (2021: £3,168.3 million). The directors consider the Group to have a strong financial position which, when coupled with the preference of Berkshire Hathaway Energy for operating with lower levels of debt than equivalent companies in the sector, creates a stable base for continued strong performance during the ED1 period.

On 15 December 2022, the Company redeemed its £200 million 7.25% bonds and on 20 July 2022, the Group repaid its £151 million EIB loan using the funds raised by the £350 million NPg Northeast bonds (at 3.25% maturing in 2052) that were issued in April 2022.

Other gains: Other gains at £1.4 million was £0.5 million lower than the prior year gain of £1.9 million due to lower profits on disposals.

Finance costs and investments: Finance costs net of investment income at £100.2 million were £13.0 million higher than the prior year due to higher interest costs on bank overdrafts and borrowings including borrowings acquired on acquisitions (Note 13), this was partially offset by higher finance income.

Taxation: The effective tax rate in the year was 39.0% (2021: 47.5%). Tax charge for the year was £126.2 million which was lower than the prior year of £141.0 million mainly due to the impact the tax rate change had on the deferred tax balance in the prior year. This was partially offset by the introduction of the Energy Profits Levy. Details of the income tax expense are provided in Note 10 to the financial statements.

Share capital: There were no changes to the Company's share capital during the year.

Cash flow: Movements in cash flows were as follows:

- **Operating activities:** Cash flow from operating activities at £624.3 million was £80.1 million higher than the previous year, primarily due to higher profit before depreciation and amortisation, offset by adverse movements in working capital.
- **Investing activities:** Cash flow used in investing activities at £568.0 million was £49.5 million higher than the previous year, mainly due to higher capital deployed and the acquisition of solar assets (Note 13), this was partially offset by higher customer contributions and interest received.
- **Financing activities:** Cash outflow from financing activities at £54.4 million was £17.2 million higher than the previous year, mainly due to higher repayment of long-term borrowings in the year. This was partially offset by the issuance of the new bond in April 2022.

Pensions: The Group participates in the Northern Powergrid Group of the Electricity Supply Pension Scheme (the "DB Scheme"), a defined benefit scheme. Further details of the Group's commitments to the DB Scheme and the associated deficit repair payments are provided in Note 28 to the financial statements. The Group also participates in the Northern Powergrid Pension Scheme, which is a defined contribution scheme.

Insurance: As part of its insurance and risk strategy, the Group has in place insurance policies, which cover risks associated with employees, third party motor and public liability. The Group carries appropriate excesses on those policies and is effectively self-insured up to the level of those excesses.

CUSTOMER SERVICE

Strategic objective: Delivering exceptional customer service.

	NPg Northeast		NPg Yorkshire	
KPI	**2022**	**2021**	**2022**	**2021**
Broad Measure of Customer Satisfaction ("BMCS")	88.3%	89.4%	87.5%	88.4%
BMCS Rank (out of 14)	12	11	13	13
BMCS Power Cuts	87.8%	88.9%	87.9%	88.4%
BMCS General Enquiries	94%	94.4%	93.3%	93.7%
BMCS Connections	86.2%	87.8%	85%	86.3%

	Northern Powergrid	
	2022	**2021**
Stakeholder Engagement and Customer Vulnerability ("SECV") rank (out of 6)	6	5

Business Plan commitment: To provide a reliable, better communicated and faster customer service offering through a range of channels to suit stakeholder needs.

Performance during the year: In respect of BMCS, an independent market research company carried out telephone surveys with Northern Powergrid's customers to find out how satisfied they were with services related to unplanned or planned power cuts, quotations and subsequent connections, and general enquiries. NPg Yorkshire recorded a marginal decline in overall satisfaction scores at 87.5% compared to the prior year (88.4%) maintaining an overall BMCS rank of 13 out of 14. NPg Northeast recorded a decline in overall satisfaction scores at 88.3% compared to the prior year (89.4%) which had resulted in an overall BMCS rank of 12 out of 14.

To further enhance the service provided to customers a number of initiatives from Northern Powergrid's customer service improvement plan were implemented during the year. This included the continued development of the customer relationship management ("CRM") system, including the launch of an enduring connections solution (which equips customers with greater self-serve capabilities), the roll-out of additional communication and greater call handling capability.

Activity scheduled to take place during 2023 includes the further development of the CRM system to support a self-serve solution for low carbon technology additional load requests, the introduction of a proactive on-site response offering to support customers impacted by long duration power cuts and to provide out of hours delivery for certain services.

Connections to the network

Business Plan commitment: To further implement customer service improvements in support of the commitment to reduce routine, small works end-to-end connections lead times by 30% during the ED1 period, actively facilitate the development of competition from independent connections providers ("ICPs") and deliver the major works service improvement plan as part of the Ofgem Incentive on Connections Engagement ("ICE").

Performance during the year: End-to-end lead time improvement continued to be challenging due to the significant increase in connections volumes as a result of low carbon technology uptake and additional applications post the relaxation of Covid-19 Pandemic (the "Pandemic") restrictions. In response Northern Powergrid implemented a new quotation system which allowed customers to obtain a quote online and increased operational delivery capacity. This was in addition to the quote on site option, single point of contact and AutoDesign tool that were implemented in ED1.

In relation to Northern Powergrid's ICE commitments for the 2022/23 regulatory year, the 11 actions included in the service improvement work plan were delivered by 31 March 2023.

Corporate responsibility

Business Plan commitment: To build effective relationships with stakeholders whilst maximising the value of contact with customers, especially those who are vulnerable and hard to reach.

Performance during the year: In May 2022, Northern Powergrid put forward its SECV submission to Ofgem in respect of work undertaken during the 2021/22 Regulatory Year. The material provided an overview of activities and case studies in areas such as support for vulnerable customers, decarbonisation, safety, environment, customer service, reliability and availability. Following the review by Ofgem's panel, Northern Powergrid achieved sixth place (of six) in the context of the DNOs, a step down from fifth place in the prior Regulatory Year (2020/21: fifth place (of five)). In response an external assessment of the approach to engagement, fuel poverty provision and support provided to vulnerable customers was undertaken and improvement plans were subsequently established.

During the year, Northern Powergrid continued to develop its routine engagement activity with a focus on decarbonisation and resilience. This included enhancing existing relationships with local councils, Local Enterprise Partnerships and civic leaders, particularly during periods of severe weather and when providing support to vulnerable customers. In addition, engagement sessions were held (and attended by the CEG) to understand stakeholders' opinions on the commitments and proposed level of investment in the ED2 Plan.

The ongoing energy crisis and economic uncertainty exacerbated the challenges facing vulnerable customers. As a result, additional resource was allocated to assist those facing fuel poverty and work continued with partners who provide support services. Northern Powergrid's fuel poverty partners resumed face to face advice where possible but also maintained online and telephone services. In addition, Northern Powergrid's Community Partnering Fund financed nine grassroots organisations across the region to deliver fuel poverty support to vulnerable households. Alongside, Northern Powergrid and all funded partners routinely promoted Priority Services Membership and shared energy efficiency materials and winter preparedness information to customers.

OPERATIONAL EXCELLENCE

Strategic objective: High-quality, efficient operators running a smart reliable energy system.

	NPg Northeast			
	2021/22		2020/21	
KPI	**Actual**	**Target**	**Actual**	**Target**
Customer minutes lost ("CML")	46.33	<52.8	36.8	<55.2
Customer interruptions ("CI")	49.83	<59.2	45.3	<60.0

	NPg Yorkshire			
	2021/22		2020/21	
KPI	**Actual**	**Target**	**Actual**	**Target**
Customer minutes lost	43.64	<53.5	40.0	<54.8
Customer interruptions	51.07	<62.0	52.4	<63.0

	NPg Northeast		NPg Yorkshire	
KPI	**2022**	**2021**	**2022**	**2021**
High voltage restoration time (minutes)	61.1	51.8	66.0	53.7

	Northern Powergrid	
KPI	**2022**	**2021**
Network investment	£442.9m	£455.8m

Business Plan commitment: To enhance the reliability of the Network in support of the commitment to achieve 8% fewer unplanned power cuts and reduce the average length of unplanned power cuts by 20% during the ED1 period.

Performance during the year: CML and CI are the KPIs set by Ofgem and used by the Northern Powergrid to measure the quality of supply and system performance. Both CML and CI are measured on a regulatory year basis. CML measures the average number of supply minutes lost for every connected customer due to both planned and unplanned power cuts that last for three minutes or longer. CI measures the average number of supply interruptions per every 100 connected customers due to planned and unplanned power cuts that last for three minutes or longer. Performance during the year was better than Ofgem's target for both CML and CI.

In relation to high-voltage restoration, NPg Northeast’s performance during the year averaged 61.1 minutes (2021: 51.8 minutes) and NPg Yorkshire’s performance during the year averaged 66.0 minutes (2021: 53.7 minutes) after allowing for severe weather incidents and other exemptions.

In respect of the Business Plan commitments, Northern Powergrid had achieved 26% fewer unplanned power cuts and a reduction of the average length of unplanned power cuts by 32% (relative to the prior regulatory period). Progress remains on track to outperform the original targets of 8% fewer unplanned power cuts and a 20% reduction in the number of unplanned customer minutes lost per customer.

Northern Powergrid invested £442.9 million during the year through its approved Network investment strategy (2021: £455.8 million), which has been designed to deliver improvements in Network performance and increase resilience. Various major projects were undertaken to reinforce the primary Network, refurbish transformers, rebuild overhead lines, remove and replace oil-filled cables, change deteriorated poles, replace switchgear and install and commission new remote-control points.

Further Network enhancements included the continued roll-out of the automatic power restoration system on the high voltage Network. At low voltage the implementation of next generation innovative low voltage technology devices continued with the addition of low-cost Network monitoring sensors which detect developing faults so that they can be proactively managed. Initiatives were also implemented as a result of the Reliability Improvement Plan including increasing the use of mobile generation to restore supplies.

CLIMATE CHANGE ADAPTATION

Strategic objective: Operate a highly reliable and resilient Network

	2021/22			2020/21		
	Annual	**Cumulative**	**Target**	**Annual**	**Cumulative**	**Target**
Flood Defences:						
High risk sites protected		**95%**	**88%**		**94%**	**75%**
Flood defence upgrades	0	125		1	125	
Installed at major substations	7	81		12	74	
Vegetation Management:						
High voltage network resilient to high winds	**16.5**		**544**	**53**		**585**
Clearance of spans	29,469		29,328	28,246		28,004
Collaboration:						
Local Resilience Forums	35		28	28		28

Business Plan commitment: To adapt to the effects of climate change by establishing and maintaining flood defences at all high-risk substations to national standards, delivering a programme of vegetation management and working collaboratively with regional infrastructure providers and local resilience forums.

Performance during the year: In respect of routine activity, Northern Powergrid invested £5.0 million on flood mitigation works and £8.6 million on the continuation of the vegetation management programme.

In parallel, activity to understand the risks and opportunities presented by climate change, as well as the development of initiatives in response, continued to evolve.

Using the latest climate projections (UKCP18), alongside work with the Met Office and the Energy Networks Association, Northern Powergrid carried out a risk assessment to identify and prioritise key climate related risks and their impact on the Network.

Focus was directed on two pathways. The first, in line with the 2°C global warming considered in the Paris agreement and the second, representing an increase in global mean surface temperature of 4.3°C by 2081-2100. The risk assessment was carried out across three timescales (current, medium term: 2050's and long term: 2080's) for each scenario, which resulted in the following key risks:

- Precipitation (extreme prolonged rainfall) - leading to flooding and erosion, and creating access issues, asset damage and reduced performance.
- Temperature (extreme heat) - high temperatures, which may reduce the performance and efficiency of assets.
- Precipitation (storms) - strong winds in conjunction with heavy rain, causing operational failure of above ground assets and increased faults.
- Temperature / Precipitation (gradual increase in temperature and rainfall) - warmer and wetter conditions extending vegetation growing seasons, resulting in accelerated growth and increasing management needs.

In terms of impact, sixteen asset related risks and four non-asset related risks were identified, all of which were included in Northern Powergrid's Climate Change Adaptation report submitted to Department for Environment, Food and Rural Affairs ("Defra") in December 2021 and the Climate Resilience Strategy for 2023 to 2028 (both available on the Group's website).

Northern Powergrid's climate resilience framework (part of the aforementioned strategy) has been developed in line with guidance from Defra and the National Infrastructure Commission's approach to Climate Resilience and incorporates the recommended aspects of resilience: Anticipate, Assess, Adapt, Recover and Transform.

EMPLOYEE COMMITMENT

Strategic objective: High-performing people doing rewarding jobs in a safe and secure workplace

	2022		2021	
KPI	**Actual**	**Target**	**Actual**	**Target**
Occupational safety and health administration rate ("OSHA")	0.26	0.09	0.29	0.09
Preventable vehicle accidents	28	28	40	28
Lost time accidents	3	0	4	0
Restricted duty accidents	2	0	1	0
Medical treatment accidents	1	2	2	2
Operational incidents	12	7	14	9

KPI	2022	2021
Absence rate	3.3%	3.3%

Health and safety

Business Plan commitment: To deliver world class safety performance and half the accident rate during the ED1 period.

Performance during the year: In common with the Berkshire Hathaway Energy group, the Group measures its safety performance in terms of the OSHA rate, which is a measure used to capture safety incidents down to minor levels of medical treatment. The Group failed to meet its target of 0.09 in 2022 having achieved an OSHA rate of 0.26 (2021: 0.29), which equated to six recordable incidents against a goal of two or fewer. Three incidents involved minor burn injuries, and as such, an intervention plan was implemented. The Group had a positive year in terms of PVAs, with 28 recorded against a target of 28 or fewer.

In respect of the Business Plan commitment, at 31 December 2022, Northern Powergrid's accident rate had been reduced by 42%, which is on target to achieve a 50% reduction by 31 March 2023.

Improving safety performance remains a key priority and the way in which this is achieved is set out in Groiup's safety and health improvement plan ("SHIP"). During the year, the SHIP focused on 45 initiatives in the areas of enhanced engagement, operational performance, risk management, road risk, occupational health and public safety. This included an upgrade of the telematics system in all fleet vehicles, continuation of driver training, weekly driving performance analysis for fleet vehicle drivers and the introduction of a new system for display screen equipment assessments.

The mental health and wellbeing of staff continues to form an integral part of the SHIP. Existing support includes an independent employee assistance service, which is a confidential, self-referral counselling and information service to assist with personal or work-related problems and access to services including counselling and physiotherapy referrals.

In terms of the Pandemic, safe working practices and procedures remained under review by members of the safety team, senior management team, Health and Safety Committee and the Board, in conjunction with trade union representatives until measures were relaxed.

During the year, Northern Powergrid successfully retained its ISO 45001 accreditation scheme for its health and safety management system.

Employees

Business Plan commitment: To emphasise the importance of leadership and high standards of performance by engaging, collaborating and working with employees and their trade union representatives.

Performance during the year: As Pandemic restrictions eased, an enduring approach to agile working was launched, allowing eligible colleagues to adopt flexible ways of working. This enhanced the Group's ability to attract new talent whilst fostering teamwork and collaboration. Alongside, the Group continued to develop its health and wellbeing offering and in support, appointed a new occupational health partner.

In relation to development, training sessions on topics which formed part of the Diversity, Equality and Inclusion plan were provided to further promote a more inclusive culture. Routine training also continued in key areas such as customer service, cyber security and management development. In 2023, the Group's leadership offering will be refreshed in line with the Berkshire Hathaway Energy Performance Management Framework.

During the year, 41 new recruits (2021: 38) joined Northern Powergrid's workforce renewal programme. At 31 December 2022, the Group had 2,527 employees (2021: 2,527). Further information concerning how the Group is supporting gender diversity in the energy industry can be found in the Group's gender pay gap report via the Group's corporate website.

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Employee engagement:
The board and senior management team keep employees and trade union representatives informed of and involved as appropriate in developments that may impact them now or in the future. This approach has been chosen as the most effective way of interacting with employees due to the combination of collectively bargained and personal contract holders. In support of this process, the Director of People and Change routinely reports to the board and the Health and Safety Committee to ensure that the views of employees are considered and to facilitate the discussion of and any subsequent decision making in respect of employee related concerns or issues.

Consultation for collectively bargained employees is agreed with trade union representatives in the form of a constitutional framework. In addition, all employees are consulted to establish their views and identify key priorities using employee engagement surveys.

During the year, the President and Chief Executive Officer, members of the board and senior management team provided regular updates on financial, organisational, safety and customer service performance. As social distancing measures eased, the executive directors engaged directly with employees during operational and office-based site visits, and induction and graduation events. Communication with employees was delivered via various channels including group wide text messages to quickly disseminate key information concerning safety, the Pandemic and Major Incident Management Plans, regular briefings, line manager conversations, meetings with trade union representatives and utilising the Group's intranet.

The Berkshire Hathaway Energy code of business conduct ("Code of Conduct")
The Group has adopted the Code of Conduct, which details the commitment to ethics and compliance with the law, provides reporting mechanisms for known or suspected ethical or legal violations, and establishes minimum standards of behaviour expected of all employees. In support of this, a "speaking up" process is in place enabling all employees to raise concerns of unethical acts, malpractice or impropriety (including bribery or corruption), and an anonymous help line operated by an independent company is also available. All colleagues complete an annual online training programme covering the requirements of the Code of Conduct.

Employment of disabled persons
The Group's policy is to provide all protected groups, including disabled people, with equality at work in respect of employment, training, career development and promotion, having regard to their aptitudes and abilities. Should any member of staff become disabled during their employment, the Group will make reasonable adjustments, wherever possible.

ENVIRONMENTAL RESPECT

Strategic objective: Leaders in environmental respect and low carbon technologies.

	2022		2021	
KPI	**Actual**	**Target**	**Actual**	**Target**
Total oil/fluid lost (litres)	21,130	<29,100	30,484	<29,700
SF6 gas discharges (kg)	134.36	<51.0	82.83	<54.0
Environmental incidents	9	<5	5	<5

KPI	**2022**	**2021**
Carbon footprint (tonnes)	31,247	30,733
Energy consumed (KWh)	43,699,674	45,639,293

Business carbon footprint	**Tonnes**	**Per km²**	**Tonnes**	**Per km²**
Scope 1	7,429	0.63	6,289	0.52
Scope 2	5,598	0.46	6,362	0.53
Scope 3	18,220	1.47	18,082	1.46
Total carbon footprint (tonnes)	31,247	2.56	30,733	2.51

Note: KWh energy consumed relates to depot energy and fleet fuel usage.
The chosen business carbon footprint intensity ratio is based on Northern Powergrid's licence area which equals 25,296 km.
The methodology adopted to calculate energy and business carbon footprint data is aligned with international standards, those required by Defra and BEIS and is compliant with ISO 14064-1:2006

Business Plan commitment: Deliver Environmental "RESPECT" (Responsibility, Efficiency, Stewardship, Performance, Evaluation, Communication and Training) and in doing so reduce oil and fluid loss by 15% and our business carbon footprint by 10% during the ED1 period.

Performance during the year: Northern Powergrid and IUS both operate a United Kingdom Accreditation Service scheme for environmental management and is certified to the environmental management systems standard ISO 14001:2015. The ISO 14001 standard is designed to enhance environmental performance, fulfil compliance obligations and achieve environmental objectives, all of which contribute to the achievement of the Group's KPIs. A full recertification assessment was carried out in March 2020 with continued certification confirmed following the last surveillance audit in October 2022.

Northern Powergrid's carbon footprint reporting framework is certified under the Certified Emissions Measurement and Reduction Scheme for compliance with ISO 14064-1:2006. Certification was reconfirmed in August 2022.

In terms of the KPIs, higher SF6 gas losses in the year led to a marginal increase in Northern Powergrid's overall carbon footprint to 31,247 tonnes (2021: 30,733 tonnes). However, Northern Powergrid has demonstrated a carbon footprint reduction of 39% at 31 December 2022, well ahead of the original 10% ED1 commitment.

In support of the target to further reduce oil and fluid loss, the 2022 annual environmental improvement plan included replacing fluid-filled cables and locating cable fluid leaks more quickly resulting in a total fluid loss of Northern Powergrid of 21,130 litres (2021: 30,484). In relation to the Business Plan commitment, at 31 December 2022, Northern Powergrid had achieved a 51% reduction in oil and fluid loss (15% commitment).

To maintain its strict policy of environmental protection and legal compliance, Northern Powergrid continued to assess environmental risks and mitigate threats through programmes of work such as fluid-filled cable replacement, undergrounding overhead lines in areas of outstanding natural beauty, installing flood defences, implementing secondary containment in high-risk substations and removing equipment containing polychlorinated biphenyl from the Network. Whilst prevention is paramount, in the event the Group's activity does result in a leak or spill, the services of an appointed 24-hour a day environmental response consultancy is used to minimise the effects of any incident.

The Group takes its environmental responsibilities very seriously and has a proven track record of lowering emissions and minimising the wider environmental impact of Network activity. Reducing the level of internal carbon footprint is a key priority and consequently, plans have been developed to become carbon net neutral by 2040. This includes initiatives such as increasing ultra-low emission or zero emission vehicles to 40% of the Group's fleet of vehicles by 2028 and the adoption of science-based targets.

Science-based targets are a set of goals developed to provide a clear route to reducing greenhouse gas emissions. Emissions reduction targets are considered science based if they are consistent with keeping global warming below 1.5°C above pre-industrial levels. The Group's science-based targets were verified by the Science-based Targets Initiative in December 2021.

In respect of the Group's wider environmental impact, plans have been developed to achieve zero waste to landfill by 2035 and to divert 90% of waste from all of the Company's operations by 2028. In addition to safeguarding the environment from its direct activity, the Company also operates a programme which is aimed at protecting natural habitats and increasing the variety and variability of species and ecosystems at 200 major sites.

To date, Northern Powergrid's performance against a number of stretching KPIs to reduce carbon usage and minimise the effects of the Group on stakeholders and the environment has been positive. However, it is acknowledged that becoming carbon neutral by 2040 and working with suppliers and partners in order to accomplish this, is not without its challenges and risks. Accordingly, the Group will continue to evolve its ambitions and enhance the implementation of environmental plans throughout the ED2 period.

Environmental Sustainability

Strategic focus: Enable significant growth in customers connecting low carbon technologies, support all pathways to net zero emissions and significantly reduce our own carbon footprint.

Performance during the year: As the country takes action to reduce carbon emissions in line with the net zero target by 2050, the way in which electricity is produced and used is expected to have a substantial impact on the Network over time. Accordingly, in the year, Northern Powergrid engaged with Ofgem to secure the funding to support its DSO strategy and therefore, act as a key facilitator in the country's net zero transition by placing decarbonisation at the heart of its investment and actions for the ED2 period.

As the volume and total capacity of decentralised energy generation grows and given the greater range of load and generation technologies now connected to the Network, Northern Powergrid continued to develop and action innovative solutions that will reduce the need for traditional and potentially expensive reinforcement.

In the past year, Northern Powergrid engaged with the market for flexibility by consulting on investment solutions where there was an option for customers to change their energy consumption and generation patterns, thereby facilitating a more efficient and greener Network. And to better understand how to prepare the Network for the future needs of its customers and the potential pathways to net zero, Northern Powergrid published further Distribution Future Energy Scenarios in February 2022 (available via the Group's corporate website).

From an innovation perspective, Northern Powergrid runs a portfolio of projects in the priority areas of customer vulnerability, resilience and decarbonisation. One ongoing energy efficiency project has the potential to deliver a 4% reduction in domestic energy use, giving rise to an average £40 annual saving. Meanwhile, the scope of the Silent Power generators for temporary restorations was expanded to support larger and high voltage faults. Ongoing innovation projects aim to provide support to rural communities.

Whilst Northern Powergrid transitions into the ED2 period and the role of the DSO becomes better defined, decarbonisation will continue to become central not only to Northern Powergrid's strategy, but the way in which the Group contributes more broadly to the evolution of the energy industry and the stakeholders with whom it interacts. Northern Powergrid has been progressive in its ambition to reduce its own business carbon footprint. However, more is required (including any subsequent considerations of the impact on the financial statements) and it is acknowledged that the Group has a key role to play in facilitating regional decarbonisation by fulfilling the functions of DSO. This means investing in people, processes and systems in order to actively manage the Network and to optimise the use of assets and generated energy in the region.

REGULATORY INTEGRITY

Strategic objective: Trustworthy, fair and balanced.

KPI: Completion of a quarterly regulatory compliance affirmation process.

Business Plan commitment: To manage the Group's business to the highest behavioural standards and adhere to a policy of strict compliance with all relevant standards, legislation and regulatory conditions.

Performance during the year: In order to assure compliance with distribution licence and other regulatory obligations, Northern Powergrid operates a regulatory compliance affirmation process, under which ownership of approximately 2,000 regulatory obligations is assigned to 71 responsible managers. Those responsible managers are required to review compliance with the relevant obligations on a quarterly basis and report on any identified non-compliances or perceived risks which are then addressed by members of the senior management team. To minimise the risk of Northern Powergrid breaching its licence conditions and other statutory requirements (which could lead to financial penalties), the board reviews the outcomes of each exercise. Each quarterly regulatory compliance affirmation process was completed satisfactorily during the year.

Northern Powergrid submitted its annual Data Assurance Report to Ofgem in February 2022, which included risk assessments of the regulatory returns to be submitted for the Regulatory Year ahead (April 2022 to March 2023), together with a report detailing the assurance work actually carried out in the year ended 28 February 2022 and the findings of that work.

Ofgem completed its review process to determine the network charges that DNOs will be able to levy over the ED2 period and issued a consultation on its draft determinations for the ED2 period on 29 June 2022, to which Northern Powergrid submitted a comprehensive response, Ofgem issued its final determinations on 30 November 2022.

The main focus in the ED2 period will be on investing in supporting the move away from dependence on fossil fuels towards cleaner, cheaper and more secure sources of energy, such as wind and solar power, to connect those sources of generation to the network and to facilitate the anticipated significant increase in the use of low carbon technologies such as heat pumps and electric vehicles.

On 2 March 2023, NPg Northeast and NPg Yorkshire sought permission from the Competition and Markets Authority (the "CMA") to appeal against the licence modifications that give effect to the ED2 price control. The appeal relates to two specific areas:

1. the misallocation of allowances that is inconsistent with efficient costs; and
2. the approach to determining rewards for the Business Plan Incentive.

The permission for the appeal was granted by the CMA. The outcome of these appeals may increase or reduce the revenue available to Northern Powergrid if the CMA amends the price control determination.

PRINCIPAL RISKS AND UNCERTAINTIES

The Group operates a structured and disciplined approach to the management of risk as part of its overall risk management policy and in support of its financial reporting practices. A robust system is in place to facilitate the identification of new and emerging opportunities and risks, including those associated with the achievement of the Group's strategic objectives and Core Principles. This includes regular reviews of the macro environment as well as risks that arise from within functional business areas. Once identified, key risks and their respective controls and mitigation plans are continually assessed and formally reviewed on a quarterly basis by the Risk Advisory Board ("RAB") in order that they are managed to an acceptable level in accordance with the Group's risk appetite. The RAB routinely reports its findings to the board to ensure the directors are sufficiently appraised of the risk exposure associated with the pursuit of the Group's long-term strategy.

The risk management programme includes regular reviews of the crisis management, disaster recovery and major incident plans. To determine the level of disaster preparedness and responsiveness against threats to business continuity, risk management plans and processes are periodically tested. This self-evaluation approach is reinforced by that of the Berkshire Hathaway Energy group, which benchmarks risk management activities across its business units and shares significant lessons learned. In an unprecedented year as a result of the Pandemic, the business continuity and disaster recovery plans were fully tested, and whilst adaptation and flexibility was required, operational performance remained resilient and employees continued to perform their duties safely.

Risks

Cyber security
Unauthorised access or compromise of the Information Technology or Operational Technology networks, resulting in loss of Network control and availability. Unauthorised access or loss of large volumes of data or sensitive data.

Mitigations:
- Robust cyber security risk mitigation programme is in place.
- Accreditation under the ISO 27001 Information Security standard for operational, customer, employee and financial information.
- Compliant to the Network Information Security Directive and the Basic Cyber Assessment Frameworks.
- Compliance with the Centre for Internet Security Critical Security Controls.
- Monitored by the Information Security Executive Committee and the board.

Regulatory and policy positioning
Decisions taken resulting in negative impacts to our business model.

Mitigations:
- Northern Powergrid's policy position supporting the expanded role of DSO was published in December 2021.
- Innovation projects in place to develop and demonstrate future technologies and commercial practices.
- The Company and Group engages in a robust regulatory and stakeholder engagement programme, the latter of which is scrutinised by the CEG.
- The Group is actively involved in consultations on the ED2 price controls.

Network resilience
Loss of the operational network due to significant weather events, targeted physical attack or catastrophic asset failure resulting in sustained or widespread loss of essential supply.

Mitigations:
- Major incident and crisis management policies, plans and governance arrangements are in place.
- An industry mutual aid agreement exists.
- Network investment ensures grid resilience.
- Grid resilience programme and audits.
- Vulnerable site protocols.
- Climate resilience strategy and framework.

Safety
Fatality or serious harm caused to an employee or a third party.

Mitigations:
- Overseen by the Health and Safety Committee.
- Clear policies and procedures exist that comply with legislation to ensure the safety of the employees and customers.
- Safety Health and Improvement Plan.
- Health and safety training is provided to employees on a continuous basis.
- Enhanced audit programme and inspection regimes are in place.
- ISO45001 safety management system in place.

Environment
Failure to prevent Network assets from having a significant negative impact on the climate and environment.

Mitigations:
- Incident response process and robust policies and procedures in place.
- Programme to reduce fluid loss and the Company's business carbon footprint and remove assets containing polychlorinated biphenyl from the Network.
- Investment in technology to minimise environmental incidents and 'self-heal' the Network.
- Asset inspection and maintenance programme.
- Environment improvement plan and Environment Action Plan.
- Path to carbon neutrality by 2040.
- Waste management and habitat protection programmes.
- Science-based targets approved by the Science-based Targets Initiative.
- ISO14001 environmental management system in place.

Resource Availability
Access to and availability of skilled resource resulting in an inability to deliver work programmes.

Mitigations:
- Mix of direct labour and contracted resource is used.
- Workforce renewal programmes in place to recruit and retain employees.
- Ongoing training and development builds internal capability.
- Employee engagement and health and well-being initiatives are in place.
- Diversity, equality and inclusion plan.

Efficiency and output performance
Failure to maintain cost and output performance competitiveness in the industry.

Mitigations:
- Robust business planning process.
- Financial controls in place including detailed review of actuals against budget, competitive tendering process, and capital expenditure approvals process.
- Monthly executive business performance review.
- Comprehensive “Efficient Output Delivery” programme.

Financial risks
The exposure to interest rate, tax, liquidity and treasury risks.

Mitigations:
- Monitored by the treasury department.
- Northern Powergrid is financed by long-term borrowings at fixed rates and has access to short-term borrowing facilities at floating rates of interest.
- As at 31 December 2022, 99% of the Group’s long-term borrowings were at fixed rates and the average maturity for these borrowings was 18 years. The Group uses interest rate swaps to mitigate exposure to uncertain future interest rates.
- Financial covenant monitoring is in place.
- Regulatory revenue adjustments reduce the effect of changes to tax payments as a result of changes to tax legislation or accounting standards.
- Brexit is not considered to be a principal risk to the Group.

Internal control
A strong internal control environment exists within the Group to support the financial reporting process, the key features of which include regular reporting, a series of operational and financial policies, investigations undertaken by internal audit and a stringent process for ensuring the implementation of internal audit recommendations. In addition, the Group utilises comprehensive business planning procedures, regularly reviews KPIs to assess progress towards its goals, and has a strong internal audit function to provide independent scrutiny. Financial controls include centralised treasury operations and established procedures for the planning, approving and monitoring of major capital expenditure.

The RAB monitors the effectiveness of internal controls and reports on its findings to the board and Berkshire Hathaway Energy. As part of the statutory reporting process, the Group’s external auditor reviews and tests a number of internal controls and reports their findings and recommendations for improvements to the board.

Controls which are applicable to financial decisions are governed via a schedule of delegations of authority which are approved by the board (and applies to the Group) for the purpose of enabling the senior management team to make decisions up to certain financial limits, above which point the decision making reverts to the directors. These limits reflect the board’s level of risk appetite and are reviewed on an annual basis.

In accordance with Berkshire Hathaway Energy’s requirements to comply with the US Sarbanes-Oxley Act, the Group undertakes a quarterly risk control assessment confirming that the effectiveness of the system of internal controls have been reviewed during the year. A self-certification process is in place, in support of this review, whereby certain senior managers are required to confirm that the system of internal control in their area of the business is operating effectively. Consequently, the directors believe that a robust system of risk assessment and management is in place.

The Group does not have a specific human rights policy. However, in accordance with the Core Principles, it remains fully committed to operating ethically and responsibly and with fairness and integrity. This is implemented through the policies and procedures it has in place which are applicable to all stakeholder groups and encompasses employees' health, safety and welfare, dealings with customers (particularly those who are vulnerable), the impact of the Group on the environment and the contribution to sustainability.

To ensure that the Group maintains the highest level of ethical standards in the conduct of its business, Berkshire Hathaway Energy's Code of Conduct has been adopted (See 'Employees'). The Group has robust procedures in place to meet the requirements of the Bribery Act 2010. Every employee must undertake training in respect of the Group's anti-corruption and anti-bribery policy each year.

Section 172(1) statement

Decision-making at the Board
All matters which under the Company and Group's governance arrangements are reserved for decision by the Directors are presented at Board meetings. Directors are briefed on any potential impacts and risks for customers, and other stakeholders and how they are to be managed. The Directors take these factors into account before making decisions, which together they believe are in the best interests of the Company or Group company and its member.

Long-term sustainability
As referenced throughout the Strategic Report, the Group's core business model (via Northern Powergrid) is to make sufficient profit in order to invest in the Network thereby, ensuring the integrity of the electricity supply for its customers. To achieve this objective, the Group delivers its service to fulfil the needs of the stakeholders with whom it interacts and in doing so, ensures all business relationships are conducted in an open and transparent manner. Consequently, fostering business relationships is a prerequisite of the activity performed by the Group in the pursuit of its goals and the long-term sustainability of the Group is at the forefront of decision-making.

The Group's policy in respect of engaging with stakeholders is governed by the Core Principles and the Code of Conduct. The Core Principle of 'Regulatory Integrity' defines the Group's commitment to comply with all laws wherever it does business and the expectation that all employees (including directors) manage their activities in a manner that is compliant with all standards, regulations and corporate policies. In addition, the Code of Conduct requires adherence to the highest level of ethical conduct and fair dealings with all customers, suppliers and competitors.

Employees
As detailed in the 'Employee Commitment' section, the Group works hard to ensure the health and safety of employees and to provide them with opportunities for advancement alongside fair terms whilst remunerating appropriately. Activities undertaken by the board in the year included reviewing health and safety performance, monitoring key appointment changes, receiving regular updates on the Group's Diversity, Equity and Inclusion plan, reviewing the Group's gender pay gap report and approving the delegations of authority.

Customers
Customers, whether they are domestic or commercial, are the primary stakeholder group served by the Group and therefore the services offered are all tailored to provide a benefit or enhance an experience. During the year, the board regularly reviewed performance levels, closely monitored the response in respect of Storm Arwen, including compensation arrangements and engaged with the Chair of the CEG. Further detail of the Group's relationship with customers and the support programmes provided is discussed in 'Customer Service'.

Producers and suppliers
The Group works closely with its supply chain and has measures in place to ensure the treatment of all supplies is fair and equitable. Relations with suppliers is managed using a supplier registration system which supports a robust and transparent procurement process and ensures strict compliance with the prevention of slavery and human trafficking. As a consequence, the system allows the Group to make informed decisions which align with its values when awarding contracts. When considering suppliers, the board advocates prompt payment practices, which are reviewed regularly by the internal audit function, and the implementation of procedures to reduce the risk of modern slavery in supply chains - as set out in the Group's annual modern slavery statement.

Financial stakeholders
Financial information is routinely made available to financial stakeholders, including relationship banks and bondholders. Directors participate directly with stakeholders when entering into new financial arrangements. During the year, the board approved an interim dividend, the annual and interim accounts and the tax strategy.

Community and environment
Each Director is required to take all reasonable steps to minimise any detrimental impact the Company's operations may have on the environment (see 'Environmental Respect'). The Group also supports a range of charitable and community activities to help customers with fuel poverty and safety around electricity ('Community' section). During the year, consistent with commitments to Ofgem following Storm Arwen, Northern Powergrid donated £7,570,079.52 to the Northern Powergrid Foundation and the directors routinely reviewed environmental performance and made decisions pursuant to Environmental Respect.

Regulator

Northern Powergrid is in regular dialogue with Ofgem concerning new policy development and emerging risks or opportunities within the sector. As outlined in 'Regulatory Integrity', to meet its licence conditions, the Group and the directors provide regular reporting to Ofgem (including the annual regulatory certificates and Regulatory Accounts), contribute to various regulatory consultations and monitor regulatory compliance. Given the implications on the Company's long-term strategy, the relationship with Ofgem, the evolving ED2 framework, the transition to DSO were regular items on the board agenda throughout the year.

Acting fairly as between the Company's owners

The Company has one class of ordinary shares which are all held by Berkshire Hathaway Energy U.K. Electric, Inc. (35%), Berkshire Hathaway Energy U.K. Power, Inc. (35%) and Berkshire Hathaway Energy U.K. Inc. (30%) all entities wholly owned by Berkshire Hathaway Energy.

Non-financial information statement

The non-financial reporting information pursuant to Section 414CA of the Companies Act 2006 has been reported throughout the Strategic Report and principal risks and uncertainties.

Approved by the board on 30 May 2023 and signed on its behalf by:

T H France
Director

Northern Powergrid Holdings Company
Directors' Report for the Year Ended 31 December 2022

The directors present their annual report and the audited consolidated financial statements consolidated financial statements for the year ended 31 December 2022.

Dividends
During the year, an interim dividend was not paid (2021: £nil). The directors recommend that no final dividend be paid in respect of the year (2021: £nil).

The Company and Group dividend policy is that dividends will be paid only after having due regard to available distributable reserves, available liquid funds and the financial resources and facilities needed to enable the Company and Group to carry on its business for at least the next year. In addition, the level of dividends is set to maintain sufficient equity in the Company so as not to jeopardise its investment grade issuer credit rating.

Directors of the group
The directors of the Company, who held office during the year and to the date of signing were as follows:

W J Fehrman (resigned 1 May 2022)
T H France
C D Haack
P A Jones
J N Reynolds
S Thon (appointed 1 May 2022)

During the year, no director was interested in any contract which was significant in relation to the business of the Company or the Group. During the year and up to the date of approval of the Directors' Report, an indemnity contained in the Company's Articles of Association was in force for the benefit of the directors of the Company and as directors of associated companies, which was a qualifying third-party indemnity provision for the purposes of the Companies Act 2006.

Future developments and future outlook
The financial position of the Group, as at 31 December 2022, is shown in the consolidated statement of financial position on pages 37 and 38. There have been no significant events since the year end and the directors intend that:

- Northern Powergrid will continue to implement the Business Plan during the remainder of the ED1 period and by delivering the strategic objectives linked to the Core Principles, Northern Powergrid will continue to develop its business by efficiently investing in the Network and improving the quality of supply and service provided to customers.
- IUS and IUS Ireland will further develop its business by concentrating on its core skills of engineering contracting thereby delivering a high standard of service to its existing clients and pursuing opportunities to increase its portfolio of clients.
- NPg Metering will retain its focus on pursuing opportunities in the market for meter asset provision as the smart meter roll-out programme develops.
- CE Resources will continue to look to build value through the management of a portfolio of hydrocarbon and renewables projects in Australia, Poland and the United Kingdom.

There are no plans to change the existing business model of any company within the Group.

Research and development
Northern Powergrid supports a programme of research that is expected to contribute to higher standards of performance and a more cost-effective operation of its business. During the year, Northern Powergrid invested £2.8 million (2021: £2.2 million) (Note 5 to the financial statements) in its research and development activities.

Political donations
During the year, no contributions were made to political organisations (2021: £nil).

Financial instruments

Financial risk management
Details of financial risks are included in the Principal Risks and Uncertainties on page 13 to 16 of the Strategic Report and in Note 31 to the financial statements.

Financial derivatives
As at 31 December 2022 the Group held two derivative financial instrument (2021: one) to mitigate the interest rate risk on a floating interest rate loan. More details on derivative financial instruments are available in Note 32 to the financial statements.

CORPORATE GOVERNANCE STATEMENT

The directors have elected to set the information required by the Disclosure and Transparency Rules 7.2.1 R to 7.2.8AR in the ‘Northern Powergrid Holdings Company and its subsidiaries Group Corporate Governance statement’, a copy of which is available on the Group’s corporate website.

DIRECTORS RESPONSIBILITIES STATEMENT

The directors are responsible for preparing the annual report and the financial statements in accordance with applicable law and regulations.

Company law requires the directors to prepare financial statements for each financial year. Under that law the directors have elected to prepare the financial statements in accordance with International Financial Reporting Standards (IFRSs) as adopted by the International Accounting Standards Board ("IASB"). Under company law the directors must not approve the financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the company and of the profit or loss of the company for that period.

In preparing these financial statements, International Accounting Standard 1 requires that directors:

- Properly select and apply accounting policies;
- Present information, including accounting policies, in a manner that provides relevant, reliable, comparable and understandable information;
- Provide additional disclosures when compliance with the specific requirements in IFRSs are insufficient to enable users to understand the impact of particular transactions, other events and conditions on the Company's and the Group's financial position and financial performance; and
- Make an assessment of the Company's and the Group's ability to continue as a going concern.

The directors are responsible for keeping adequate accounting records that are sufficient to show and explain the company’s transactions and disclose with reasonable accuracy at any time the financial position of the company and enable them to ensure that the financial statements comply with the Companies Act 2006. They are also responsible for safeguarding the assets of the company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The directors are responsible for the maintenance and integrity of the corporate and financial information included on the company’s website. Legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

Viability statement

The directors have chosen a period of not less than ten years for the purposes of making this statement. The timeframe corresponds with the ten-year plan that is submitted to the Group’s shareholder each year alongside the Annual Plan and which sets out the Group’s long term strategy. Given Northern Powergrid’s business model, which operates in a stable sector, the directors believe that the Group as a whole is very likely to be viable for longer than the period chosen for the purpose of this statement.

In addition, various factors were contemplated when making an assessment of the Group’s prospects including the general stability associated with the regulatory environment, the principal risks and uncertainties facing the Group (including the ability to mitigate those risks), the Group’s business model and strategy, the forecasts developed as part of the Annual Plan, the commitments made in the Business Plan, and the fact that the notice period that GEMA must provide to Northern Powergrid in the event it wishes to revoke either of the electricity distribution licences is twenty five years. The Directors have also taken account of the Group’s current cash position, its strong operating performance, its operating cash flows, the availability of banking facilities and its strong relationship with its parent company, Berkshire Hathaway Energy.

Stress-testing of the Annual Plan and the Group’s forecasts is undertaken on an ongoing basis. The stress-testing considers the potential impact of a combination of a wide spectrum of risks and uncertainties driven by external factors. The risks and uncertainties are considered both in isolation or in the scenario that they materialise together. Stress-testing scenarios are submitted to the shareholder alongside the Annual Plan and more regularly as part of the preparation of the Group’s forecasts.

Consideration was also given to the obligations contained in Northern Powergrid's licences to provide Ofgem with annual certificates, confirming that the directors have a reasonable expectation that Northern Powergrid will have sufficient financial and operational resources available for the continuation of business for a period of at least 12 months. The board determined any material variations to the assumptions used when providing those certificates were unlikely. Based on the results of their review, the directors have a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over the next ten-year period.

Going Concern

A review of the Group's business activities during the year, together with details regarding its future development, performance and position, its objectives, policies and processes for managing its capital, its financial risk management objectives and details of its exposures to trading risk, credit risk and liquidity risk are set out in the Strategic Report, the Directors' Report and the appropriate notes to the financial statements.

When considering whether to continue to adopt the going concern basis in preparing the annual report and financial statements, the directors have taken into account a number of factors, including the following:

- The Group's main subsidiaries, NPg Northeast and NPg Yorkshire, are stable electricity distribution businesses operating an essential public service and are regulated by the Gas and Electricity Markets Authority (“GEMA”). In carrying out its functions, GEMA has a statutory duty under the Electricity Act 1989 to have regard to the need to secure that licence holders are able to finance the activities, which are the subject of obligations under Part 1 of the Electricity Act 1989 (including the obligations imposed by the electricity distribution licence) or by the Utilities Act 2000;
- The Group is profitable with strong underlying cash flows. The Company, NPg Northeast and NPg Yorkshire hold investment grade credit ratings
- The Group is financed by long-term borrowings with an average maturity of 18 years and has access to short-term committed borrowing facilities of £242 million provided by Barclays Bank plc, Lloyds Bank plc, HSBC UK Bank plc and Royal Bank of Canada;
- The Group benefits from strong investment-grade credit ratings which allow access to a range of financing options including the capital markets. A successful bond issue by the Group in April 2022, demonstrated that the Group’s bonds remain attractive to investors and there is an active market with strong appetite to invest;
- The Group has prepared forecasts which taking into account reasonable possible changes in trading performance, show that the Group has sufficient resources to settle its liabilities as they fall due. The directors have had discussions with the bank who have indicated that they would continue to provide the short-term facilities to the Group for the foreseeable future on acceptable terms.

Consequently, after making enquiries, the directors have a reasonable expectation that the Company and the Group have adequate resources to continue in operational existence for the foreseeable future. Accordingly, they continue to adopt the going concern basis in preparing the annual report and financial statements.

Disclosure of information to the auditor

Each director has taken steps that they ought to have taken as a director in order to make themselves aware of any relevant audit information and to establish that the company's auditor is aware of that information. The directors confirm that there is no relevant information that they know of and of which they know the auditor is unaware.

Reappointment of auditor

Deloitte LLP will continue in office in accordance with the provisions in Section 487 of the Companies Act 2006 and has indicated its willingness to do so.

Approved by the board on 30 May 2023 and signed on its behalf by:

T H France
Director

Independent Auditor's Report to the Members of Northern Powergrid Holdings Company

Report on the audit of the financial statements

Opinion

- the financial statements of Northern Powergrid Holdings Company (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 2022 and of the group's profit for the year then ended;
- the group financial statements have been properly prepared in accordance with United Kingdom adopted international accounting standards and International Financial Reporting Standards (IFRSs) as issued by the International Accounting Standards Board (IASB);
- the parent company financial statements have been properly prepared in accordance with United Kingdom adopted international accounting standards and as applied in accordance with the provisions of the Companies Act 2006; and
- the financial statements have been prepared in accordance with the requirements of the Companies Act 2006.

We have audited the financial statements which comprise:

- the consolidated income statement;
- the consolidated statement of comprehensive income;
- the consolidated and parent company statement of financial position;
- the consolidated and parent company statements of changes in equity;
- the consolidated statement of cash flows and;
- the related Notes 1 to 34.

The financial reporting framework that has been applied in the preparation of the group financial statements is applicable law, United Kingdom adopted international accounting standards and IFRSs as issued by the IASB. The financial reporting framework that has been applied in the preparation of the parent company financial statements is applicable law and United Kingdom adopted international accounting standards and as applied in accordance with the provisions of the Companies Act 2006.

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, 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 9 to the financial statements. We confirm that we have not provided any non-audit services prohibited by the FRC's Ethical Standard to the group or the parent company.

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

Summary of our audit approach

The key audit matters that we identified in the current year were:

- Accounting for capital spend - overhead allocation model; and
- Goodwill impairment; and
- Valuation of defined benefit obligations.

Within this report, key audit matters are identified as follows:
- Newly identified
- Increased level of risk
- Similar level of risk
- Decreased level of risk

Materiality: The materiality that we used for the group financial statements was £17.8m which was determined on the basis of income before tax.

Scoping: Our scope provides full scope audit coverage of 95% of the group's revenue, 93% of profit before tax as well as 99% of net assets.

Significant changes in our approach: There was no significant change in our approach except to reassess our controls reliance approach.

Conclusions relating to going concern

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

Our evaluation of the directors' assessment of the group's and parent company's ability to continue to adopt the going concern basis of accounting included:

• assessing financing facilities including nature of facilities, repayment terms and covenants;
• evaluating the linkage to business model and medium-term risks;
• assessing assumptions used in the forecasts, including forecasted information relating to next price control review RIIO-ED2;
• assessing the impact of the current macroeconomic conditions such as inflation to the business;
• calculating the amount of headroom in the forecasts, specifically relating to cash and covenants on borrowings;
• performaing sensitivity analysis;
• evaluating sophistication of the model used to prepare the forecasts, testing of clerical accuracy of those forecasts and our assessment of the historical accuracy of forecasts prepared by management; and
• assessing the appropriateness of the going concern disclosures in the financial statements.

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

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

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

Key audit matters

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

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

Accounting for capital spend - overhead allocation model

Key audit matter description

Total additions to property, plant and equipment ("PPE") in the year in, within the two distribution subsidiaries of the group, Northern Powergrid (Northeast) plc and Northern Powergrid (Yorkshire) plc were £456m (2021: £464m) with the majority of the additions to the Company's electricity distribution system, as disclosed in Note 11 to the financial statements. These additions include £99m capitalised overheads (2021: £86m). A portion of overheads are capitalised to the extent that it is probable that future economic benefits associated with the asset will flow to the Company and the cost of the item can be measured reliably in accordance with IAS 16 Property, Plant and Equipment and the Company's policies. The allocation of overheads to capital results from analysis of the costs incurred and their relevant cost drivers, this is reviewed annually.

The judgements around amounts capitalised remains an area at risk of potential bias due to the level of subjectivity in the percentage of overheads capitalised, which also creates a potential fraud risk. In particular, the key risk that management's judgement in the percentage amounts capitalised are not reflective of the capital spend and as such PPE could be material misstated as a consequence. This is as disclosed in Note 2 to the financial statements, including the note relating to critical judgements in applying accounting policies.

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

- We have obtained an understanding of relevant controls surrounding accounting for capital spend;
- We have analysed the capital spend and the overhead allocation percentages in the year and compared these to prior years to identify any unusual and relevant fluctuations. We have also analysed current policies in place and assessed their suitability in line with IAS 16, along with reviewing the approach management takes towards assessing capitalised overheads and any change introduced in the current year; and
- We have performed testing of the total overheads including within the allocation model which are subsequently capitalised based on management's assessment of percentage allocation.

Key observations
Based on the work performed, and the evidence obtained, we have concluded that management's overhead capitalisation judgement is reasonable, with policies applied being appropriate and consistent with the requirements of IAS 16.

Goodwill impairment

Key audit matter description
Goodwill associated with the Yorkshire distribution network cash generating unit is held at a group level, with an annual impairment review required by International Accounting Standard 36: Impairment of Assets (IAS 36). Management are required to determine if the carrying value of goodwill has fallen below the higher of value in use or fair value less costs to sell of Northern Powergrid (Yorkshire) Plc.

The value multiple rate in the fair value less costs to sell represent the most complex estimates and key judgement areas in which management's impairment modelling relies upon. We identified this as a potential area for management bias due to the level of management judgement involved.

Details regarding the goodwill value of £248.8m (2021: £248.8m) are shown in note 14 to the financial statements and on the face of the Consolidated Statement of Financial Position. It is management's view that no impairment is required.

The assumptions underpinning the impairment review carried out as part of the goodwill assessment is included as a 'key source of estimation uncertainty' in note 2 to the financial statements.

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

- We have obtained an understanding of the relevant controls surrounding goodwill impairment calculations under the fair value less costs to sell basis;
- We challenged the assumptions identified (in particular the value multiple rate) against market indicators and other similar companies, including a recent transaction within the sector;
- We evaluated management's sensitivity analysis and performed an independent sensitivity analysis on the value multiple rate; and
- We evaluated management's disclosures made within the financial statements ensuring compliance with IAS 36.

Key observations
Based on the work performed above, and the evidence obtained, we have concluded that we concur with management's view that no impairment is required.

Valuation of defined benefit obligations

Key audit matter description
The group operates a defined pension scheme, for which key judgement relate to the determination of the present value of the defined benefit obligation in accordance with IAS 19 Employee Benefits. In accordance with management's actuary, the present value of the funding surplus is £151.1m (2021: £262.2m), with an underlying obligation of £965.5m (2021: £1,480.4m). Due to the continued number of members claiming settlements in the year, there continues to be an additional risk around the valuation modelling of each settlement and the impact to the actuarial assumptions due to the change in the profile of the membership of the scheme. The accounting policy and disclosure is found in Note 28 to the financial statements.

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

- We have obtained an understanding of the relevant controls involved in the review of the actuary report at the year-end;

- We have obtained and tested the underlying data and assumptions utilised by management's actuary in the calculation of the pension obligations;
- We challenged the settlement model utilised and tested the underlying data used in the model to derecognise the obligations; and
- Working with our internal actuarial specialists, we considered the estimates of management's actuary and challenged management's assumptions and judgements by comparing the assumptions and results to benchmarked figures.

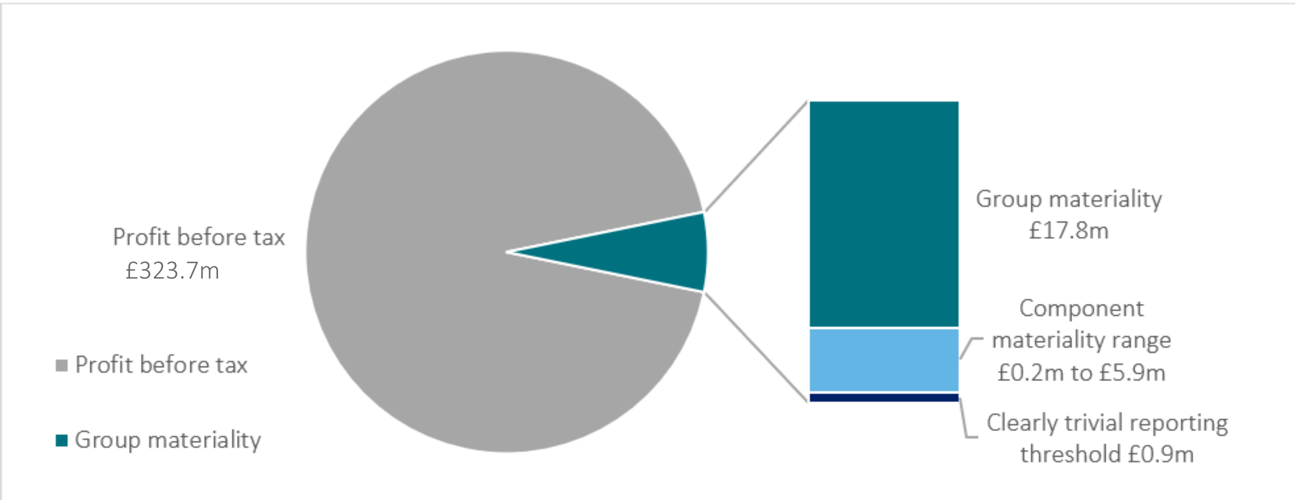
Key observations
Based on the work performed above, and the evidence obtained, we conclude that the defined pension obligation is valued appropriately; the relevant assumptions used by management are consistent with the requirements of IAS 19 and within a reasonable range.

Our application of 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
- **Materiality:** £17.8m (2021: £15.1m)
- **Basis for determining materiality:** c5% of income before tax (2021: c5% of income before tax)
- **Rationale for the benchmark applied:** The group contains large trading entities. The industry revenue is highly regulated, therefore, there is a focus on income before tax.

Parent company financial statements
- **Materiality:** £4.6m (2021: £8.0m)
- **Basis for determining materiality:** Parent company materiality equates to 3% of net assets (2021: 3%), which is capped at 26% of group materiality (2021: 53.0%).
- **Rationale for the benchmark applied:** Total equity shows how much of the value of shareholdings are in the company and as such investor value. The company is not trading and as such incurs no revenue.



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 60% of group materiality for the 2022 audit (2021: 60%). Parent company financial statements performance materiality was set at 60% of parent company materiality for the 2022 audit (2021: 60%). We believe it is appropriate to retain 60% of group materiality in determining performance materiality considering the following:

- our risk assessment, including our assessment of the group's overall control environment; and
- the volume of uncorrected misstatements in the prior period and control deficiencies identified.

Error reporting threshold

We agreed with the Board of Directors that we would report all audit differences in excess of £0.9m (2021: £0.75m), as well as differences below that threshold that, in our view, warranted reporting on qualitative grounds. We also report to the Board of Directors on disclosure matters that we identified when assessing the overall presentation of the financial statements.

An overview of the scope of our audit

Our group audit was scoped by obtaining an understanding of the group and its environment, including internal controls, and assessing the risks of material misstatement at the group level. The operations of the group are mainly focused on the United Kingdom in the electricity distribution business, with some overseas assets in the oil and gas industry.

The focus of our audit work was on the main regulated businesses, Northern Powergrid (Northeast) Plc and Northern Powergrid (Yorkshire) plc, with work performed at a combination of the group's offices in the Northeast and Yorkshire regions, and we have audited the significant sub consolidations in the group. Other sizeable companies within the group include Integrated Utility Services Limited, which provides contracting and maintenance services to the electricity, rail and water industries, and Northern Powergrid Metering Limited which leases smart meters to energy providers. Our audit scope provides full scope audit coverage 95% of the group's revenue (2021: 99%), 93% of profit before tax (2021: 86%) as well as 99% of net assets (2021: 100%).

A component materiality was used to perform the audit work for all component entities for FY22 this ranged from £0.2m to £5.9m (2021: £4.5m to £7.0m). Component materiality is used to reduce to an appropriately low level of probability that the aggregate of uncorrected and undetected misstatements in the group financial statements exceeds materiality for the group financial statements as a whole.

At the group level, we have tested the consolidation process and carried out analytical procedures to confirm our conclusion that there was no risk of material misstatement of the aggregated financial information of the remaining components subject to audit or audit of specific balances.

Audit work to respond to the risks of material misstatement was performed directly by the group audit engagement team. There have been no material changes in scope from prior year except for adopting a no reliance on controls approach for the testing of revenue.

Our consideration of the control environment

We have involved our IT specialists to assess relevant controls over the group's IT landscape which contains a number of IT systems and tools used to support business processes. These included controls within the Oracle and Durabill systems integral to relevant business cycles. However, we identified control deficiencies and reported these to the Board of Directors. We evaluated the impact of these deficiencies on our audit and revised our risk assessment as appropriate. The directors discuss their assessment of the control environment on page 16 to 19 of the annual report.

We have obtained an understanding of relevant manual controls of key business cycles through a combination of tests of inquiry, inspection, observation, and re-performance and reported a number of controls related improvements to the Board of Directors.

Our consideration of climate-related risks

We have made enquiries with management to understand the impact of climate-related risks and controls relevant to the business, assessed the risks, and adapted our assessment of the risks of material misstatement as appropriate. This included reviewing the provisions in place and obtaining legal confirmation to ascertain if there should be any additional environmental provisions recognised. As outlined in Note 2, the impact on the financial statements has been increased expenses and capital expenditures to make the network resilient to extreme weather events. Management have disclosed their climate change adaptation in the strategic report.

We have involved our ESG (Environmental, Social and Governance specialists) to review Northern Powergrid's climate change disclosures and evaluate the information presented in its accounts. No additional risks were identified by the group audit engagement team.

Other information

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

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

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

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

We have nothing to report in this regard.

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 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.

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

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

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, our procedures included the following:

- the nature of the industry and sector, control environment and business performance including the design of the group's remuneration policies, key drivers for directors' remuneration, bonus levels and performance targets;
- results of our enquiries of management, internal audit and the Board about their own identification and assessment of the risks of irregularities including those that are specific to the Group's sector;
- 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 related to fraud or non-compliance with laws and regulations;
- the matters discussed among the audit engagement team and involving relevant internal specialists, including tax, valuations, pensions, IT, actuarial and industry specialists 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: accounting for capital spend - overhead allocation model, goodwill impairment and valuation of defined benefit obligations. 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 legislation, 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 group's operating licence regulated by the Gas and Electricity Markets Authority (GEMA).

Audit response to risks identified

As a result of performing the above, we identified the following key audit matters related to fraud:

- Accounting for capital spend - overhead allocation model; and
- Goodwill impairment; and
- Valuation of defined benefit pension obligation.

The key audit matters section of our report explains the matter in more detail and also describes the specific procedures we performed in response to that key audit matter.

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 provisions of relevant laws and regulations described as having a direct effect on the financial statements;
- enquiring of management, the Board of Directors and 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 HMRC and Ofgem; and
- 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 remained alert to any indications of fraud or non-compliance with laws and regulations throughout the audit.

Report on other legal and regulatory requirements

Opinion on other matter prescribed by 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 of 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.

We have nothing to report in respect of this matter.

Corporate Governance Statement

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

- the directors' statement with regards to the appropriateness of adopting the going concern basis of accounting and any material uncertainties identified as set out on page 30 of the annual report;
- the directors' explanation as to its assessment of the group's prospects, the period this assessment covers and why the period is appropriate as set out on page 29 of the annual report;
- the board's confirmation that it has carried out a robust assessment of the emerging and principal risks as set out on page 13 of the annual report;
- the section of the annual report that describes the review of effectiveness of risk management and internal control systems as set out on page 13 of the annual report; and
- the section describing the work of the audit committee as set out on page 27 of the annual report.

Other matters which we are required to address

Auditor tenure

Following the recommendation of the Board of Directors, we were appointed by the Board of Northern Powergrid Holdings Company in 1998 to audit the financial statements for the year ending 31 December 1998 and subsequent financial periods. The period of total uninterrupted engagement including previous renewals and reappointments of the firm is 25 years, covering the years ending 31 December 1998 to 31 December 2022.

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.

Anthony Matthews FCA (Senior Statutory Auditor)
For and on behalf of Deloitte LLP, Statutory Auditor
Newcastle upon Tyne
Tyne and Wear
United Kingdom

30 May 2023

Northern Powergrid Holdings Company
Consolidated Income Statement for the Year Ended 31 December 2022

	Note	2022 £ 000	2021 £ 000
Revenue	3	1,148,839	918,325
Cost of sales		(161,722)	(43,767)
Gross profit		987,117	874,558
Distribution costs		(329,120)	(311,125)
Administrative expenses		(235,412)	(181,239)
Operating profit	5	422,585	382,194
Other gains	4	1,354	1,907
Finance income	6	2,273	1,612
Finance costs	6	(102,515)	(88,830)
Profit before tax		323,697	296,883
Income tax expense	10	(126,240)	(141,039)
Profit for the year		197,457	155,844
Profit attributable to:			
Owners of the Company		195,498	154,281
Non-controlling interests		1,959	1,563
		197,457	155,844

The above results were derived from continuing operations.

Northern Powergrid Holdings Company
Consolidated Statement of Comprehensive Income for the Year Ended 31 December 2022

	Note	2022 £ 000	2021 £ 000
Profit for the year		197,457	155,844
Items that will not be reclassified subsequently to profit or loss			
Re-measurements of post-employment benefit obligations (net)	28	(74,175)	130,374
Items that may be reclassified subsequently to profit or loss			
Gain on cash flow hedges (net)	21	16,564	3,950
Foreign currency losses	21	(85)	(446)
		16,479	3,504
Total comprehensive income for the year		139,761	289,722
Total comprehensive income attributable to:			
Owners of the Company		137,802	288,159
Non-controlling interests	22	1,959	1,563
		139,761	289,722

The notes on pages 44 to 126 form an integral part of these financial statements.

Northern Powergrid Holdings Company
(Registration number: 03476201)
Consolidated Statement of Financial Position as at 31 December 2022

	Note	31 December 2022 £ 000	31 December 2021 £ 000
Assets			
Non-current assets			
Property, plant and equipment	11	7,562,034	7,029,079
Right of use assets	12	30,976	24,105
Intangible assets	14	299,969	297,925
Equity accounted investments	15	3,982	3,898
Retirement benefit obligations	28	151,500	262,200
Deferred tax asset	10	754	363
Trade and other receivables	17	4,087	2,702
Other non-current financial assets	32	45,967	944
		8,099,269	7,621,216
Current assets			
Inventories	16	32,509	20,879
Trade and other receivables	17	199,505	165,712
Tax receivable	10	6,454	3,130
Cash and cash equivalents	18, 23	30,977	29,125
Restricted cash	19	2,823	-
Contract assets	3	5,824	7,593
Other current financial assets	32	3,484	204
		281,576	226,643
Total assets		8,380,845	7,847,859
Equity and liabilities			
Equity			
Share capital	20	(354,550)	(354,550)
Share premium		810	810
Foreign currency translation reserve	21	1,300	1,215
Cash flow hedging reserve	21	(17,425)	(861)
Retained earnings		(2,897,544)	(2,776,221)
Equity attributable to owners of the Company		(3,267,409)	(3,129,607)
Non-controlling interests		(40,682)	(38,723)
Total equity		(3,308,091)	(3,168,330)
Non-current liabilities			
Lease liabilities		(26,057)	(18,551)
Loans and borrowings	23	(2,512,624)	(2,074,946)
Provisions	25	(63,018)	(11,986)
Deferred revenue	27	(1,504,481)	(1,486,460)
Deferred tax liabilities	10	(408,624)	(359,834)
		(4,514,804)	(3,951,777)

The notes on pages 44 to 126 form an integral part of these financial statements.

Northern Powergrid Holdings Company
(Registration number: 03476201)
Consolidated Statement of Financial Position as at 31 December 2022 (continued)

	Note	31 December 2022 £ 000	31 December 2021 £ 000
Current liabilities			
Lease liabilities		(6,346)	(6,160)
Trade and other payables	26	(269,386)	(226,478)
Loans and borrowings	23	(184,304)	(423,495)
Deferred revenue	27	(66,685)	(66,261)
Provisions	25	(15,932)	(5,358)
Other current financial liabilities	32	(15,297)	-
		(557,950)	(727,752)
Total liabilities		(5,072,754)	(4,679,529)
Total equity and liabilities		(8,380,845)	(7,847,859)

Approved by the board on 30 May 2023 and signed on its behalf by:

T H France
Director

Northern Powergrid Holdings Company
(Registration number: 03476201)
Company Statement of Financial Position as at 31 December 2022

	Note	31 December 2022 £ 000	31 December 2021 £ 000
Assets			
Non-current assets			
Investments in subsidiaries, joint ventures and associates	15	376,289	376,289
Trade and other receivables	17	40,000	190,000
		416,289	566,289
Current assets			
Trade and other receivables	17	224,117	219,738
Cash and cash equivalents	18	-	10,403
		224,117	230,141
Total assets		640,406	796,430
Equity and liabilities			
Equity			
Share capital	20	(354,550)	(354,550)
Retained earnings		(225,537)	(223,000)
Total equity		(580,087)	(577,550)
Non-current liabilities			
Loans and borrowings	23	-	(199,134)
Current liabilities			
Trade and other payables	26	(24,095)	(18,842)
Loans and borrowings	23	(35,624)	(644)
Income tax liability		(600)	(260)
		(60,319)	(19,746)
Total liabilities		(60,319)	(218,880)
Total equity and liabilities		(640,406)	(796,430)

The Directors have taken the exemption offered under section 408 of the Act from publishing a separate statement of profit or loss. The Company reported a profit for the financial year ended 31 December 2022 of £2.5m (2021: £32.8m).

Approved by the Board on 30 May 2023 and signed on its behalf by:

T H France
Director

Northern Powergrid Holdings Company
Consolidated Statement of Changes in Equity for the Year Ended 31 December 2022

	Share capital £ 000	Share premium £ 000	Foreign currency translation £ 000	Cash flow hedging reserve £ 000	Retained earnings £ 000	Total £ 000	Non-controlling interests £ 000	Total equity £ 000
At 1 January 2022	354,550	(810)	(1,215)	861	2,776,221	3,129,607	38,723	3,168,330
Profit for the year	-	-	-	-	195,498	195,498	1,959	197,457
Other comprehensive income	-	-	(85)	16,564	(74,175)	(57,696)	-	(57,696)
Total comprehensive income	-	-	(85)	16,564	121,323	137,802	1,959	139,761
At 31 December 2022	354,550	(810)	(1,300)	17,425	2,897,544	3,267,409	40,682	3,308,091

	Share capital £ 000	Share premium £ 000	Foreign currency translation £ 000	Cash flow hedging reserve £ 000	Retained earnings £ 000	Total £ 000	Non-controlling interests £ 000	Total equity £ 000
At 1 January 2021	354,550	(810)	(769)	(3,089)	2,491,566	2,841,448	37,482	2,878,930
Profit for the year	-	-	-	-	154,281	154,281	1,563	155,844
Other comprehensive income	-	-	(446)	3,950	130,374	133,878	-	133,878
Total comprehensive income	-	-	(446)	3,950	284,655	288,159	1,563	289,722
Dividends	-	-	-	-	-	-	(322)	(322)
At 31 December 2021	354,550	(810)	(1,215)	861	2,776,221	3,129,607	38,723	3,168,330

Northern Powergrid Holdings Company
Company Statement of Changes in Equity for the Year Ended 31 December 2022

	Share capital £ 000	Retained earnings £ 000	Total £ 000
At 1 January 2022	354,550	223,000	577,550
Profit for the year	-	2,537	2,537
Total comprehensive income	-	2,537	2,537
At 31 December 2022	354,550	225,537	580,087

	Share capital £ 000	Retained earnings £ 000	Total £ 000
At 1 January 2021	354,550	190,180	544,730
Profit for the year	-	32,820	32,820
Total comprehensive income	-	32,820	32,820
At 31 December 2021	354,550	223,000	577,550

The notes on pages 44 to 126 form an integral part of these financial statements.

Northern Powergrid Holdings Company
Consolidated Statement of Cash Flows for the Year Ended 31 December 2022

	Note	2022 £ 000	2021 £ 000
Cash flows from/(used in) operating activities			
Profit for the year		197,457	155,844
Depreciation and amortisation	5	350,064	284,297
Depreciation on right of use assets		6,926	6,426
Amortisation of deferred revenue		(66,515)	(64,318)
Profit on disposal of property plant and equipment	4	(1,354)	(1,907)
Retirement benefit obligation		13,238	(9,000)
Finance income	6	(2,273)	(1,612)
Finance costs	6	102,515	88,830
Income tax expense	10	126,240	141,039
		726,298	599,599
Increase in inventories	16	(9,484)	(1,532)
Increase in trade and other receivables	17	(30,926)	(12,354)
Increase in trade and other payables	26	12,075	15,445
Decrease/(increase) in contract assets	3	1,769	(1,379)
(Decrease)/increase in provisions	25	(13,365)	3,946
Cash generated from operations		686,367	603,725
Income taxes paid		(62,071)	(59,540)
Net cash flow from operating activities		624,296	544,185
Cash flows from/(used in) investing activities			
Acquisitions of property plant and equipment		(673,926)	(606,258)
Proceeds from sale of property plant and equipment		3,652	4,598
Acquisition of intangible assets	14	(13,983)	(11,661)
Receipt of customer contributions		114,071	93,427
Interest received		2,156	522
Dividend income	6	927	840
Fixed asset investments	15	(894)	-
Net cash flows used in investing activities		(567,997)	(518,532)
Cash flows from/(used in) financing activities			
Proceeds from long-term borrowing		348,320	218,000
Transaction costs relating to loans and borrowings		(2,105)	(4,235)
Repayment of long-term borrowing		(391,509)	(166,035)
Movement of short-term borrowing		98,848	470
Payments to finance lease creditors		(6,622)	(6,286)
Movement in restricted cash		(1,661)	16,758
Interest expense on leases		(654)	(716)
Interest paid		(99,064)	(94,872)
Minority interest paid		-	(322)
Net cash flows generated used in financing activities		(54,447)	(37,238)
Net increase/(decrease) in cash and cash equivalents		1,852	(11,585)
Cash and cash equivalents at 1 January		29,125	40,710
Cash and cash equivalents at 31 December		30,977	29,125

The notes on pages 44 to 126 form an integral part of these financial statements.

Northern Powergrid Holdings Company
Company Statement of Cash Flows for the Year Ended 31 December 2022

	Note	2022 £ 000	2021 £ 000
Cash flows from/(used in) operating activities			
Profit for the year		2,537	32,820
Finance income	6	(19,976)	(47,413)
Finance costs	6	14,763	15,236
Income tax expense		595	(147)
		(2,081)	496
Increase in trade and other payables	26	5,253	1,292
Cash generated from operations		3,172	1,788
Income taxes (paid)/received		(255)	407
Net cash flow from operating activities		2,917	2,195
Cash flows from/(used in) investing activities			
Movement in intercompany loans		145,265	(102,538)
Interest received		19,976	47,413
Net cash flows from/(used in) investing activities		165,241	(55,125)
Cash flows from/(used in) in financing activities			
Movement in intercompany treasury account		35,624	-
Interest paid		(14,185)	(14,506)
Repayment of long-term borrowing		(200,000)	-
Net cash flows used in financing activities		(178,561)	(14,506)
Net decrease in cash and cash equivalents		(10,403)	(67,436)
Cash and cash equivalents at 1 January		10,403	77,839
Cash and cash equivalents at 31 December		-	10,403

Yorkshire Electricity Group plc, a Northern Powergrid Group company, acting on behalf of other group companies was authorised to settle various liabilities against the relevant intercompany accounts. The Company has disclosed the underlying cash flows as operating, investing or financing according to their nature on the basis that, as a principal, the entity has the right to the cash inflows and/or the obligation to settle the liability and ensure clarity of disclosure of the cash costs of the business.

1 General information

The Company is a private Company limited by share capital, incorporated in England and Wales and domiciled in the United Kingdom.

The address of its registered office is:
Lloyds Court, 78 Grey Street, Newcastle upon Tyne, Tyne and Wear, NE1 6AF, United Kingdom

2 Accounting policies

Statement of compliance
The group financial statements have been prepared in accordance with International Financial Reporting Standards and its interpretations adopted by the IASB.

Summary of significant accounting policies and key accounting estimates
The principal accounting policies applied in the preparation of these financial statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

Basis of preparation
The financial statements have been prepared under the historical cost convention as modified by financial instruments recognised at fair value.

The preparation of financial statements in conformity with IFRS requires the use of certain critical accounting estimates. It also requires management to exercise its judgement in the process of applying the group's accounting policies.

2 Accounting policies (continued)

Going Concern
A review of the Group's business activities during the year, together with details regarding its future development, performance and position, its objectives, policies and processes for managing its capital, its financial risk management objectives and details of its exposures to trading risk, credit risk and liquidity risk are set out in the Strategic Report, the Directors' Report and the appropriate notes to the financial statements.

When considering whether to continue to adopt the going concern basis in preparing the annual report and financial statements, the directors have taken into account a number of factors, including the following:

- The Group's main subsidiaries, NPg Northeast and NPg Yorkshire, are stable electricity distribution businesses operating an essential public service and are regulated by the Gas and Electricity Markets Authority (“GEMA”). In carrying out its functions, GEMA has a statutory duty under the Electricity Act 1989 to have regard to the need to secure that licence holders are able to finance the activities, which are the subject of obligations under Part 1 of the Electricity Act 1989 (including the obligations imposed by the electricity distribution licence) or by the Utilities Act 2000;
- The Group is profitable with strong underlying cash flows. The Company, NPg Northeast and NPg Yorkshire hold investment grade credit ratings
- The Group is financed by long-term borrowings with an average maturity of 18 years and has access to short-term committed borrowing facilities of £242 million provided by Barclays Bank plc, Lloyds Bank plc, HSBC UK Bank plc and Royal Bank of Canada;
- The Group benefits from strong investment-grade credit ratings which allow access to a range of financing options including the capital markets. A successful bond issue by the Group in April 2022, demonstrated that the Group’s bonds remain attractive to investors and there is an active market with strong appetite to invest;
- The Group has prepared forecasts which taking into account reasonable possible changes in trading performance, show that the Group has sufficient resources to settle its liabilities as they fall due. The directors have had discussions with the bank who have indicated that they would continue to provide the short-term facilities to the Group for the foreseeable future on acceptable terms.

Consequently, after making enquiries, the directors have a reasonable expectation that the Company and the Group have adequate resources to continue in operational existence for the foreseeable future. Accordingly, they continue to adopt the going concern basis in preparing the annual report and financial statements.

Basis of consolidation
The group financial statements consolidate the financial statements of the company and its subsidiary undertakings drawn up to 31 December 2022.

A subsidiary is an entity controlled by the company. Control is achieved where the company has the power to govern the financial and operating policies of an entity so as to obtain benefits from its activities.

The results of subsidiaries acquired or disposed of during the year are included in the income statement from the effective date of acquisition or up to the effective date of disposal, as appropriate. Where necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies into line with those used by the group.

The purchase method of accounting is used to account for business combinations that result in the acquisition of subsidiaries by the group. The cost of a business combination is measured as the fair value of the assets given, equity instruments issued and liabilities incurred or assumed at the date of exchange, plus costs directly attributable to the business combination. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. Any excess of the cost of the business combination over the acquirer’s interest in the net fair value of the identifiable assets, liabilities and contingent liabilities recognised is recorded as goodwill.

2 Accounting policies (continued)

Inter-company transactions, balances and unrealised gains on transactions between the company and its subsidiaries, which are related parties, are eliminated in full.

Intra-group losses are also eliminated but may indicate an impairment that requires recognition in the consolidated financial statements.

Accounting policies of subsidiaries have been changed where necessary to ensure consistency with the policies adopted by the group. Non-controlling interests in the net assets of consolidated subsidiaries are identified separately from the group's equity therein. Non-controlling interests consist of the amount of those interests at the date of the original business combination and the non-controlling shareholder's share of changes in equity since the date of the combination. Total comprehensive income is attributed to non-controlling interests even if this results in the non-controlling interests having a deficit balance.

Critical judgements in applying accounting policies

The following are the critical judgements, apart from those involving estimations, that the directors have made in the process of applying the Group's accounting policies and that have the most significant effect on amounts recognised in the consolidated financial statements:

- The split of operating and capital expenditure and the allocation of overheads to property, plant and equipment: The allocation of overheads to capital is derived from a detailed analysis of the costs and their cost drivers which is reviewed on an annual basis. The percentage allocation of overheads across the work stream categories are obtained from section managers who are asked to provide reasoning and supporting evidence for the allocation. Finance then undertake a financial impact assessment review and the rationale to ensure it complies with IFRS. The amount of overheads capitalised in the year was £98.7 million (2021: £86.8 million) which was an increase from 62% to 63%.

Key sources of estimation uncertainty

The following are the key assumptions concerning the future and other key sources of estimation uncertainty at the end of the reporting period that may have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year:

- Assumptions used when evaluating long-term pension plans - these assumptions and their possible impacts are disclosed in note 28.
- Impairment of goodwill evaluation - determining whether goodwill is impaired requires an estimation on an annual basis of the fair value of cash generating units to which goodwill has been allocated. The carrying value of goodwill at the Statement of Financial Position date was £248.8m. The fair value used as the basis for the goodwill impairment calculations are set out in note 14.
- Recognition of deferred tax asset in relation to the tax attributes of the oil and gas business - determining on whether the tax attributes of the oil and gas business (as disclosed in Note 10) are recognised as a deferred tax asset under IAS 12 which requires the business to demonstrate that it is probable that future taxable profits should be available in order to offset these losses.

2 Accounting policies (continued)

- Impairment of oil and gas assets -

  Exploration and appraisal costs are accounted for on a successful efforts basis. All costs relating to licence and data acquisition, geological and geophysical activity and exploration and appraisal drilling are initially capitalised as intangible oil and gas assets pending determination of the commercial potential of the relevant oil and gas properties.

  The carrying value of intangible oil and gas assets at the Statement of Financial Position date was £3.7m (Note 14). These relate to E&A costs of the Phase 2 Saturn Banks Assets. The commercial potential of these assets is not yet known and there are no impairment indicators at the Statement of Financial Position date.

  The carrying value of tangible oil and gas assets at the Statement of Financial Position date, net of abandonment asset, was £261.1m (Note 11 and 25).

  Determining whether oil and gas assets are impaired requires an estimation of the value in use of the assets. The calculation of discounted future net cash flows for oil and gas assets under development or in production are reviewed at least annually and are most sensitive to the following assumptions:

  • Cash generating unit - where individual fields benefit from shared infrastructure and the assets were acquired concurrently the Group considers treating them as one CGU is the most appropriate basis for considering impairment.
  • Commercial reserves - oil and gas reserves are calculated on an entitlement basis. Estimates of commercial reserves underpin the calculation of depletion and amortisation on a unit of production basis. Estimates of commercial reserves include estimates of the amount of oil and gas in place, assumptions about the reservoir performance over the life of the field and assumptions about commercial factors which, in turn, will be affected by the future oil and gas price.
  • Production volumes - annual estimates of oil and gas reserves are generated internally with input from operator profiles and technical opinion from management utilising information which is considered similar to '2P' calculated reserves used in the UK sector. The estimated future production profiles are used in the life of the fields which in turn are used as a basis in the calculation of discounted future net cash flows.
  • Commodity prices - long term assumptions for oil and gas prices are used for future cash flows in accordance with the judgement of senior management.
  • Fixed and variable operating costs - variables operating costs include examples such as pipeline tariffs and treatment charges. Fixed operating costs are based on operator budgets.
  • Capital expenditure - Field development is capital intensive and future capital expenditure has a significant bearing on the value of an oil and gas development asset. In addition, capital expenditure may be required for producing fields to increase production and/or extend the life of the field.
  • Discount rates - Rates used should reflect the current market assessment of risks specific to the oil and gas sector. A rate of 10% has been applied to the assessment as at 31 December 2022.

  A potential change in any of the above assumptions may cause the estimated future net cash flows to be lower than the carrying value, resulting in an impairment loss. The assumptions which would have the greatest impact on recoverable amounts of the fields are production volumes (linked to recoverable reserves) and commodity prices.

  The impairment assessment carried out concluded that no impairment should be recognised for the oil and gas assets and greater detail is given in Note 11.

2 Accounting policies (continued)

- Impairment of renewable energy assets -

  The carrying value of renewable energy assets at the Statement of Financial Position date was £272.2m.

  Determining if the renewable energy assets are impaired requires an estimation of the value in use of the assets. The calculation of discounted future net cash flows are reviewed at least annually and are most sensitive to the following assumptions:

  • Generation - estimates of energy generation are based on operator profiles and technical opinion from management. The estimated future generation is impacted by factors such as the weather and technical issues.
  • Market Black Price - the assets are subjected to a fixed price contract on approximately 70% of the generation therefore movements in the market price of electricity impact the value in use to a lesser extent. Long term assumptions for electricity prices are used for future cash flows in accordance with the judgement of senior management.

  The impairment assessment carried out concluded that no impairment should be recognised for the renewable energy assets.

New standards and amendments

Effective for periods beginning on or after 1 January 2022
- Amendment to IFRS 3: Reference to the Conceptual Framework
- Amendments to IAS 16: Property, Plant & Equipment - Proceeds before Intended Use
- Amendments to IAS 37: Onerous Contracts - Cost of Fulfilling a Contract
- Annual Improvements to IFRS Standards 2018-2020

These amendments did not have a material impact on the financial statements.

The directors have considered new accounting standards issued that are not yet applicable and have noted no material changes are likely to arise.

Leases
The Group applies IFRS 16 to all leases (except as noted below) which include buildings, land and fleet vehicles. The right-of-use assets are initially measured at the amount of the lease liability plus any initial direct costs incurred by the lessee. Subsequently, the assets are measured under the fair value method. The corresponding lease liability is initially measured at present value of all lease payments over the lease term and can be restated if the terms or other criteria of the contract change. These values can be found in the Statement of Financial Position.

The Group has taken practical expedients as per below:

- For short-term leases (lease term of 12 months or less) and leases of low-value assets (which includes personal computers, small items of office furniture and telephones), the Group has opted to recognise a lease expense on a straight-line basis as permitted by IFRS 16. This expense is presented within ‘administrative expenses’ in the Income Statement.
- Applies a single discount rate to a portfolio of leases;
- Uses hindsight to determine the lease term when contract contains options to extend or terminate the lease; and
- Adjusts right of use asset by provision for onerous leases as an alternative to performing an impairment review.

The weighted average lessee’s incremental borrowing rate applied to determine the present value of the lease liabilities during the current period was 2.33% (2021: 1.753%)

The Group recognises deprecation of right-of-use assets (within administration expenses) and interest on lease liabilities (within finance costs) in the Income Statement. Within the Statement of Cash Flow, the Group separates the total amount of cash paid between the principal portion and the interest, both of which are presented within financing activities.

Right-of-use assets are depreciated over the shorter of the useful life of the asset or the lease term. For information regarding the depreciation charge per class of asset and carrying value, please refer to Note 12 Right of use assets.

2 Accounting policies (continued)

Revenue recognition

Recognition

The Group earns revenue from the provision of services relating to revenue from a contract to provide services is recognised by the following means:
- Distribution use of system income is primarily recognised on a per unit (volumetric i.e. kWh and capacity (kVA)) and fixed (per 'customer' per day) basis;
- Customer contributions for connections are amortised over the life of the corresponding asset;
- This revenue is recognised in the accounting period when control of the product has been transferred, at an amount that reflects the consideration to which the entity expects to be entitled in exchange for fulfilling its performance obligations to customers.
- Contracting revenue is recognised in line with expenditure;
- Meter asset provision income is accounted for under lease accounting;
- Intercompany recharges for services provided are based on costs incurred;
- Gas revenue is the sale of natural gas and condensate;
- Renewables revenue is the sale of renewable energy; and
- Other revenue includes assessment and design fees and disconnections from the network and are recognised by reference to the proportion of total costs of providing the service.
- This revenue is recognised in the accounting period when the services are rendered at an amount that reflects the consideration to which the entity expects to be entitled in exchange for fulfilling its performance obligations to customers.

The principles in IFRS are applied to revenue recognition criteria using the following 5 step model:

1. Identify the contracts with the customer
2. Identify the performance obligations in the contract
3. Determine the transaction price
4. Allocate the transaction price to the performance obligations in the contract
5. Recognise revenue when or as the entity satisfies its performance obligations

Fee arrangements

Below are details of fee arrangements and how these are measured and recognised, for revenue from the provision of services:

- For regulated use of system income the revenue for the service is recognised on the basis of agreed charging methodologies which is recognised on a per unit (volumetric i.e. kWh and capacity (kVA)) and fixed (per 'customer' per day) basis.
- For fixed price for contracted service revenue is recognised based on the stage of completion and performance obligations met for actual services provided as a proportion of the total fixed fee agreed in the contract.
- For stage payment on long-term contracts revenue is recognised by reference to stage of manufacture at the year end date using contractual rates specified in the contract. Revenue on materials is measured at the actual amount of the material used on the contract at the price specified in the contract.

The performance obligations involved in engineering contracting work are accounted for as follows:

- Where the outcome of a contract can be estimated reliably, revenue and costs are recognised by reference to the stage of completion of the contract activity at the end of the reporting period, based on the proportion of contract costs incurred for work performed to date relative to the estimated total contract costs, except where this would not be representative of the stage of completion.
- Variations in contract work, claims and incentive payments are included to the extent that they have been agreed with the customer.
- Where the outcome of a contract cannot be estimated reliably, contract revenue is recognised to the extent of the costs incurred where it is probable they will be recoverable. Contract costs are recognised as expenses in the period in which they are incurred. When it is probable that total contract costs will exceed total contract revenue, the expected loss is recognised as an expense immediately.

2 Accounting policies (continued)

- When contract costs incurred to date plus recognised profits less recognised losses exceed progress billings, the surplus is shown as amounts due from customers for contract work. For contracts where progress billings exceed contract costs incurred to date plus recognised profits less recognised losses, the surplus is shown as the amounts due to customers for contract work. Amounts received before the related work is performed are included in the consolidated statement of financial position, as a liability, as advances received. Amounts billed for work performed but not yet paid by the customer are included in the consolidated statement of financial position under trade and other receivables.

Other performance obligations include but are not limited to:
- Provision of vehicles over a specified period accounted for under lease accounting;
- Provisions of exploration equipment over a specified period; and
- Passage of milestones and completion of installation of equipment for engineering contracting.

The principal activity of the CalEnergy Resources ("CER") business is the exploration, development, production and sale of natural gas as well as the sale of renewable energy. During the year, CER recognised revenues from the sale of gas, condensate and renewables in line with IFRS 15 Revenue from Contracts with Customers. CER is considered to be the principal in it's contract with customers because it controls the gas before transferring it when sold. Revenue is recognised when performance obligations are satisfied (i.e. by transferring control). Transferring control of gas involves the customer taking physical possession and the title passing, generally on delivery of the gas to an agreed delivery point. In respect of gas sales, the delivery point is when the gas is delivered into the National Transmission System downstream of the Bacton gas terminal. Condensate is sold on an FCA basis when it is delivered onto the buyer's rail tank car loading manifold.

Performance obligations are satisfied at a point in time and at this point CER recognises revenue. Contracts contain one performance obligation which is the provision of gas or condensate. The transaction price is the amount to which CER expects to be entitled and is allocated based on standalone selling prices. Contracts for the sale of gas and condensate are priced with reference to quoted prices. All revenue from these contracts is disclosed as revenue from contracts with customers and any amounts payable to the customer for certain costs are recognised as a reduction of the transaction price and, therefore, a reduction in revenue since the payment to the customer is not in exchange for goods. The credit terms range between 20-40 days after the month-end, depending on the customer.

Contract modifications
The group's contracts are often amended for changes in contract specifications and requirements. Contract modification exists when the amendment either creates new or changes the existing enforceable rights and obligations. The effect of a contract modification on the transaction price and the group's measure of progress for the performance obligation to which it relates, is recognised as an adjustment to revenue in one of the following ways:

a. Prospectively as an additional separate contract:
b. Prospectively as a termination of the existing contract and creation of a new contract;
c. As part of the original contract using a cumulative catch up; or
d. As a combination of b) and c).

The facts and circumstances of any contract modification are considered individually as the types of modifications will vary contract by contract and may result in different accounting outcomes. Judgement is applied in relation to the accounting for such modifications where the final terms or legal contracts have not been agreed prior to the period end as management need to determine if a modification has been approved and if it either creates new or changes existing enforceable rights and obligations of the parties. Depending upon the outcome of such negotiations, the timing and amount of revenue recognised may be different in the relevant accounting periods. Modification and amendments to contracts are undertaken via an agreed formal process. For example, if a change in scope has been approved but the corresponding change in price is still being negotiated, management use their judgement to estimate the change to the total transaction price.

Tax
The tax expense for the period comprises current and deferred tax. Tax is recognised in profit or loss, except that a change attributable to an item of income or expense recognised as other comprehensive income is also recognised directly in other comprehensive income.

2 Accounting policies (continued)

The current income tax charge is calculated on the basis of tax rates and laws that have been enacted or substantively enacted by the reporting date in the countries where the group operates and generates taxable income.

Deferred income tax is recognised on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements and on unused tax losses or tax credits in the group. Deferred income tax is determined using tax rates and laws that have been enacted or substantively enacted by the reporting date.

The carrying amount of deferred tax assets are reviewed at each reporting date and a valuation allowance is set up against deferred tax assets so that the net carrying amount equals the highest amount that is more likely than not to be recovered based on current or future taxable profit.

Property, plant and equipment

Property, plant and equipment is stated in the statement of financial position at cost, less any subsequent accumulated depreciation and subsequent accumulated impairment losses.

The cost of property, plant and equipment includes directly attributable incremental costs incurred in their acquisition and installation.

Depreciation

Depreciation is charged so as to write off the cost of assets, other than land and properties under construction over their estimated useful lives, as follows:

Asset class	**Depreciation method and rate**
Distribution system:	
- Generation assets	15 years
- Conventional metering equipment	up to 5 years
- Information Technology equipment	up to 10 years
- Land	not depreciated
- Other system assets	45 years
Land and buildings:	
- Freehold buildings	up to 60 years
- Leasehold buildings	lower of lease period or 60 years
- Non-Operational land	not depreciated
Furniture, fittings and equipment	up to 10 years
Metering equipment	up to 15 years
Renewables	up to 35 years

The estimated useful lives, residual values and depreciation method are reviewed at the end of each reporting period, with the effect of any material changes in those estimates accounted for on a prospective basis. Due to the significance of the Groups's investment in property, plant and equipment, variations in estimates could impact operating results both positively and negatively although, historically, few changes have been required.

Assets in the course of construction are carried at cost, less any recognised impairment loss. Costs include professional fees, and, for qualifying assets, borrowing costs capitalised in accordance with the Group's accounting policy. Such assets are classified to the appropriate categories of property, plant and equipment when completed and ready for intended use. Depreciation on these assets, on the same basis as other assets, commences when the assets are commissioned. Assets are derecognised when they are disposed of profit or loss on disposal is recognised in other gains on the statement of profit or loss.

2 Accounting policies (continued)

Goodwill
Goodwill arising on the acquisition of an entity represents the excess of the cost of acquisition over the Group's interest in the net fair value of the identifiable assets, liabilities and contingent liabilities of the entity recognised 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. Goodwill is held in the currency of the acquired entity and revalued to the closing rate at each reporting period date.

Goodwill is not subject to amortisation but is tested for impairment.

Negative goodwill arising on an acquisition is recognised directly in the income statement. On disposal of a subsidiary or a jointly controlled entity, the attributable amount of goodwill is included in the determination of the profit or loss recognised in the income statement on disposal.

Intangible assets amortisation
Amortisation is provided on intangible assets so as to write off the cost, less any estimated residual value, over their expected useful economic life as follows:

Asset class	**Amortisation method and rate**
Software development	up to 15 years

Oil and gas assets
Exploration and appraisal costs are accounted for on the successful efforts basis. All costs relating to licence and data acquisition, geological and geophysical activity and exploration and appraisal drilling are initially capitalised as intangible oil and gas assets pending determination of the commercial potential of the relevant oil and gas properties. Exploration costs, which are not incurred under a specific licence, are written off in the year incurred. If prospects are subsequently deemed to be unsuccessful on completion of evaluation, the associated costs are charged to the statement of profit or loss in the year in which that determination is made. If the prospects are deemed to be commercially viable, such costs are transferred to tangible oil and gas assets under property, plant and equipment.

Depreciation, depletion and amortisation for oil and gas properties is calculated on a unit-of-production basis, using the ratio of oil and gas production in the period to the estimated quantities of proven and probable reserves at the end of the period plus production in the period, on a field-by-field basis. Proven and probable reserve estimates are based on a number of underlying assumptions including oil and gas prices, future costs, oil and gas in place and reservoir performance, which are inherently uncertain. Management uses established industry techniques to generate its estimates and regularly references its estimates against those of joint venture partners or external consultants. However, the amount of reserves that will ultimately be recovered from any field cannot be known with certainty until the end of the field's life.

Where there has been a change in economic or commercial conditions that indicates a possible impairment of a project, the recoverability of the net book value less any provisions for decommissioning costs, is assessed by comparison with the estimated discounted future net cash flows based on management's expectations of future gas and oil prices and future costs. Any impairment identified is charged to the statement of profit or loss as additional depreciation. Where conditions giving rise to impairment subsequently reverse, the effect of the impairment charge is also reversed as a credit to the statement of profit or loss. In accordance with IAS 36, when it is not possible to determine the recoverable amount of an individual asset, then the recoverable amount of the assets cash-generating unit is instead determined. For the oil and gas assets the smallest identifiable group of assets that generates cash inflows is considered to be the project since the oil and gas recovered from each field would not be cash generating without the use of the shared pipeline and processing facilities.

2 Accounting policies (continued)

Generation credits
Large Scale Generation Certificates ("LGCs") are considered Government Grants under IAS20 Government Grants. Government grants are recognized when there is reasonable assurance that the Group will comply with the conditions of the grant and the grant will be received.

Government Grants shall be recognised in profit or loss on a systematic basis over the periods in which the entity recognises as expenses the related costs for which the grants are intended to compensate. The LGC's are therefore recognised in the same period as the electricity that is generated. This appropriately matches the costs of generating the asset (i.e. the associated power generation) with the income from the grant. At each period end, for LGCs remaining on the balance sheet, an assessment of the value is completed. Under IAS 2, Inventory should be held at the lower of cost and net realisable value.

Investments in associates and joint ventures
An associate is an entity over which the Group has significant influence. Significant influence is the power to participate in the financial and operating policy decisions of the investee but is not control or joint control over those policies. A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have the rights to the net assets of the joint arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

The results and assets and liabilities of associates or joint ventures are incorporated in these consolidated financial statements using the equity method of accounting except when classified as held for sale. Investments in associates or joint venture entities are initially recognised at cost and adjusted thereafter to recognise the Group's share of profit or loss and other comprehensive income of the associate or joint venture. When the Group's share of losses of an associate or a joint venture exceeds the Group's interest in that associate or joint venture, the Group discontinues recognising its share of future losses.

An investment in an associate or a joint venture is accounted for using the equity method from the date on which the investee becomes an associate or a joint venture. On acquisition of the investment in an associate or a joint venture, any excess of the cost of the investment over the Group's share of the net fair value of the identifiable assets and liabilities of the investee is recognised as goodwill, which is included within the carrying amount of the investment. Any excess of the Group's share of the net fair value of the identifiable assets and liabilities over the cost of the investment, after reassessment, is recognised immediately in profit or loss in the period in which the investment is acquired.

A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

Fixed asset investments are stated at cost less provision or amounts written off for impairment in value.

Investments in subsidiaries
Investments in subsidiaries are account for at cost less impairment.

Cash and cash equivalents
Cash and cash equivalents comprise cash on hand and call deposits, and other short-term highly liquid investments that are readily convertible to a known amount of cash and are subject to an insignificant risk of changes in value. Amounts borrowed under overdraft facilities are included within borrowings on the statement of financial position, however included within cash and cash equivalents on the statement of cash flows.

Trade receivables
Trade receivables are amounts due from customers for merchandise sold or services performed in the ordinary course of business. If collection is expected in one year or less (or in the normal operating cycle of the business if longer), they are classified as current assets. If not, they are presented as non-current assets.

Trade receivables are recognised initially at the transaction price. They are subsequently measured at amortised cost using the effective interest method, less provision for impairment. A provision for the impairment of trade receivables is established when there is objective evidence that the group will not be able to collect all amounts due according to the original terms of the receivables.

2 Accounting policies (continued)

Inventories
Inventories are stated at the lower of cost and net realisable value. Cost is determined using the average cost method.

The cost of finished goods and work in progress comprises direct materials and, where applicable, direct labour costs and those overheads that have been incurred in bringing the inventories to their present location and condition. At each reporting date, inventories are assessed for impairment. If inventory is impaired, the carrying amount is reduced to its selling price less costs to complete and sell; the impairment loss is recognised immediately in profit or loss.

Trade payables
Trade payables are obligations to pay for goods or services that have been acquired in the ordinary course of business from suppliers. Accounts payable are classified as current liabilities if payment is due within one year or less (or in the normal operating cycle of the business if longer). If not, they are presented as non-current liabilities.

Trade payables are recognised initially at the transaction price and subsequently measured at amortised cost using the effective interest method.

Borrowings
All borrowings are initially recorded at the amount of proceeds received, net of transaction costs. Borrowings are subsequently carried at amortised cost, with the difference between the proceeds, net of transaction costs, and the amount due on redemption being recognised as a charge to the income statement over the period of the relevant borrowing.

Interest expense is recognised on the basis of the effective interest method and is included in finance costs.

Borrowings are classified as current liabilities unless the group has an unconditional right to defer settlement of the liability for at least 12 months after the reporting date.

Provisions
Provisions are recognised when the group has a present obligation (legal or constructive) as a result of a past event, it is probable that the group will be required to settle that obligation and a reliable estimate can be made of the amount of the obligation.

Provisions are measured at the directors' best estimate of the expenditure required to settle the obligation at the reporting date and are discounted to present value where the effect is material.

Share capital
Ordinary shares are classified as equity. Equity instruments are measured at the fair value of the cash or other resources received or receivable, net of the direct costs of issuing the equity instruments. If payment is deferred and the time value of money is material, the initial measurement is on a present value basis.

Dividends
Dividend distribution to the company's shareholders is recognised as a liability in the Company's financial statements in the period in which the dividends are approved by the company's shareholders.

2 Accounting policies (continued)

Financial instruments

Initial recognition
Financial assets and financial liabilities comprise all assets and liabilities reflected in the statement of financial position, although excluding property, plant and equipment, investment properties, intangible assets, deferred tax assets, prepayments, deferred tax liabilities and employee benefits plan.

The Group recognises financial assets and financial liabilities in the statement of financial position when, and only when, the Group becomes party to the contractual provisions of the financial instrument.

Financial assets are initially recognised at fair value. Financial liabilities are initially recognised at fair value, representing the proceeds received net of premiums, discounts and transaction costs that are directly attributable to the financial liability.

All regular way purchases and sales of financial assets and financial liabilities classified as fair value through profit or loss ("FVTPL") are recognised on the trade date, i.e. the date on which the Group commits to purchase or sell the financial assets or financial liabilities. All regular way purchases and sales of other financial assets and financial liabilities are recognised on the settlement date, i.e. the date on which the asset or liability is received from or delivered to the counterparty. Regular way purchases or sales are purchases or sales of financial assets that require delivery within the time frame generally established by regulation or convention in the market place.

Subsequent to initial measurement, financial assets and financial liabilities are measured at either amortised cost or fair value.

Classification and measurement
Financial instruments are classified at inception into one of the following categories, which then determine the subsequent measurement methodology:

Financial assets are classified into one of the following three categories:
· financial assets at amortised cost;
· financial assets at fair value through other comprehensive income (FVTOCI); or
· financial assets at FVTPL.

Financial liabilities are classified into one of the following two categories:
· financial liabilities at amortised cost; or
· financial liabilities at FVTPL.

The classification and the basis for measurement are subject to the Group's business model for managing the financial assets and the contractual cash flow characteristics of the financial assets, as detailed below:

Financial assets at amortised cost
A financial asset is measured at amortised cost if it meets both of the following conditions and is not designated as at FVTPL:
· the assets are held within a business model whose objective is to hold assets in order to collect contractual cash flows; and
· the contractual terms of the financial assets give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

If either of the above two criteria is not met, the financial assets are classified and measured at FVTOCI or FVTPL.

If a financial asset meets the amortised cost criteria, the Group may choose to designate the financial asset at FVTPL. Such an election is irrevocable and applicable only if the FVTPL classification significantly reduces a measurement or recognition inconsistency.

2 Accounting policies (continued)

Financial assets at fair value through other comprehensive income
A financial asset is measured at FVTOCI only if it meets both of the following conditions and is not designated as at FVTPL:
· the asset is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets; and
· the contractual terms of the financial assets give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

On initial recognition of an equity investments that is not held for trading, the Group may irrevocably elect to present subsequent changes in fair value in OCI. This election is made on an investment-by-investment basis.

If an equity investment is designated as FVTOCI, all gains and losses, except for dividend income, are recognised in other comprehensive income and are not subsequently included in the statement of income.

Financial assets at fair value through the profit or loss
Financial assets not otherwise classified above are classified and measured as FVTPL.

Financial liabilities at amortised cost
All financial liabilities, other than those classified as financial liabilities at FVTPL, are measured at amortised cost using the effective interest rate method.

Financial liabilities at fair value through the profit or loss
Financial liabilities not measured at amortised cost are classified and measured at FVTPL. This classification includes derivative liabilities.

2 Accounting policies (continued)

Derecognition

Financial assets
The Group derecognises a financial asset when;
- the contractual rights to the cash flows from the financial asset expire,
- it transfers the right to receive the contractual cash flows in a transaction in which substantially all of the risks and rewards of ownership of the financial asset are transferred; or
- the Group neither transfers nor retains substantially all of the risks and rewards of ownership and it does not retain control of the financial asset.

On derecognition of a financial asset, the difference between the carrying amount of the asset and the sum of the consideration received is recognised as a gain or loss in the profit or loss.

Any cumulative gain or loss recognised in OCI in respect of equity investment securities designated as FVTOCI is not recognised in profit or loss on derecognition of such securities. Any interest in transferred financial assets that qualify for derecognition that is created or retained by the group is recognised as a separate asset or liability.

The Group enters into transactions whereby it transfers assets recognised on its statement of financial position, but retains either all or substantially all of risks and rewards of the transferred assets or a portion of them. In such cases, the transferred assets are not derecognised.

When the group derecognises transferred financial assets in their entirety, but has continuing involvement in them then the entity should disclose for each type of continuing involvement at the reporting date:

(a) The carrying amount of the assets and liabilities that are recognised in the entity's statement of financial position and represent the entity's continuing involvement in the derecognised financial assets, and the line items in which those assets and liabilities are recognised;

(b) The fair value of the assets and liabilities that represent the entity's continuing involvement in the derecognised financial assets;

(c) The amount that best represents the entity's maximum exposure to loss from its continuing involvement in the derecognised financial assets, and how the maximum exposure to loss is determined; and

(d) The undiscounted cash outflows that would or may be required to repurchase the derecognised financial assets or other amounts payable to the transferee for the transferred assets.

Financial liabilities
The Group derecognises a financial liability when its contractual obligations are discharged, cancelled, or expire.

Modification of financial assets and financial liabilities

Financial assets
If the terms of a financial asset are modified, the Group evaluates whether the cash flows of the modified asset are substantially different. If the cash flows are substantially different, then the contractual rights to the cash flows from the original financial asset are deemed to expire. In this case the original financial asset is derecognised and a new financial asset is recognised at either amortised cost or fair value.

If the cash flows are not substantially different, then the modification does not result in derecognition of the financial asset. In this case, the group recalculates the gross carrying amount of the financial asset and recognises the amount arising from adjusting the gross carrying amount as a modification gain or loss in the statement of income.

2 Accounting policies (continued)

Financial liabilities
If the terms of a financial liabilities are modified, the Group evaluates whether the cash flows of the modified asset are substantially different. If the cash flows are substantially different, then the contractual obligations from the cash flows from the original financial liabilities are deemed to expire. In this case the original financial liabilities are derecognised and new financial liabilities are recognised at either amortised cost or fair value.

If the cash flows are not substantially different, then the modification does not result in derecognition of the financial liabilities. In this case, the Group recalculates the gross carrying amount of the financial liabilities and recognises the amount arising from adjusting the gross carrying amount as a modification gain or loss in the statement of income.

Impairment of financial assets

Measurement of Expected Credit Losses
The Group recognises loss allowances for expected credit losses (ECL) on financial instruments that are not measured at FVTPL, namely:
- Financial assets that are debt instruments;
- Accounts and other receivables;
- Financial guarantee contracts issued; and
- Loan commitments issued.

The Group classifies its financial instruments into stage 1, stage 2 and stage 3, based on the applied impairment methodology, as described below:

Stage 1: for financial instruments where there has not been a significant increase in credit risk since initial recognition and that are not credit-impaired on origination, the Group recognises an allowance based on the 12-month ECL.

Stage 2: for financial instruments where there has been a significant increase in credit risk since initial recognition but they are not credit-impaired, the Group recognises an allowance for the lifetime ECL.

Stage 3: for credit-impaired financial instruments, the Group recognises the lifetime ECL.

The Group measures loss allowances at an amount equal to the lifetime ECL, except for the following, for which they are measured as a 12-month ECL:

- debt securities that are determined to have a low credit risk (equivalent to investment grade rating) at the reporting date; and
- other financial instruments on which the credit risk has not increased significantly since their initial recognition.

The Group considers a debt security to have low credit risk when their credit risk rating is equivalent to the globally understood definition of ‘investment grade’.

A 12-month ECL is the portion of the ECL that results from default events on a financial instrument that are probable within 12 months from the reporting date.

Provisions for credit-impairment are recognised in the statement of income and are reflected in accumulated provision balances against each relevant financial instruments balance.

Evidence that the financial asset is credit-impaired include the following;

- Significant financial difficulties of the borrower or issuer;
- A breach of contract such as default or past due event;
- The restructuring of the loan or advance by the Group on terms that the Group would not consider otherwise;
- It is becoming probable that the borrower will enter bankruptcy or other financial reorganisation;
- The disappearance of an active market for the security because of financial difficulties; or
- There is other observable data relating to a group of assets such as adverse changes in the payment status of borrowers or issuers in the Group, or economic conditions that correlate with defaults in the Group.

2 Accounting policies (continued)

For trade receivables, the Group applies the simplified approach, which requires expected lifetime losses to be recognised from initial recognition of the receivables.

To measure the expected credit losses, trade receivables and contract assets have been grouped based on shared credit risk characteristics and the days past due. The contract assets relate to unbilled work in progress and have substantially the same risk characteristics as the trade receivables for the same types of contracts. The Group has therefore concluded that the expected loss rates for trade receivables are a reasonable approximation of the loss rates for the contract assets.

The expected loss rates are based on the payment profiles of sales over a period of 36 month before 31 December 2021 and the corresponding historical credit losses experienced within this period. The historical loss rates are adjusted to reflect current and forward-looking information on macroeconomic factors affecting the ability of the customers to settle the receivables. The Group has identified the GDP and the unemployment rate of the countries in which it sells its goods and services to be the most relevant factors, and accordingly adjusts the historical loss rates based on expected changes in these factors.

Derivative financial instruments
Derivative financial instruments are contracts, the value of which is derived from one or more underlying financial instruments or indices, and include futures, forwards, swaps and options in the interest rate, foreign exchange, equity and credit markets.

Derivative financial instruments are recognised in the statement of financial position at fair value. Fair values are derived from prevailing market prices, discounted cash flow models or option pricing models as appropriate.

In the statement of financial position, derivative financial instruments with positive fair values (unrealised gains) are included as assets and derivative financial instruments with negative fair values (unrealised losses) are included as liabilities.

Hedge accounting
Derivatives held for risk management purposes include all derivative assets and liabilities that are not classified as trading assets and liabilities.

The group designates certain derivatives held for risk management as well as certain non-derivative financial instruments as hedging instruments in qualifying hedging relationships. On initial designation of the hedge, the group formally documents the relationship between the hedging instruments and hedge items, including the risk management objective and strategy in undertaking the hedge, together with the method that will be used to assess the effectiveness of the hedging relationship. The group makes an assessment, both at inception of the hedge relationship and on an ongoing basis, of whether the hedging instruments are expected to be highly effective in offsetting that changes in the fair value or cash flows of the respective hedged items during the period for which the hedge is designated.

2 Accounting policies (continued)

These hedging relationships are discussed below.

Cash flow hedges
The group makes an assessment for a cash flow hedge of a forecast transaction, of whether the forecast transaction is highly probable to occur and presents an exposure to variations in cash flows that could ultimately affect profit or loss.

When a derivative is designated as the hedging instrument in a hedge of the variability in cash flows attributable to a particular risk associated with a recognised asset or liability that could affect profit or loss, then the effective portion of changes in the fair value of the derivative is recognised in other comprehensive income ("OCI") and presented in the hedging reserve within equity. Any ineffective portion of changes in the fair value of the derivative is recognised immediately in profit or loss. The amount recognised in OCI is reclassified to profit or loss as a reclassification adjustment in the same period as the hedged cash flows affect profit or loss, and in the same line item in the statement of profit or loss and OCI.

If the hedging derivative expires or is sold, terminated or exercised, or the hedge no longer meets the criteria for cash flow hedge accounting, or the hedge designation is revoked, then hedge accounting is discontinued prospectively. However, if the derivative is novated to a central clearing counterparty by both parties as a consequence of laws or regulations without changes in its terms except for those that are necessary for the novation, then the derivative is not considered expired or terminated.

Accounting estimates and assumptions
The preparation of the financial statements requires management to make estimates and assumptions that affect the reported amounts of certain financial assets, liabilities, income and expenses.

The use of estimates and assumptions is principally limited to the determination of provisions for impairment, the valuation of financial instruments is explained in more detail below:

Provisions for impairment
In determining impairment of financial assets, judgement is required in the estimation of the amount and timing of future cash flows as well as an assessment of whether the credit risk on the financial asset has increased significantly since initial recognition and incorporation of forward-looking information in the measurement of ECL.

Fair value of financial assets and liabilities
Where the fair value of financial assets and liabilities cannot be derived from active markets, they are determined using a variety of valuation techniques that include the use of mathematical models. The input to these models is derived from observable markets where available, but where this is not feasible, a degree of judgement is required in determining assumptions used in the models. Changes in assumptions used in the models could affect the reported fair value of financial assets and liabilities.

- The split of operating and capital expenditure and the allocation of overheads to property, plant and equipment: The allocation of overheads to capital is derived from a detailed analysis of the costs and their cost drivers which is reviewed on annual basis. The percentage allocation of overheads across the work stream categories are obtained from section managers who are asked to provide reasoning and supporting evidence for the allocation. Finance then undertake a financial impact assessment review and the rationale to ensure it complies with IFRS. The amount of overheads capitalised in the year was £98.7 million (2021: £86.8 million).

3 Revenue

The analysis of the Group's revenue for the year from continuing operations is as follows:

	2022 £ 000	2021 £ 000
Distribution revenue	881,954	750,676
Amortisation of deferred revenue	66,515	64,318
Contracting revenue	23,430	20,688
Meter asset rental	86,334	81,106
Gas revenue	98,202	-
Renewables revenue	15,527	-
Loss on renewables derivative	(24,318)	-
Other revenue	1,195	1,537
	1,148,839	918,325

The tables below represent the internal information provided to the President and Chief Executive Officer of the Group for the purposes of resource allocation and segmental performance appraisal. The Group operates in five principal areas of activity, those of the distribution of electricity, engineering contracting, gas exploration and smart meter rental in the United Kingdom & renewables in Australia.

Reportable segments are those that meet two or more of the following criteria under IFRS 8:
- Its reported revenue is 10% or more of the combined revenue of all segments;
- The absolute measure of its profit or loss is 10% or more of the combined reported profit; and
- Its assets are 10% or more of the combined assets of all segments.

NPg Northeast and NPg Yorkshire are aggregated into a single operating segment, "Distribution", as they have similar characteristics and are similar in the nature of their products and services, their processes, and the type of customer that utilise their products and services. The distribution segment includes distribution revenue and amortisation of deferred revenue listed above, all other revenue is included in "other" in the segmental analysis.

"Other" comprises engineering contracting, hydrocarbon exploration, renewables, smart meter rental and business support units.

3 Revenue (continued)

2022	Distribution £ 000	Other £ 000	Total £ 000
Revenue	948,469	200,370	1,148,839
Inter-segment sales	1,152	(1,152)	-
Total revenue	949,621	199,218	1,148,839
Operating profit	390,980	31,605	422,585
Other gains			1,354
Finance costs			(102,515)
Finance income			2,273
Profit before tax			323,697
Capital additions	465,238	421,846	887,084
Depreciation and amortisation	241,615	115,375	356,990
Amortisation of deferred revenue	(66,515)	-	(66,515)
Segment assets	7,000,644	1,149,778	8,150,421
Unallocated corporate assets			230,424
Total assets			8,380,845
Segment liabilities	(1,904,465)	(256,410)	(2,160,874)
Unallocated corporate liabilities			(2,911,880)
Total liabilities			(5,072,754)
Segment net assets	5,096,179	893,368	5,989,547
Unallocated net corporate liabilities			(2,681,456)
Total net assets			3,308,091

3 Revenue (continued)

2021	Distribution £ 000	Other £ 000	Total £ 000
Revenue	814,994	103,331	918,325
Inter-segment sales	1,184	(1,184)	-
Total revenue	816,178	102,147	918,325
Operating profit	362,218	19,976	382,194
Other gains			1,907
Finance costs			(88,830)
Finance income			1,612
Profit before tax			296,883
Capital additions	472,143	142,780	614,923
Depreciation and amortisation	231,492	59,231	290,723
Amortisation of deferred revenue	(64,318)	-	(64,318)
Segment assets	6,744,153	830,935	7,575,089
Unallocated corporate assets			272,768
Total assets			7,847,857
Segment liabilities	(1,865,766)	(292,337)	(2,158,103)
Unallocated corporate liabilities			(2,521,154)
Total liabilities			(4,679,527)
Segment net assets	4,878,388	538,589	5,416,986
Unallocated net corporate liabilities			(2,248,656)
Total net assets			3,168,330

Sales to the E.ON group in 2022 of £186.5 million (2021: £171.8 million) and to British Gas plc in 2022 of £121.1 million (2021: £90.9 million) are included within the Distribution segment.

Contract assets arise where goods or services are transferred to the customer before the customer pays consideration, or before payment is due. All contract assets relate to engineering contracting work within Integrated Utility Services. Contracts in progress at statement of financial position date:

3 Revenue (continued)

Assets recognised from costs to fulfil a contract with customers

	31 December 2022 £ 000	31 December 2021 £ 000
Contract costs incurred plus recognised profit less recognised losses to date	40,230	37,952
Less: progress billings	(34,406)	(30,359)
	5,824	7,593

At 31 December 2022, no retentions are held by customers for contract work (2021: £nil).

Advances received from customers for contract work amounted to £nil (2021: £nil).

The Company had no contract assets at 31 December 2022 (2021: £nil).

4 Other gains and losses

The analysis of the Group's other gains and losses for the year is as follows:

	2022 £ 000	2021 £ 000
Gain on disposal of property, plant and equipment	1,354	1,907

5 Operating profit

Arrived at after charging/(crediting)

	2022 £ 000	2021 £ 000
Depreciation expense	338,125	269,817
Depreciation on right of use assets	6,926	6,426
Amortisation expense	11,939	14,480
Research and development	2,750	2,206
Trade and other receivables loss allowance	1,202	11,494
Amortisation of deferred revenue	(66,515)	(64,318)

Amortisation expense is included in administration costs within the statement of profit or loss on page 35.

6 Finance income and costs

	2022 £ 000	2021 £ 000
Finance income		
Other finance income	2,273	1,612
Finance costs		
Interest on bank overdrafts and borrowings	(108,787)	(96,732)
Interest expense on leases	(654)	(716)
Borrowing costs included in cost of qualifying asset	6,926	8,618
Total finance costs	(102,515)	(88,830)
Net finance costs	(100,242)	(87,218)

Borrowing costs included in the costs of qualifying assets during the year arose on the general borrowing pool and are calculated by applying a capitalisation rate of 3.14% within NPg Northeast (2021: 3.28%), 3.35% within NPg Yorkshire (2021: 3.28%) and 4.50% within oil and gas assets (2021: 4.50%).

7 Staff costs

	2022 £ 000	2021 £ 000
Salaries	138,350	138,068
Social security costs	16,732	15,846
Defined benefit pension cost	30,942	12,760
Defined contribution pension cost	10,313	9,375
	196,337	176,049
Less charged to property plant and equipment	(99,728)	(96,416)
	96,609	79,633

A large proportion of the Group's employees are members of the defined benefit scheme, details of which are given in the Employee Benefit Obligations Note 28.

The monthly average number of persons employed by the Group (including directors) during the year was as follows:

	2022 No.	2021 No.
Distribution	2,370	2,388
Engineering contracting	163	138
Hydrocarbon exploration and development	17	17
Other	14	14
	2,564	2,557

The Company had no employees in the years ended 31 December 2022 and 31 December 2021.

8 Directors' remuneration

The directors' remuneration for the year was as follows:

8 Directors' remuneration (continued)

	2022 £	2021 £
Highest paid		
Short-term employee benefits	754,112	775,084
Other long-term benefits	798,882	851,543
	1,552,994	1,626,627
Total		
Short-term employee benefits	991,748	961,728
Post-retirement benefits - defined contribution	11,645	17,930
Other long-term benefits	901,619	964,181
	1,905,012	1,943,839
Post retirement benefits		
Directors who are members of a defined contribution scheme	2	2
Directors who are members of a defined benefit scheme	-	-

	2022 £	2021 £
Key personnel remuneration		
Short-term employee benefits	1,552,310	1,196,078
Post-retirement benefits - defined benefit	63,578	47,907
Post-retirement benefits - defined contribution	161,038	171,824
Other long-term benefits	502,178	480,589
	2,279,104	1,896,398

Other key personnel includes a number of senior functional managers who, whilst not board directors, have authority and responsibility for planning, directing and controlling activities of the Group.

9 Auditor's remuneration

The auditor's remuneration for the year was as follows:

	2022 £ 000	2021 £ 000
Fees payable to the auditor for audit of the Company's annual accounts	280	247
Fees payable to the auditor for audit of the Company's subsidiaries pursuant to legislation	792	752
Total audit fees	1,072	999
Audit of regulatory reporting	117	103
Other services	14	121
Total auditor's remuneration	1,203	1,223

Other services relate to non-statutory audit services including European Single Electronic Format ("ESEF") assurance, apprentice levy assurance, bond issuance and pensions.

10 Income tax

Tax charged in the income statement

	2022 £ 000	2021 £ 000
Current taxation		
UK corporation tax	59,921	59,227
UK corporation tax adjustment to prior periods	(1,082)	(2,130)
Petroleum revenue tax	(483)	(424)
	58,356	56,673
Deferred taxation		
Arising from origination and reversal of temporary differences	2,726	(35)
Deferred tax expense/(credit) from unrecognised temporary difference from a prior period	(7,985)	1,262
Deferred tax expense/(credit) relating to changes in tax rates or laws	2,441	83,139
Deferred Energy Profits Levy	70,702	-
Total deferred taxation	67,884	84,366
Tax expense in the income statement	126,240	141,039

10 Income tax (continued)

The tax on profit before tax for the year is higher than the standard rate of corporation tax in the UK (2021 - higher than the standard rate of corporation tax in the UK) of 19.00% (2021 - 19.00%).

The differences are reconciled below:

	2022 £ 000	2021 £ 000
Profit before tax	323,697	296,883
Corporation tax at standard rate	61,502	56,408
Increase in deferred tax due to changes in tax rates or laws	2,441	83,139
Tax effect of result of joint venture entities	(192)	(207)
Decrease in current tax from adjustment for prior periods	(1,082)	(2,130)
Permanent differences (including non-taxable dividends)	3,191	293
Pension contributions recognised in other comprehensive income	-	(255)
Increase/(decrease) in deferred tax from adjustment for prior periods	(7,985)	1,262
Non-deductible interest	485	457
Current year and prior year tax losses which are not recognised for deferred tax	595	4,621
Petroleum revenue tax	(391)	(345)
Overseas taxes- non taxable foreign exchange	1,196	(322)
Release of deferred tax in respect to prior year holdover relief claims due to asset reinvestment	(2,889)	(312)
UK:UK transfer pricing adjustments	(442)	(456)
Difference in tax rates arising on ring fence trade	4,834	(1,088)
Deferred Energy Profits Levy	70,702	-
Benefit of tax losses not previously recognised	(7,422)	-
Initial recognition exemption	2,109	-
Other tax effects for reconciliation between accounting profit and tax expense/(income)	(412)	(26)
Total tax charge	126,240	141,039

The Autumn Budget 2022 confirmed that the corporation tax rate will increase to 25% from 1 April 2023 as previously enacted. Deferred tax balances are therefore measured at 25% at 31 December 2022 (25% at 31 December 2021) after taking into account the estimated effect of timing differences which will reverse at the 19% rate prior to 1 April 2023.

There is no uncertainty over the acceptable income tax treatment.

Should any uncertainties arise the Group will apply adopted amendments to IFRIC 23.

10 Income tax (continued)

Amounts recognised in other comprehensive income

	2022		
	Before tax £ 000	**Tax (expense) benefit £ 000**	**Net of tax £ 000**
Gain/(loss) on cash flow hedges (net)	22,195	(5,631)	16,564
Foreign currency translation gains/(losses)	(85)	-	(85)
Remeasurements of post employment benefit obligations (net)	(98,900)	24,725	(74,175)
	(76,790)	19,094	(57,696)

	2021		
	Before tax £ 000	**Tax (expense) benefit £ 000**	**Net of tax £ 000**
Gain/(loss) on cash flow hedges (net)	4,962	(1,012)	3,950
Foreign currency translation gains/(losses)	(446)	-	(446)
Remeasurements of post employment benefit obligations (net)	165,100	(34,726)	130,374
	169,616	(35,738)	133,878

10 Income tax (continued)

Deferred tax

Group
Deferred tax assets and liabilities

Deferred tax movement during the year:

	At 1 January 2022 £ 000	Recognised in income £ 000	Recognised in other comprehensive income £ 000	At 31 December 2022 £ 000
Accelerated tax depreciation	402,511	15,775	-	418,286
Pension benefit obligations	55,431	(2,972)	(24,725)	27,734
Other items	(4,752)	101	5,631	980
Rollover/holdover relief	2,994	(2,888)	-	106
Losses	(96,350)	(12,834)	-	(109,184)
Energy Profits Levy	-	70,702	-	70,702
	359,834	67,884	(19,094)	408,624

	At 1 January 2021 £ 000	Recognised in income £ 000	Recognised in other comprehensive income £ 000	At 31 December 2021 £ 000
Accelerated tax depreciation	297,567	104,944	-	402,511
Pension benefit obligations	8,959	9,496	36,976	55,431
Other items	(3,929)	(1,835)	1,012	(4,752)
Rollover/holdover relief	3,538	(544)	-	2,994
Losses	(66,404)	(29,946)	-	(96,350)
	239,731	82,115	37,988	359,834

The losses deferred tax asset of £109.4m (2021: £96.4m) includes a deferred tax asset of £0.5m (2021:£0.3m) in respect of site restoration provisions.

As at 31 December 2021, a net deferred tax asset of £12.3m in relation to the Group's hydrocarbon exploration projects was included within the Group's deferred tax assets. The deferred tax asset is no longer being recognised as at 31 December 2022 on the basis that it is now uncertain there will be future taxable profits for the losses to be utilised against. The Group therefore has an unrecognised deferred tax asset of £21.7m (2021: £nil) in relation to the tax attributes of these projects as at 31 December 2022. This position will be re-assessed at the end of the next reporting period.

The other deferred tax liability of £1.2m (2021:£4.7m asset) includes the tax benefit on interest accrued on fair value adjustments on borrowings acquired on the acquisition of Yorkshire Power Group Limited, interest rate swaps, cash flow hedges and employee benefits which are deductible on a paid basis. Within pension benefit obligations the movement in the year represents deferred tax on the movement in retirement benefit obligation/asset. A proportion of the movement has been capitalised in property, plant and equipment.

10 Income tax (continued)

The Energy Profits Levy ("EPL") was introduced from 26 May 2022 to apply 25% levy on profits earned from the production of UK oil and gas from 26 May 2022 to 31 March 2025. The EPL was subsequently increased to 35% from 1 January 2023 and extended to 31 March 2028. The deferred tax liability of the group includes a deferred EPL liability of £70.7m. As the increased EPL rate was substantively enacted at the balance sheet date, the deferred EPL liability has been measured at 35%.

The Company had no deferred tax liability as at 31 December 2022 (2021: £nil).

A subsidiary included a group relief claim from a Berkshire Hathaway group company for losses of £90.6m within its corporation tax return for the year ended 31 December 2015, the parties agreed a discounted payment for these losses. This would give rise to a potential tax asset to recognise in the Group of £6.8m. However, this tax asset has not been recognised to date on the basis the surrendering company was dissolved prior to the formal group relief surrender being made and as a result the surrenderers previous shareholder is currently in ongoing discussions with HM Revenue & Customs to establish and agree a mechanism which will permit a valid group relief surrender of the losses which meets the requirements of the tax legislation. There has been no significant progress on these discussions in the past 12 months but this is continually monitored by the Group on a regular basis.

11 Property, plant and equipment

Group

	Land and buildings £ 000	Distribution system £ 000	Metering equipment £ 000	Oil & gas assets £ 000	Furniture, fittings and equipment £ 000	Renewables £ 000	Total £ 000
Cost or valuation							
At 1 January 2021	8,682	8,529,947	540,604	187,995	103,448	-	9,370,676
Additions	(278)	455,812	56,998	85,060	5,672	-	603,264
Disposals	-	(26,476)	(29,238)	-	(1)	-	(55,715)
Foreign exchange movements	-	-	-	(327)	-	-	(327)
At 31 December 2021	8,404	8,959,283	568,364	272,728	109,119	-	9,917,898
At 1 January 2022	8,404	8,959,283	568,364	272,728	109,119	-	9,917,898
Additions	-	442,922	53,266	90,075	10,560	276,278	873,101
Disposals	-	(30,801)	(35,845)	-	-	-	(66,646)
Foreign exchange movements	-	-	-	277	-	-	277
At 31 December 2022	8,404	9,371,404	585,785	363,080	119,679	276,278	10,724,630
Depreciation							
At 1 January 2021	5,422	2,280,395	280,203	15,534	90,472	-	2,672,026
Charge for year	193	212,645	51,169	332	5,478	-	269,817
Eliminated on disposal	-	(26,476)	(26,547)	-	(1)	-	(53,024)
At 31 December 2021	5,615	2,466,564	304,825	15,866	95,949	-	2,888,819

11 Property, plant and equipment (continued)

	Land and buildings £ 000	Distribution system £ 000	Metering equipment £ 000	Oil & gas assets £ 000	Furniture, fittings and equipment £ 000	Renewables £ 000	Total £ 000
At 1 January 2022	5,615	2,466,564	304,825	15,866	95,949	-	2,888,819
Charge for the year	108	222,639	52,843	52,807	5,791	3,937	338,125
Eliminated on disposal	-	(30,801)	(33,547)	-	-	-	(64,348)
At 31 December 2022	5,723	2,658,402	324,121	68,673	101,740	3,937	3,162,596
Carrying amount							
At 31 December 2021	2,789	6,492,719	263,539	256,862	13,170	-	7,029,079
At 31 December 2022	2,681	6,713,002	261,664	294,407	17,939	272,341	7,562,034

In respect of the Oil & gas assets with a net book value of £294.4m included above an impairment review process was completed utilising reserves and other information available at 31 December 2022. This showed significant headroom such that disclosure of further sensitivity analysis would not be necessary.

Since year end expected reserves were significantly reduced, reflecting lower than expected gas rates and high rates of associated water at the Southwark field indicating a connection to the active aquifer which was identified in Q1 2023. Utilising management’s updated best estimate of reserves following this consideration and the commodity price curves at 31 December 2022 there was still headroom but less than £10m.

If price curves were to reduce by 10% from that in existence at 31 December 2022, or if these revised reserves assumed were to reduce by 10% the impairments that would have arisen would have been £20.1m and £19.6m respectively.

11 Property, plant and equipment (continued)

Expenditure recognised in the carrying amount of property, plant and equipment in the course of construction was as follows:

	31 December 2022 £ 000	31 December 2021 £ 000
Distribution system	432,483	426,827
Oil and gas assets	127,800	249,300
	560,283	676,127

Contractual commitments for the acquisition of property, plant and equipment were as follows:

	31 December 2022 £ 000	31 December 2021 £ 000
Distribution system	65,959	71,904

12 Right of use assets

Group

	Fleet £ 000	Property £ 000	Land £ 000	Total £ 000
Cost or valuation				
At 1 January 2021	23,849	7,066	1,923	32,838
Additions	6,431	415	-	6,846
Disposals	(1,096)	(87)	-	(1,183)
At 31 December 2021	29,184	7,394	1,923	38,501
Additions	5,519	-	8,277	13,796
Disposals	(2,831)	-	-	(2,831)
At 31 December 2022	31,872	7,394	10,200	49,466
Depreciation				
At 1 January 2021	7,554	1,573	27	9,154
Charge for year	5,394	967	64	6,425
Eliminated on disposal	(1,096)	(87)	-	(1,183)
At 31 December 2021	11,852	2,453	91	14,396
Charge for the year	5,721	977	227	6,925
Eliminated on disposal	(2,831)	-	-	(2,831)
At 31 December 2022	14,742	3,430	318	18,490
Carrying amount				
At 31 December 2022	17,130	3,964	9,882	30,976
At 31 December 2021	17,332	4,941	1,832	24,105

Within the Land additions for the year, 96.5% (£7,985k) of these relate to additions through acquisitions in the year.

13 Acquisitions

On 28 June 2022, CalEnergy Resources (Australia) Limited ("CRA") acquired 100% of the share capital of Candian Solar Investment Trust ("CSIT") from Canadian Solar Energy Holding Singapore Pte Limited for a consideration of £143,928,000 (A$253,758,680). CSIT owns 100% of the two operational solar farms, Suntop Solar Farm and Gunnedah Solar Farm located in New South Wales, Australia. The construction of the assets was funded by borrowings which are split between fixed and floating rate loans.

The Group determined the transaction is an asset acquisition rather than a business combination as the assets acquired and liabilities assumed do not constitute the definition of a business as defined in IFRS 3 "Business Combinations". Individual assets and liabilities at acquisition date were identified and the purchase price was allocated to those assets and liabilities based on their relative fair values. The initial measurement requirements of the applicable standards have been applied to each identifiable asset acquired and liability assumed and any difference between the initial measurement of the individual asset or liability and its allocated transaction price is accounted for by applying the relevant requirements.

The preliminary estimated opening balance sheet of the CSIT group of companies is shown below:

	£000
Property, plant and equipment	277,692
Right of use assets	8,029
Other non-current financial assets	37,852
Total non-current assets	323,573
Cash and cash equivalents	14,250
Restricted cash	1,162
Inventories	2,146
Trade and other receivables	4,252
Other current financial assets	5,227
Total current assets	27,037
Total assets	350,610
Loans and borrowings	(135,943)
Provisions	(36,829)
Lease liabilities	(8,546)
Total non-current liabilities	(181,318)
Trade and other payables	(7,069)
Loans and borrowings	(2,309)
Provisions	(9,946)
Other current financial liabilities	(6,041)
Total current liabilities	(25,365)
Total liabilities	(206,683)

13 Acquisitions (continued)

	£000
Net assets	143,928

Acquisition adjustments have been recognised on the following items:

Provisions
Included within provisions is a Power Purchase Agreement (PPA), which is a virtual contract for difference providing Amazon with ~67% of generated electricity and associated generation credits from the two solar farms over a ten-year period.

The provision has been derived using a discounted cash flow calculation resulting in a liability of £46,775,218 (A$82,469,387) for the onerous sale of generation credits. The liability will be amortised over the life of the contract.

Property, Plant and Equipment

The difference between the amount at which each identifiable asset acquired and liability assumed are initially measured with reference to the applicable standard and the individual transaction price is included within property, plant and equipment and depreciated over the 35 year economic life of the assets.

14 Intangible assets

Group

	Goodwill £ 000	Software development £ 000	Oil & Gas exploration £ 000	Total £ 000
Cost or valuation				
At 1 January 2021	248,843	171,420	77,221	497,484
Additions	-	9,554	2,107	11,661
Disposals	-	(714)	-	(714)
At 31 December 2021	248,843	180,260	79,328	508,431
At 1 January 2022	248,843	180,260	79,328	508,431
Additions	-	9,961	4,022	13,983
At 31 December 2022	248,843	190,221	83,350	522,414
Amortisation				
At 1 January 2021	-	120,116	76,624	196,740
Amortisation charge	-	11,926	2,554	14,480
Amortisation eliminated on disposals	-	(714)	-	(714)
At 31 December 2021	-	131,328	79,178	210,506
At 1 January 2022	-	131,328	79,178	210,506
Amortisation charge	-	11,516	423	11,939
At 31 December 2022	-	142,844	79,601	222,445
Carrying amount				
At 31 December 2022	248,843	47,377	3,749	299,969
At 31 December 2021	248,843	48,932	150	297,925

During the year the amount of contractual commitments for the acquisition of intangible assets amounted to £2.3 million (2021: £2.9m).

14 Intangible assets (continued)

Goodwill

All the goodwill arose on the acquisition of Yorkshire Power Group Limited prior to the adoption of IFRS by the Group. In accordance with the transitional rules on first time adoption, the allocation of goodwill to cash generating units ("CGU") has not been reassessed from that used in the previous UK GAAP accounts.

The Group's distribution activities comprise two cash generating units ("CGUs") with carrying values as follows:

	2022 £ m	2021 £ m
Northern Powergrid (Northeast) plc	2,277	2,206
Northern Powergrid (Yorkshire) plc (including Goodwill)	3,254	3,104
	5,531	5,310

The carrying values of the CGUs comprise tangible and intangible assets with finite lives and are net of deferred revenues. In addition, the Northern Powergrid (Yorkshire) plc CGU includes goodwill of £248.8m (2021: £248.8m).

The Group tests goodwill annually for impairment or more frequently if there are indications that goodwill might be impaired.

The recoverable amounts of the CGUs are determined from fair value less costs of disposal calculations with reference to recent market transactions for similar assets. The key assumptions for the calculations are those regarding the premium to RAV.

The RAV premia used to determine the fair value was assessed against the RAV premia implicit in comparable market transactions. The fair value measurement is categorised as Level 2 in the fair value hierarchy.

The current carrying value of the Northern Powergrid (Yorkshire) plc CGU is at 1.34 times premia to RAV and the Northern Powergrid (Northeast) plc CGU is 1.28 times premia to RAV. We have noted a transaction of 1.61 times premia to RAV which provides an external benchmark that our internal valuation is supportable. We have utilised an estimated RAV as at 31 March 2023 of £1,792m for Northern Powergrid (Northeast) plc and £2,427m for Northern Powergrid (Yorkshire) plc.

The application of these assumptions did not give rise to an impairment charge in 2022 (2021: £nil).

The sensitivity of changes in the assumptions used in the impairment calculation is:

RAV premium sensitivity	Variable used	Fair value £ 000	Headroom/ (Impairment) £ 000
Base case:			
Northern Powergrid (Northeast) plc	60%	2,867,000	590,000
Northern Powergrid (Yorkshire) plc	60%	3,883,000	629,000
Downside 5% RAV premium reduction:			
Northern Powergrid (Northeast) plc	55%	2,778,000	501,000
Northern Powergrid (Yorkshire) plc	55%	3,762,000	508,000

15 Investments

	Investment in joint ventures £ 000	Investment in associate £ 000	Share in other undertakings £ 000	Total £ 000
At 1 January 2021	3,627	-	21	3,648
Profit from investments	1,090	-	-	1,090
Dividends paid by investments	(840)	-	-	(840)
At 31 December 2021	3,877	-	21	3,898
Additions	-	894	-	894
Profit/(loss) from investments	1,011	(894)	-	117
Dividends paid by investments	(927)	-	-	(927)
At 31 December 2022	3,961	-	21	3,982

Summary of the Company investments

	31 December 2022 £ 000	31 December 2021 £ 000
Investments in subsidiaries	376,289	376,289

15 Investments (continued)

Group subsidiaries
Details of the Group subsidiaries as at 31 December 2022 are as follows:

Name of subsidiary	Principal activity	Registered office and country of incorporation	Proportion of ownership interest and voting rights held 2022	2021
Northern Powergrid UK Holdings*	Holding company	England and Wales	99%	99%
Yorkshire Power Group Limited	Holding Company	England and Wales	99%	99%
CalEnergy Gas Limited	Hydrocarbon exploration and development	3rd floor, 55 Drury Lane, London, WC2B 5SQ, England and Wales	100%	100%
CalEnergy Gas (Holdings) Limited*	Holding company	England and Wales	100%	100%
CalEnergy Resources Limited	Holding company	England and Wales	100%	100%
CalEnergy Resources Poland Sp. zo.o	Hydrocarbon exploration and development	AL. Wilanowska 206 app. 19, 02-765, Warsaw, Poland	100%	100%
CalEnergy Resources (Australia) Limited	Hydrocarbon exploration and development	3rd Floor, 55 Drury Lane, London, WC2B 5SQ, England and Wales	100%	100%
CE Electric Services Limited	Dormant	England and Wales	100%	100%
Central Powergrid Limited	Dormant	England and Wales	100%	100%
East PowerGrid Limited	Dormant	England and Wales	100%	100%
Eastern PowerGrid Limited	Dormant	England and Wales	100%	100%
Infastructure North Limited	Dormant	England and Wales	100%	100%
Integrated Utility Services Limited	Engineering contracting services	England and Wales	100%	100%
Integrated Utility Services Limited	Engineering contracting services	C11 Gateway, Rosemount Business Park, Ballycoolin, Dublin 15, Ireland	100%	100%
IUS Limited	Dormant	England and Wales	100%	100%
Midlands PowerGrid Limited	Dormant	England and Wales	100%	100%
NEDL Limited	Dormant	England and Wales	100%	100%
North East PowerGrid Limited	Dormant	England and Wales	100%	100%
North Eastern Powergrid Limited	Dormant	England and Wales	100%	100%
North PowerGrid Limited	Dormant	England and Wales	100%	100%

15 Investments (continued)

Name of subsidiary	Principal activity	Registered office and country of incorporation	Proportion of ownership interest and voting rights held 2022	2021
North West PowerGrid Limited	Dormant	England and Wales	100%	100%
North Western PowerGrid Limited	Dormant	England and Wales	100%	100%
Northern Electric Distribution Limited	Dormant	England and Wales	100%	100%
Northern Electric Finance plc	Finance company	England and Wales	100%	100%
Northern Electric plc**	Holding company	England and wales	100%	100%
Northern Electric Properties Limited*	Property holding and management company	England and Wales	100%	100%
Northern Electric Share Scheme Trustee Limited	Dormant	England and Wales	100%	100%
Northern Electricity (North East) Limited	Dormant	England and Wales	100%	100%
Northern Electricity (Yorkshire) Limited	Dormant	England and Wales	100%	100%
Northern Electricity Limited	Dormant	England and Wales	100%	100%
Northern Electricity Networks Company (North East) Limited	Dormant	England and Wales	100%	100%
Northern Electricity Networks Company (Yorkshire) Limited	Dormant	England and Wales	100%	100%
Northern Electricity Networks Company Limited	Dormant	England and Wales	100%	100%
Northern Electrics Limited	Dormant	England and Wales	100%	100%
Northern Energy Funding Company Limited	Dormant	England and Wales	100%	100%
Northern Metering Services Limited	Dormant	England and Wales	100%	100%
Northern Powergrid Gas Limited*	Holding company	England and Wales	100%	100%
Northern Powergrid Limited	Holding company	England and Wales	100%	100%
Northern Powergrid Metering Limited	Meter asset provider	England and Wales	100%	100%
Northern Powergrid (Northeast) plc	Distribution of electricity	England and Wales	100%	100%
Northern PowerGrid (North West) Limited	Dormant	England and Wales	100%	100%
Northern Powergrid (Yorkshire) plc	Distribution of electricity	England and Wales	100%	100%

15 Investments (continued)

Name of subsidiary	Principal activity	Registered office and country of incorporation	Proportion of ownership interest and voting rights held 2022	2021
Northern Power Networks Company (North East) Limited	Dormant	England and Wales	100%	100%
NewGen Drilling Pty Limited	Hydrocarbon exploration and development	Level 1, 12 St Georges Terrace, Perth, W A 6000, Australia	100%	100%
Northern Power Networks Company (Yorkshire) Limited	Dormant	England and Wales	100%	100%
Northern Powergrid Networks Company Limited	Dormant	England and Wales	100%	100%
Northern Transport Finance Limited	Car finance company	England and Wales	100%	100%
Northern Utility Services Limited	Dormant	England and Wales	100%	100%
PowerGrid (Central) Limited	Dormant	England and wales	100%	100%
PowerGrid (East) Limited	Dormant	England and Wales	100%	100%
PowerGrid (Eastern) Limited	Dormant	England and Wales	100%	100%
PowerGrid (Midlands) Limited	Dormant	England and Wales	100%	100%
PowerGrid (North East) Limited	Dormant	England and Wales	100%	100%
PowerGrid (North Eastern) Limited	Dormant	England and Wales	100%	100%
PowerGrid (North West) Limited	Dormant	England and Wales	100%	100%
PowerGrid (North Western) Limited	Dormant	England and Wales	100%	100%
PowerGrid (North) Limited	Dormant	England and Wales	100%	100%
PowerGrid (Northern) Limited	Dormant	England and Wales	100%	100%
PowerGrid (South East) Limited	Dormant	England and Wales	100%	100%
PowerGrid (South Eastern) Limited	Dormant	England and Wales	100%	100%
PowerGrid (South West) Limited	Dormant	England and Wales	100%	100%
PowerGrid (South Western) Limited	Dormant	England and Wales	100%	100%
PowerGrid (South) Limited	Dormant	England and Wales	100%	100%
PowerGrid (Southern) Limited	Dormant	England and Wales	100%	100%
PowerGrid (West) Limited	Dormant	England and Wales	100%	100%

15 Investments (continued)

Name of subsidiary	Principal activity	Registered office and country of incorporation	Proportion of ownership interest and voting rights held 2022	2021
Powergrid (Western) Limited	Dormant	England and Wales	100%	100%
PowerGrid (Yorkshire) Limited	Dormant	England and Wales	100%	100%
South East PowerGrid Limited	Dormant	England and Wales	100%	100%
South Eastern PowerGrid Limited	Dormant	England and Wales	100%	100%
South PowerGrid Limited	Dormant	England and Wales	100%	100%
South West PowerGrid Limited	Dormant	England and Wales	100%	100%
South Western PowerGrid Limited	Dormant	England and Wales	100%	100%
Southern PowerGrid Limited	Dormant	England and Wales	100%	100%
West PowerGrid Limited	Dormant	England and Wales	100%	100%
Western Powergrid Limited	Dormant	England and Wales	100%	100%
YEDL Limited	Dormant	England and Wales	100%	100%
Yorkshire Cayman Holding Limited	Dormant	PO Box 309, Ugland House, South Church Street, George Town, Grand Cayman, Cayman Islands	100%	100%
Yorkshire Electricity Distribution Limited	Dormant	England and Wales	100%	100%
Yorkshire Electricity Group plc	Finance company	England and Wales	100%	100%
Yorkshire Power Finance Limited	Finance company	PO Box 309, Ugland House, SOuth Church Street, George Town, Grand Cayman, Cayman Islands	100%	100%
Yorkshire Powergrid Limited	Dormant	England and Wales	100%	100%
CalEnergy Resources (UK) Limited	Hydrocarbon exploration and development	England and Wales	100%	100%
Canadian Solar Investment Trust	Holdings company	Australia	100%	0%
Suntop Holding Trust	Holdings company	Australia	100%	0%
Guneddah Holding Trust	Holdings company	Australia	100%	0%
Suntop Asset Trust	Asset trust	Australia	100%	0%
Gunnedah Asset Trust	Asset trust	Australia	100%	0%

15 Investments (continued)

Name of subsidiary	Principal activity	Registered office and country of incorporation	Proportion of ownership interest and voting rights held 2022	2021
Canadian Solar Investment Management Pty Ltd	Investment management	Australia	100%	0%
Suntop Holdco Pty Ltd	Trustee	Australia	100%	0%
Suntop SF Pty Ltd	Trustee	Australia	100%	0%
Suntop Finco Pty Ltd	Finance company	Australia	100%	0%
Canadian Solar Investments Holdco Pty	Holdings company	Australia	100%	0%
Candian Solar Investments Finco Pty Ltd	Finance company	Australia	100%	0%
Gunnedah Holdco Pty Ltd	Trustee	Australia	100%	0%
Gunnedah SF Pty Ltd	Trustee	Australia	100%	0%
Gunnedah Finco Pty Ltd	Finance company	Australia	100%	0%

The class of shares held in the above subsidiaries are ordinary shares.

*These companies have taken advantage of s479A Companies Act exemption from audit. Their Company registration numbers are:

• Northern Powergrid UK Holdings (03270696);
• CalEnergy Gas (Holdings) Limited (02772202);
• Northern Electric Properties Limited (02522939); and
• Northern Powergrid Gas Limited (04328138).

**The Group also owns 69% of the Northern Electric plc cumulative preference shares. The terms of the cumulative preference shares are contained in the Financial Statements of Northern Electric plc.

Unless otherwise stated the registered office of the above companies is: Lloyds Court, 78 Grey Street, Newcastle upon Tyne, Tyne and Wear, NE1 6AF.

Northern Powergrid UK Holdings is a direct subsidiary of the Group. All of the other above companies are indirect subsidiaries. The class of shares related to the above companies are ordinary shares.

Group associates

15 Investments (continued)

Details of the Group associates as at 31 December 2022 are as follows:

Name of associate	Principal activity	Registered office	Proportion of ownership interest and voting rights held by the Group 2022	2021
Baltic Gas Sp. Z o.o	General partner in Baltic Gas project	ul. Stary Dwor 9, 80-758 Ddansk, Poland	50%	50%
Baltic Gas Sp. Z o.o. i Wspolnicy Spolka Komandytowa	Hydrocarbon exploration and development	ul. Stary Dwor 9, 80-758 Gdansk, Poland	50%	50%

The class of shares held in the above associates are ordinary shares.

15 Investments (continued)

Summarised financial information in respect of the Group's joint venture is set out below:

Group joint ventures
Details of the Group joint ventures as at 31 December 2022 are as follows:

Name of Joint-ventures	Principal activity	Registered office	Proportion of ownership interest and voting rights held by the Group	
			2022	**2021**
Vehicle Lease and Service Limited	Transport services	Centre for Advanced Industry, 3rd floor, Coble Dene, North Shields, NE29 6DE, England and Wales	50%	50%
VLS Limited	Dormant	Centre for Advanced Industry, 3rd Floor, Coble Dene, North Shields, NE29 6DE, England and Wales	50%	50%

The class of shares held in the above joint ventures are ordinary shares.

Joint ventures and associates are not strategic to the Group’s activities.

15 Investments (continued)

Summarised financial information in respect of the Group's joint venture is set out below:

	31 December 2022 £ 000	31 December 2021 £ 000
Net assets	7,922	7,754
Group's share of net assets	3,961	3,877
Revenue	20,615	19,085
Profit for the year	2,022	1,941
Group's share of profit for the year	1,011	970

16 Inventories

	Group		Company	
	31 December 2022 £ 000	31 December 2021 £ 000	31 December 2022 £ 000	31 December 2021 £ 000
Raw materials and consumables	24,968	19,638	-	-
Generation credits	5,865	-	-	-
Work in progress	1,345	763	-	-
Vehicle inventory	331	478	-	-
	32,509	20,879	-	-

17 Trade and other receivables

	Group		Company	
	31 December 2022 £ 000	**31 December 2021 £ 000**	**31 December 2022 £ 000**	**31 December 2021 £ 000**
Distribution use of system receivables and accrued income	131,236	126,891	-	-
Engineering contracting receivables	10,562	4,551	-	-
Trade receivables	56,823	30,951	-	-
Finance lease receivable	3,968	5,059	-	-
Loss allowance	(17,102)	(16,221)	-	-
Net trade receivables	185,487	151,231	-	-
Prepayments	12,539	13,948	-	-
Other receivables	1,479	533	7	363
Receivables from related parties	-	-	224,110	219,375
	199,505	165,712	224,117	219,738
Non-current trade receivables	4,087	2,702	-	-
Non-current receivables from related parties	-	-	40,000	190,000
	203,592	168,414	264,117	409,738

The average credit period on receivables is 30 days. No interest is charged on outstanding trade receivables.

The Group always measures the loss allowance for trade receivables at an amount equal to lifetime expected credit loss. The expected credit losses on trade receivables are estimated using a provision matrix by reference to past default experience of the debtor and an analysis of the debtor's current financial position, adjusted for factors that are specific to the debtors, general economic conditions of the industry in which the debtors operate and an assessment of both the current as well as the forecast direction of conditions at the reporting date.

There has been no change in the estimation techniques or significant assumptions made during the current reporting period.

The Group writes off a trade receivable when there is information indicating that the debtor is in severe financial difficulty and there is no realistic prospect of recovery, e.g. when the debtor has been placed under liquidation or has entered into bankruptcy proceedings. None of the trade receivables that have been written off is subject to enforcement activities.

As the Group's historical credit loss experience does shows significantly different loss patterns for different customer segments, the provision for loss allowance based on past due status is distinguished as follows:

- Distribution businesses: DUoS receivables, damages receivables, and other receivables;
- Metering: contracted meters, contracted churn, and non-contracted churn; and
- Engineering contracting.

The movement in the loss allowance was as follows:

17 Trade and other receivables (continued)

	2022 £ 000	2021 £ 000
At 1 January	16,221	9,993
Amounts utilised/written off in the year	(321)	(5,266)
Amounts recognised in the income statement	1,202	11,494
At 31 December	17,102	16,221

The increase in the amount recognised in the year follows the failure of a number of electricity supply companies in 2021. Subject to certain conditions mentioned on the following pages, losses arising in relation to Distribution Use of System debts will be recovered through an increase in future allowed income.

Significant increase in credit risk

In assessing whether the credit risk on a financial instrument has increased significantly since initial recognition, the Group compares the risk of a default occurring on a financial instrument at the reporting date with the risk of a default occurring on the financial instrument at the date of initial recognition. In making this assessment the Company considers historical experience as well as forward-looking information that is available without undue cost or effort. Forward-looking information includes the future prospects of the industries in which the Group's debtors operate obtained from economic expert reports, financial analysts, government bodies, relevant think-tanks and other similar organisations. In particular the following information is taken into account when assessing whether credit risk has increased significantly since initial recognition:

- existing or forecast adverse changes in business, financial or economic conditions that are expected to cause a significant decrease in the debtor's ability to meet its debt obligations;
- an actual or expected significant deterioration in the operating results of the debtor;
- significant increases in credit risk on other financial instruments of the same debtor; and
- an actual or expected significant adverse change in the regulatory, economic, or technological environment of the debtor that results in a significant decrease in the debtor's ability to meet its debt obligations.

17 Trade and other receivables (continued)

Distribution use of system receivables

The customers served by the Group's distribution network are supplied predominantly by a number of electricity supply businesses (circa 110) with the E.ON group accounting for approximately 21.7% of distribution revenues in 2022 (2021: 23.4%) and British Gas plc accounting for approximately 14.1% of distribution revenues in 2022 (2021: 12.4%). Ofgem under Code Governance arrangements, set out a framework known as Credit Cover within the Distribution Connection and Use of System Agreement (DCUSA), which sets credit limits for each supply business based on its credit rating (taken from a credit agency). If no score is available, then they can build up their credit limit through good payment history. In addition, suppliers can provide other forms of collateral to cover their value at risk (measured as being equivalent to 45 days usage) or if their credit rating alone is not sufficient to cover their value at risk. Acceptable collateral typically is provided in the form of a parent company guarantee, letter of credit, cash or an escrow account.

Provided the Group has implemented credit control, billing and collection processes in line with best practice guidelines and can demonstrate compliance with the guidelines or is able to satisfactorily explain departure from the guidelines, any losses arising from supplier default will be recovered through an increase in future allowed income. Losses incurred to date have not been material therefore no ECL has been made on DUoS balances.

The following is the expected credit loss for receivables past due:

2022	Not due £ 000	Current £ 000	1-3 months £ 000	3-6 months £ 000
Total balance	80,516	61,476	89	6,984
Less specific provisions	-	(48)	(10)	(6,967)
Balance eligible for ECL	80,516	61,428	79	17
Lifetime ECL	0%	0%	0%	0%
Expected credit loss	-	-	-	-

2021	Not due £ 000	Current £ 000	1-3 months £ 000	3-6 months £ 000
Total balance	70,822	49,533	3,904	2,632
Less specific provisions	-	(511)	(3,889)	(2,025)
Balance eligible for ECL	70,822	49,022	15	607
Lifetime ECL	0%	0%	0%	0%
Expected credit loss	-	-	-	-

17 Trade and other receivables (continued)

Other distribution trade receivables

Sales of goods and services comprise all income streams which are not classified as UoS income. Examples of non-UoS income streams would be service alterations/disconnections, assessment and design fees, and recovery of amounts for damage caused by third parties to the distribution system. The average credit period on sales of goods and services is 30 days. Interest is not generally charged on the trade receivables paid after the due date.

The following is the expected credit loss for receivables past due:

Damages receivables

2022	0-6 months £ 000	6-12 months £ 000	1-2 years £ 000	2-3 years £ 000	Over 3 year £ 000
Total balance	3,076	2,002	1,321	384	307
Less specific provisions	(156)	(80)	(520)	(86)	(234)
Balance eligible for ECL	2,920	1,922	801	298	73
Lifetime ECL	20%	25%	30%	40%	80%
Expected credit loss	584	481	240	119	58

2021	0-6 months £ 000	6-12 months £ 000	1-2 years £ 000	2-3 years £ 000	Over 3 year £ 000
Total balance	3,283	903	749	584	115
Less specific provisions	(406)	(174)	(156)	(406)	(52)
Balance eligible for ECL	2,877	729	593	178	63
Lifetime ECL	20%	25%	30%	40%	80%
Expected credit loss	575	182	178	71	50

17 Trade and other receivables (continued)

Non-damages receivables

2022	Not due £ 000	Current £ 000	1-6 months £ 000	6-12 months £ 000	Over 1 year £ 000
Total balance	762	699	1,911	569	872
Less specific provisions	-	-	-	-	-
Balance eligible for ECL	762	699	1,911	569	872
Lifetime ECL	0%	0%	0%	50%	88%
Expected credit loss	-	-	-	285	767

2021	Not due £ 000	Current £ 000	1-6 months £ 000	6-12 months £ 000	Over 1 year £ 000
Total balance	538	743	1,051	368	620
Less specific provisions	-	-	-	-	-
Balance eligible for ECL	538	743	1,051	368	620
Lifetime ECL	0%	0%	0%	50%	88%
Expected credit loss	-	-	-	184	546

Meter asset provision

Included in trade receivables are balances relating to the provision of meters through Northern Powergrid Metering Limited. The average credit period on these receivables is 30 days. Interest is not generally charged on receivables paid after the due date.

The Group writes off a trade receivable when there is information indicating that the debtor is in severe financial difficulty and there is no realistic prospect of recovery, e.g. when the debtor has been placed under liquidation or has entered into bankruptcy proceedings, or when the debtor is over 1 year past due. None of the trade receivables that have been written off is subject to enforcement activities.

For receivables where there is no specific provisions, a provision is made for debts past their due date based on lifetime expected credit loss determined by reference to past default experience. The following is the expected credit loss for receivables past due:

Contracted

2022	Current £ 000	1-3 months £ 000	3-6 months £ 000	6-12 months £ 000	Over 1 year £ 000
Total balance	6,774	2,145	27	4	58
Less specific provisions	-	(2,145)	(27)	(4)	(58)
Balance eligible for ECL	6,774	-	-	-	-
Lifetime ECL	0%	0%	100%	100%	100%
Expected credit loss	-	-	-	-	-

17 Trade and other receivables (continued)

2021	Current £ 000	1-3 months £ 000	3-6 months £ 000	6-12 months £ 000	Over 1 year £ 000
Total balance	5,926	2,365	-	7	-
Less specific provisions	-	-	-	(7)	-
Balance eligible for ECL	5,926	2,365	-	-	-
Lifetime ECL	0%	0%	100%	100%	100%
Expected credit loss	-	-	-	-	-

Contracted churn

2022	Current £ 000	1-3 months £ 000	3-6 months £ 000	6-12 months £ 000	Over 1 year £ 000
Total balance	4,164	1,128	270	117	1,053
Less specific provisions	-	(1,128)	(270)	(117)	(1,053)
Balance eligible for ECL	4,164	-	-	-	-
Lifetime ECL	0%	100%	100%	100%	100%
Expected credit loss	-	-	-	-	-

2021	Current £ 000	1-3 months £ 000	3-6 months £ 000	6-12 months £ 000	Over 1 year £ 000
Total balance	5,184	3,384	336	449	21
Less specific provisions	(27)	(377)	(336)	(449)	(21)
Balance eligible for ECL	5,157	3,007	-	-	-
Lifetime ECL	0%	30%	100%	100%	100%
Expected credit loss	-	902	-	-	-

17 Trade and other receivables (continued)

Non-contracted churn

2022	Current £ 000	1-3 months £ 000	3-6 months £ 000	6-12 months £ 000	Over 1 year £ 000
Total balance	347	36	1	33	660
Less specific provisions	-	(36)	(1)	(33)	(660)
Balance eligible for ECL	347	-	-	-	-
Lifetime ECL	0%	100%	100%	100%	100%
Expected credit loss	-	-	-	-	-

2021	Current £ 000	1-3 months £ 000	3-6 months £ 000	6-12 months £ 000	Over 1 year £ 000
Total balance	2,457	1,021	613	170	83
Less specific provisions	(28)	(258)	(613)	(170)	(83)
Balance eligible for ECL	2,429	763	-	-	-
Lifetime ECL	0%	17%	50%	100%	100%
Expected credit loss	-	130	-	-	-

Engineering contracting receivables

The average credit period on Engineering contracting receivables is 30 days. Interest is not generally charged on receivables paid after due date. Included in the Group’s construction contracts balance are debtors with a carrying amount of £1.9 million (2021: £2.1 million), which are past due at the reporting date for which the Group has provided for an irrecoverable amount of £0.1 million (2021: £0.1 million) based on past experience. The Group does not hold and collateral over these balances. The average age of these receivables is 50 days (2021: 54 days).

Included in the Group's construction contracts balance are debtors with a carrying amount of £nil (2021: £nil) which are past due at the reporting date for which the Group has not provided as there has not been a significant change in credit quality and the amounts are still considered recoverable. The Group does not hold any collateral over these balances.

The average credit period on sales of goods and services is 30 days. Interest is not generally charged on the trade receivables paid after the due date.

2022	Current £ 000	1-3 months £ 000	3-6 months £ 000	6-12 months £ 000	Over 1 year £ 000
Total balance	2,174	1,891	135	44	104
Less specific provisions	-	-	-	-	(104)
Balance eligible for ECL	2,174	1,891	135	44	-
Lifetime ECL	0%	1%	10%	50%	100%
Expected credit loss	-	19	14	22	-

2021	Current £ 000	1-3 months £ 000	3-6 months £ 000	6-12 months £ 000	Over 1 year £ 000
Total balance	2,136	1,909	25	123	78
Less specific provisions	-	-	-	-	(78)
Balance eligible for ECL	2,136	1,909	25	123	-
Lifetime ECL	0%	1%	10%	50%	100%
Expected credit loss	-	19	3	62	-

17 Trade and other receivables (continued)

Finance lease receivables
Northern Transport Finance Limited ("NTFL"), a wholly owned subsidiary, enters into credit finance arrangements for motor vehicles with employees in the Group. All agreements are denominated in sterling. The term of the finance agreements is predominantly three years.

The interest rate inherent in the agreements is fixed at the contract date for all of the term of the agreement. The average effective interest rate contracted is approximately 6.5% (2021: 6.5%) per annum. None of these debts are past due and there are no indicators of impairment.

The directors consider the carrying value of finance lease receivables approximates their fair value. The maximum risk exposure is the book value of these receivables, less the residual value of the leased assets.

2022	**Minimum lease payments £ 000**	**Interest £ 000**	**Present value £ 000**
Within one year	4,027	(109)	3,918
Between one to five years	4,624	(537)	4,087
	8,651	(646)	8,005

2021	**Minimum lease payments £ 000**	**Interest £ 000**	**Present value £ 000**
Within one year	5,075	(92)	4,983
Between one to five years	3,036	(334)	2,702
	8,111	(426)	7,685

17 Trade and other receivables (continued)

Operating lease receivables

Operating leases relate to the metering assets owned by the Group with lease terms of up to 10 years. The lessee does not have an option to purchase the meters at the expiry of the lease period.

The total future value of minimum lease payments is as follows:

	31 December 2022 £ 000	31 December 2021 £ 000
Within one year	79,519	73,145
In two to five years	262,627	272,860
Over five years	145,932	131,950
	488,078	477,955

The Group's exposure to credit and market risks, including maturity analysis, relating to trade and other receivables is disclosed in Note 31 "Financial risk review".

18 Cash and cash equivalents

	Group		Company	
	31 December 2022 £ 000	31 December 2021 £ 000	31 December 2022 £ 000	31 December 2021 £ 000
Cash at bank	30,808	24,865	-	-
Other cash and cash equivalents	169	4,260	-	10,403
Total included in current assets in the statement of financial position	30,977	29,125	-	10,403

Cash and cash equivalents have a maturity of less than three months, are readily convertible to cash and are subject to an insignificant risk of changes in value. The carrying amount of these assets approximates their fair value. Other cash and cash equivalents include short-term investments and intercompany loans that are highly liquid and repayable on demand.

19 Restricted cash

	Group		Company	
	31 December 2022 £ 000	31 December 2021 £ 000	31 December 2022 £ 000	31 December 2021 £ 000
Restricted cash	2,823	-	-	-

Restricted cash was acquired within the acquisition of renewable assets in June 2022. Please see Note 13 for more detail.

20 Share capital

Allotted, called up and fully paid shares

	31 December 2022		31 December 2021	
	No. 000	£ 000	No. 000	£ 000
Ordinary shares of £1 each	354,550	354,550	354,550	354,550

The Company has 400 million shares authorised for issue. The Company has one class of ordinary shares which carries no right to fixed income. Details of the cumulative non-equity preference shares are contained in the loans and borrowings note 23.

21 Reserves

Group

The changes to each component of equity resulting from items of other comprehensive income for the current year were as follows:

	Foreign currency translation £ 000	Cash flow hedging reserve £ 000	Retained earnings £ 000	Total £ 000
Gain on cash flow hedges (net)	-	16,564	-	16,564
Foreign currency translation losses	(85)	-	-	(85)
Remeasurements of post employment benefit obligations	-	-	(74,175)	(74,175)
	(85)	16,564	(74,175)	(57,696)

The changes to each component of equity resulting from items of other comprehensive income for the prior year were as follows:

	Foreign currency translation £ 000	Cash flow hedging reserve £ 000	Retained earnings £ 000	Total £ 000
Loss on cash flow hedges (net)	-	3,950	-	3,950
Foreign currency translation losses	(446)	-	-	(446)
Remeasurements of post employment benefit obligations	-	-	130,374	130,374
	(446)	3,950	130,374	133,878

22 Non-controlling interests

	Non-controlling interests £ 000
At 1 January 2022	38,723
Profit for the year	1,959
Total comprehensive income	1,959
At 31 December 2022	40,682

	Non-controlling interests £ 000
At 1 January 2021	37,482
Profit for the year	1,563
Total comprehensive income	1,563
Dividends	(322)
At 31 December 2021	38,723

23 Loans and borrowings

	Group		Company	
	2022 £ 000	2021 £ 000	2022 £ 000	2021 £ 000
Non-current loans and borrowings	2,512,624	2,074,946	-	199,134
Current loans and borrowings	184,304	423,495	35,624	644
	2,696,928	2,498,441	35,624	199,778

Group

	Carrying value		Fair value	
	2022 £ 000	2021 £ 000	2022 £ 000	2021 £ 000
Short-term loans	99,570	283	99,570	283
Bank overdraft	-	439	-	439
Bond 2022 - 7.25%	-	199,778	-	200,644
Bond 2025 - 2.50%	152,148	151,860	142,411	156,959
Amortising loan 2025 - 3.0842%	135,199	-	131,445	-
Amortising loan 2026 - 2.9520%*	174,915	212,395	173,480	218,247
Bond 2028 - 7.25%	193,076	193,450	206,117	251,312
Bond 2032 - 4.375%	151,365	151,210	143,659	184,883
Bond 2035 - 5.125%	153,457	153,366	150,066	204,175
Bond 2035 - 5.125%	204,599	204,479	200,337	272,012
Bond 2052 - 3.25%	354,942	-	259,793	-
European Investment Bank 2022 - 4.133%	-	153,782	-	153,791
European Investment Bank 2025 - 2.073%	50,086	50,086	45,163	50,978
European Investment Bank 2027 - 2.564%	250,267	250,267	215,108	262,704
Cumulative preference shares	34,114	34,114	42,925	51,543
2049 - 2.750% Northern Electric Finance plc	150,098	150,037	100,507	172,211
2059 - 2.250%- Northern Powergrid (Yorkshire) plc	295,443	295,337	169,829	313,467
2062 - 1.875% - Northern Powergrid (Northeast) plc	297,649	297,558	154,267	289,945
	2,696,928	2,498,441	2,234,677	2,783,593

The Group's exposure to market and liquidity risks, including maturity analysis, relating to loans and borrowings is disclosed in Note 31 "Financial risk review".

23 Loans and borrowings (continued)

* 2026 £218m Amortising Loan is 80% swapped at a fixed rate of 2.4455%, with the remaining 20% floating at SONIA plus 1.55%. Loan is secured by a Fixed and Floating charge over all assets of the Company (excluding smart meters) and limited recourse security over the issued share capital of the Company by the Shareholder.

In April 2022, the Group issued a £350m bond at 3.25% maturing in 2052, the funds were used for general corporate purposes including the repayment of debt maturities in 2022.

During the year the European Investment Bank loan at 4.133% and the Northern Powergrid Holdings Company bond at 7.25% were repaid.

23 Loans and borrowings (continued)

Company

	Carrying value 2022 £ 000	Carrying value 2021 £ 000	Fair value 2022 £ 000	Fair value 2021 £ 000
2022- 7.25%	-	199,778	-	200,644
Amounts owed to Group undertakings	35,624	-	35,624	-
	35,624	199,778	35,624	200,644

Within the total financial liabilities, £2,597.4m million relates to external borrowings and preference shares whose fair value is determined with reference to quoted market prices. The directors' estimates of the fair value of internal borrowings are determined in accordance with generally accepted pricing models based on discounted cash flow analysis using prices from observable current market transactions or dealer quotes for similar instruments. The valuation of liabilities set out above is based on Level 1 inputs.

The terms of the cumulative preference shares:

- entitle holders, in priority to holders of all other classes of shares, to a fixed cumulative preferential dividend of 8.061p (net) per share per annum payable half-yearly in equal amounts on 31 March and 30 September;
- on a return of capital on a winding up, or otherwise, will carry the right to repayment of capital together with a premium of 99p per share and a sum equal to any arrears or accruals of dividend. This right is in priority to the rights of ordinary shareholders;
- carry the right to attend a general meeting of Northern Electric plc and vote if, at the date of the notice convening the meeting, payment of the dividend to which they are entitled is six months or more in arrears, or if a resolution is to be considered at the meeting for the winding-up of Northern Electric plc or abrogating, varying or modifying any of the special rights attaching to them; and
- are redeemable in the event of the revocation by the Secretary of State of Northern Electric plc's Public Electricity Supply Licence at the value given above.

During the year ended 31 December 2001, under the terms of the Northern Electric plc's transfer scheme, as approved by the Secretary of State in accordance with the provisions of the Utilities Act 2000, the Northern Electric plc's Public Electricity Supply Licence was converted into an Electricity Distribution Licence and an Electricity Supply Licence.

More details on the classification of loans and borrowings is available in Note 30.

The Group's capital management and exposure to market and liquidity risk, including maturity analysis, in respect of loans and borrowings is disclosed in financial risk review Note 31.

24 Obligations under leases and hire purchase contracts

Group

Lease liability

Lease commitments relate to fleet vehicles from Vehicle Lease and Service Limited, a joint venture, with terms of up to 7 years and land and buildings with terms of up to 100 years.

The total future value of minimum lease payments is as follows:

	31 December 2022 £ 000	31 December 2021 £ 000
Within one year	7,209	6,734
Between two to five years	16,258	15,659
In over five years	12,238	4,595
Total lease payment	35,705	26,988
Unearned interest	(3,302)	(2,277)
Total lease liability	32,403	24,711

The Company has no lease commitments.

25 Provisions

Group

	PPA Liability £ 000	Claims £ 000	Abandonment £ 000	Other £ 000	Total £ 000
At 1 January 2022	-	1,503	8,824	7,017	17,344
Additional provisions	-	2,889	28,196	567	31,652
Increase through acquisitions	41,955	-	-	-	41,955
Provisions used	(6,955)	(2,010)	-	(3,036)	(12,001)
At 31 December 2022	35,000	2,382	37,020	4,548	78,950
Non-current liabilities	23,257	-	37,020	2,741	63,018
Current liabilities	11,743	2,382	-	1,807	15,932

PPA Liability: This was acquired within the acquisition of renewable assets in the year (Note 13). The Power Purchase Agreement (PPA) is a virtual contract for difference which provides Amazon with ~67% of generated electricity and associated generation credits from the two solar farms over a ten-year period.

Claims: Provision has been made to cover costs arising from utility damage, public liability, and motoring third party claims, which are not externally insured. Settlement is expected substantially within 12 months.

Abandonment provision relates to the decommissioning of the Group's exploration and evaluation assets. The decommissioning is recorded at the Group's share of expected costs to be incurred. It is not expected that these costs will be incurred over the next 12 months. The provision has been estimated using existing technology at current prices.

Other: Relates primarily to environmental liabilities, wayleave disputes, provision for future safe disposal of transformers which contain oil contaminated with Polychlorinated Biphenyls (PCBs) and holidays in suspense. Settlement is expected substantially after the next 12 months.

Also included within 'other' are pension provisions which relate to the Group's share of expected settlements of liabilities relating to pension deficit repair of Electricity Association Technology Limited ("EATL") and are expected to be settled by 2028. As at 31 December 2022 the provision relating to the EATL is £1.6m (2021: £1.8m). Another item included is a provision to cover the actuarial assessment of the costs of unfunded pension arrangements in respect of former employees. As at 31 December 2022 provision relating to unfunded pensions is £1.5m (2021: £1.5m). This is expected to be realised over the next 20 years.

At 31 December 2022, the Company had no provisions for liabilities and charges (2021: £nil).

26 Trade and other payables

	Group		Company	
	31 December 2022 £ 000	31 December 2021 £ 000	31 December 2022 £ 000	31 December 2021 £ 000
Payments on account	111,708	82,597	-	-
Trade payables	18,147	9,408	-	-
Capital creditors	47,846	53,193	-	-
Accrued expenses	21,659	24,221	-	-
Amounts due to related parties	25,844	20,468	23,224	17,849
Social security and other taxes	20,624	14,784	-	-
Other payables	23,558	21,807	871	993
	269,386	226,478	24,095	18,842

The Group's exposure to market and liquidity risks, including maturity analysis, related to trade and other payables is disclosed in the financial risk review Note 31.

The directors consider that the carrying amount of other financial liabilities approximates their fair value, calculated by discounting future cash flows at market rate at the statement of financial position date. The valuation is based on Level 1 inputs. Trade creditors and accruals principally comprise amounts outstanding for trade purchases and on-going costs. Invoices are paid at the end of the month following the date of the invoice. The Group has financial risk management policies in place to ensure that all payables are paid within the credit timeframe. The standard payment term for trade payables is net monthly.

27 Deferred revenue

	Group		Company	
	31 December 2022 £ 000	31 December 2021 £ 000	31 December 2022 £ 000	31 December 2021 £ 000
Opening balance	1,552,721	1,533,286	-	-
Additions	84,960	83,753	-	-
Amortisation	(66,515)	(64,318)	-	-
	1,571,166	1,552,721	-	-

	Group		Company	
	31 December 2022 £ 000	31 December 2021 £ 000	31 December 2022 £ 000	31 December 2021 £ 000
Current	66,685	66,261	-	-
Non-current	1,504,481	1,486,460	-	-
	1,571,166	1,552,721	-	-

Deferred revenue relates to customer contributions towards distribution system assets. The Group's policy is to credit the customer contribution to revenue on a straight-line basis, in line with the useful life of the distribution system assets.

28 Pension and other schemes

Defined benefit pension schemes
Electricity Supply Pension Scheme

The Group contributes to two pension schemes, which it operates on behalf of the participating companies within the Group. Those pension schemes are:
- The Northern Powergrid Group of the ESPS (the "DB Scheme"); and
- The Northern Powergrid Pension Scheme.

The Northern Powergrid Pension Scheme was introduced for new employees of the Group from July 1997 and is a money purchase arrangement accounted for as a defined contribution scheme.

The DB Scheme is a defined benefit scheme for directors and employees, which provides pension and other related retirement benefits based on final pensionable pay. The DB Scheme closed to staff commencing employment with the Group on or after 23 July 1997. Members who joined before this date, including some Protected Persons under The Electricity (Protected Persons) (England and Wales) Pension Regulations 1990, continue to build up future pension benefits.

Under the DB Scheme, employees are typically entitled to annual pensions on retirement at age 63 of one-eightieth of final pensionable salary for each year of service plus an additional tax-free cash lump sum at retirement of three times pension. Benefits are also payable on death and following other events such as withdrawing from active service.

No other post-retirement benefits are provided to members of the DB Scheme.

Pension regulation
The UK pensions market is regulated by the Pensions Regulator whose key statutory objectives in relation to UK defined benefit plans are to:
- protect the benefits of members;
- promote and to improve understanding of good administration;
- reduce the risk of situations arising which may lead to compensation being payable from the Pension Protection Fund ("PPF"); and
- minimise any adverse impact on the sustainable growth of an employer.

The Pensions Regulator has various powers including the power to:
- wind up a scheme where winding up is necessary to protect members' interests;
- appoint or remove a trustee;
- impose a schedule of company contributions where trustees and company fail to agree on appropriate contributions; and
- impose contributions where there has been a detrimental action against the scheme.

Role of Trustees
The DB Scheme is administered by a board of Trustees which is legally separate from the Company. The assets of the DB Scheme are held in a separate trustee-administered fund. The board of Trustees is made up of Trustees appointed by the Company, as the Principal Employer of the DB Scheme, Trustees elected by the membership and an independent trustee. The Trustees are required by law to act in the interests of all relevant beneficiaries and are responsible in particular for the asset investment strategy plus the day-to-day administration of the benefits payable. They also are responsible for jointly agreeing with the Principal Employer the level of contributions due to the DB Scheme.

28 Pension and other schemes (continued)

Funding requirements
UK legislation requires that pension schemes are funded prudently (i.e. to a level in excess of the current expected cost of providing benefits). The last actuarial valuation of the DB Scheme was carried out by the Trustee's actuarial advisors, Aon, as at 31 March 2022. Such valuations are required by law to take place at intervals of no more than three years. Following each valuation, the Trustees and the Northern Powergrid Group must agree the contributions required (if any) such that the DB Scheme is fully funded over time on the basis of suitably prudent assumptions.

At the latest funding valuation as at 31 March 2019, the funding deficit was assessed to be £116.3 million. In light of this and subsequent changes in the funding position, the Group agreed with the Trustees in September 2020 to pay £2.44 million per month from 1 April 2019 to 31 March 2021. A further £29.3 million will be paid on 30 November 2021 and 30 November 2022 and £14.1 million on 30 November 2023 and 30 November 2024. These amounts are in 2019/20 prices and will be updated on 1 April 2020 and on each 1 April thereafter in line with annual changes in RPI inflation. If the actuarial assumptions are borne out in practice then the funding deficit is expected to be removed by 31 March 2025. The amounts due each November may be reduced by up to 100% depending on the updated funding position. Due to a significantly improved funding position, the November 2021 and 2022 deficit contributions were suspended. The next actuarial valuation is underway as at 31 March 2022 and is expected to be completed by 30 June 2023, by which time a new contribution schedule will be agreed.

The contributions payable by the Group to the DB Scheme in respect of future benefits which are accruing is 49.1% of pensionable pay. These contributions were determined as part of the 31 March 2019 actuarial valuation and are payable in addition to the deficit repair contributions mentioned above. These rates will remain in place until such a time as a new schedule of contributions is agreed between the Trustees and the Group as part of the 31 March 2022 valuation.

In addition, the Group pays contributions to cover the expenses of running the DB Scheme are 6.3% of pensionable pay from 1 October 2020.

The Northern Powergrid Group’s total contribution to the DB Scheme for the next financial year are expected to be £11.2m (subject to a new contribution schedule being put in place).

The Trust Deed provides the Group with an unconditional right to a refund of surplus assets assuming the gradual settlement of plan liabilities over time. Furthermore, in the ordinary course of business the Trustees have no right to unilaterally wind up, or otherwise augment the benefits due to members of the DB scheme. Based on these rights, any net surplus in the plan is recognised in full

Profile of the scheme
The defined benefit obligation ("DBO") includes benefits for current employees, former employees and current pensioners. The overall duration of the DB Scheme's obligation was assessed to be about 17 years based on the results of the 31 March 2019 funding valuation. This is the weighted-average time over which benefit payments are expected to be made.

As at 31 March 2019, broadly about 30% of the liabilities are attributable to current employees (duration about 24 years), 10% to former employees (duration about 23 years) and 60% to current pensioners (duration about 13 years). Given increases in yields, we anticipate that the overall duration of the Scheme’s obligation will have reduced to around 14 years at 31 December 2022.

Investment objectives for the DB Scheme
The Trustees aim to achieve the Scheme's investment objectives through investing partly in a diversified mix of growth assets which, over the long term, are expected to grow in value by more than low risk assets like cash and gilts. This is done with a broad liability driven investing framework that uses cash, gilts and other hedging instruments like swaps in a capital efficient way. In combination this efficiently captures the Trustees' risk tolerances and return objectives relative to the Scheme's liabilities.

The Company and Trustees have agreed a long-term strategy for reducing investment risk as and when appropriate. This includes the use of Liability Driven Investment (LDI) from October 2016 to more closely match the nature and duration of the DB Scheme's liabilities through the use of derivatives such as swaps and repurchase agreements. The portfolio is designed to hedge a proportion of the interest rate and inflation risk inherent in the Scheme's liabilities. The target hedging level is currently 99% (2021: 99%) of the DB Scheme's liabilities as measured on the basis used for the funding valuation.

28 Pension and other schemes (continued)

The trustees insure certain benefits which are payable on death before retirement.

Risks

Volatile asset returns
The DBO is calculated using a discount rate set with reference to corporate bond yields. If assets underperform this discount rate, this will create an element of deficit. The DB Scheme aims to hold a significant proportion (27%) of its assets in return-seeking assets (such as equities) which, although expected to outperform corporate bonds in the long-term, create volatility and risk in the short-term.

Mitigation
The allocation to return-seeking assets is monitored to ensure it remains appropriate given the DB Scheme's long-term objectives. The Trustees regularly review the strategy from return-seeking assets and have diversified some return-seeking assets from equities into Reinsurance and Listed Infrastructure to reduce overall risk. To avoid concentration risk, the allocation to UK equity is restricted to 35% of the total equity allocation.

Changes in bond yields
A decrease in corporate bond yields will increase the value placed on the DBO for accounting purposes, although this will be partially offset by an increase in the value of the DB Scheme's bond holdings.

Mitigation
The DB Scheme aims to hold a substantial proportion of its assets (73%) as bonds and Liability Driven Investments (LDI), which provide a significant hedge against falling bond yields (falling yields which increase the DBO will also increase the value of the bond assets). There are some differences in the credit quality of bonds held by the DB Scheme and the bonds analysed to decide the DBO discount rate, such that there remains some risk should yields on different quality bond/swap assets diverge.

Inflation risk
A significant proportion of the DBO is indexed in line with price inflation (specifically in line with RPI) and higher inflation will leads to a higher DBO.

Mitigation
The DB Scheme invests around 42% in LDI (included in the 73% above) which provides a hedge against higher-than-expected inflation increases on the DBO (rising inflation will increase both the DBO and the value of the LDI portfolio).

Life expectancy risk
The majority of the DB Scheme's obligations are to provide benefits for the life of the member, so increases in life expectancy will result in an increase in the liabilities.

Mitigation
The DB Scheme regularly reviews actual experience of its membership against the actuarial assumptions underlying the future benefit projections and carries out detailed analysis when setting an appropriate scheme specific mortality assumption.

Currency risk
To increase diversification, the DB Scheme invests in overseas assets. This leads to a risk that foreign currency movements negatively impact the value of assets in Sterling terms.

Mitigation
The DB Scheme hedges a proportion of the overseas investments currency risk for those overseas currencies that can be hedged efficiently. The DB Scheme's currency hedging ratio is currently 50% in respect of overseas developed market currencies.

Other risks
There are a number of other risks associated with the DB Scheme including operational risks (such as paying out the wrong benefits), legislative risks (such as the government increasing the burden on pension schemes through new legislation) and other demographic risks (such as a higher proportion of members dying than assumed with a dependant eligible to receive a survivor's pension from the DB Scheme).

Reporting at 31 December 2022

28 Pension and other schemes (continued)

For the purposes of this disclosure, the current and future pension costs of the Northern Powergrid Group have been assessed by Aon, a qualified independent actuary, using the assumptions set out below, which the actuary has confirmed represent a reasonable best estimate of those costs. The review has been based on the same membership and other data as at 31 March 2019. The board of Northern Powergrid Holdings Company has accepted the advice of the actuary and formally approved the use of these assumptions for the purpose of calculating the pension cost of the Northern Powergrid Group.

The results of the latest funding valuation at 31 March 2019 have been adjusted 31 December 2020. Those adjustments take account of experience over the period since 31 March 2019, changes in market conditions, and differences in the financial and demographic assumptions. The present value of the DBO and the related current service cost were measured using the Projected Unit Credit Method.

For schemes closed to new members, such as the DB Scheme, the current service cost calculated under the Projected Unit Credit Method is expected to increase as the members of the DB Scheme approach retirement.

Principal actuarial assumptions

The significant actuarial assumptions used to determine the present value of the defined benefit obligation at the statement of financial position date are as follows:

	31 December 2022 %	31 December 2021 %
Discount rate	4.80	1.95
Future salary increases	3.20	3.45
Future pension increases	2.75	2.85
Inflation- CPI	2.50	2.55
Inflation - RPI	2.95	2.95
Proportion of pension exchanged for additional cash at retirement	10.00	10.00

Post retirement mortality assumptions

	31 December 2022 Years	31 December 2021 Years
Life expectancy for male currently aged 60	26.70	26.70
Life expectancy for female currently aged 60	28.60	28.60
Life expectancy at 60 for male currently aged 45	27.40	27.40
Life expectancy at 60 for female currently aged 45	29.70	29.60

28 Pension and other schemes (continued)

Reconciliation of scheme assets and liabilities to assets and liabilities recognised

The amounts recognised in the statement of financial position are as follows:

	31 December 2022 £ 000	31 December 2021 £ 000
Fair value of scheme assets	1,117,000	1,742,600
Present value of scheme liabilities	(965,500)	(1,480,400)
Defined benefit pension scheme surplus	151,500	262,200

Scheme assets

Changes in the fair value of scheme assets are as follows:

	31 December 2022 £ 000	31 December 2021 £ 000
Fair value at start of year	1,742,600	1,700,700
Interest income	33,600	23,800
Remeasurement gains on scheme assets	(582,000)	87,900
Employer contributions	12,100	20,800
Contributions by scheme participants	400	400
Benefits paid	(88,300)	(89,700)
Administrative expenses paid	(1,400)	(1,300)
Fair value at end of year	1,117,000	1,742,600

Analysis of assets

The major categories of scheme assets are as follows:

	31 December 2022 £ 000	31 December 2021 £ 000
Developed market equity	78,400	124,000
Emerging market equity	4,400	3,200
Property	169,400	194,300
Reinsurance	80,800	80,200
Listed infrastructure	62,800	95,300
Investment grade corporate bonds	15,900	201,300
Other debt (non-investment grade)	32,800	133,100
Fixed interest gilts	6,500	46,400
Index-linked gilts	-	3,800
Liability driven investments	584,300	703,200
Cash and cash equivalents including derivatives	81,700	157,800
	1,117,000	1,742,600

The pension scheme has not invested in any of the Company's own financial instruments or in properties or other assets used by the Company.

28 Pension and other schemes (continued)

Scheme liabilities

Changes in the present value of scheme liabilities are as follows:

	31 December 2022 £ 000	31 December 2021 £ 000
Present value at start of year	(1,480,400)	(1,612,600)
Current service cost	(11,100)	(12,000)
Past service cost	(16,500)	-
Actuarial gains arising from changes in demographic assumptions	900	2,900
Actuarial losses arising from changes in financial assumptions	530,100	55,100
Actuarial gains/(losses) arising from experience adjustments	(47,900)	19,200
Interest cost	(28,500)	(22,300)
Benefits paid	88,300	89,700
Contributions by scheme participants	(400)	(400)
Present value at end of year	(965,500)	(1,480,400)

Amounts recognised in the income statement

	31 December 2022 £ 000	31 December 2021 £ 000
Current service cost	11,100	12,000
Past service cost	16,500	-
Losses (gains) on curtailments and settlements	1,490	1,300
Net interest	(5,100)	(1,500)
Total amount recognised	23,990	11,800
Costs included in cost of qualifying assets	(6,800)	(8,000)
Total amount recognised in income statement	17,190	3,800

28 Pension and other schemes (continued)

Amounts taken to the Statement of Comprehensive Income

	31 December 2022 £ 000	31 December 2021 £ 000
Actuarial (gains) and losses arising from changes in demographic assumptions	(900)	(2,900)
Actuarial (gains) and losses arising from changes in financial assumptions	(530,100)	(55,100)
Actuarial (gains) and losses arising from experience adjustments	47,900	(19,200)
Return on plan assets in excess of that recognised in net interest	582,000	(87,900)
Amounts recognised in the Statement of Comprehensive Income	98,900	(165,100)

Sensitivity analysis

Significant actuarial assumptions for determination of the defined benefit obligation are discount rate, inflation, and mortality. The sensitivity analyses below have been determined based on reasonably possible changes of the respective assumptions occuring at the end of the reporting period, while holding all other assumptions constant:

		31 December 2022			31 December 2021	
	+ 0.1%	0.0%	- 0.1%	+ 0.1%	0.0%	- 0.1%
Adjustment to discount rate	£ 000	£ 000	£ 000	£ 000	£ 000	£ 000
Present value of total obligation	952,700	965,500	979,300	1,455,600	1,480,400	1,505,600

		31 December 2022			31 December 2021	
	+ 0.1%	0.0%	- 0.1%	+ 0.1%	0.0%	- 0.1%
Adjustment to rate of inflation	£ 000	£ 000	£ 000	£ 000	£ 000	£ 000
Present value of total obligation	978,700	965,500	953,300	1,503,900	1,480,400	1,466,300

		31 December 2022			31 December 2021	
Adjustment to mortality age rating assumption	+ 1 Year £ 000	None £ 000	- 1 Year £ 000	+ 1 Year £ 000	None £ 000	- 1 Year £ 000
Present value of total obligation	995,300	965,500	934,900	1,545,600	1,480,400	1,415,600

The sensitivity analysis presented above may not be representative of the actual change in defined benefit obligation as it is unlikely that the changes in assumptions would occur in isolation of one another as some of the assumptions may be correlated.

29 Net debt reconciliation

Group

2022

	At 1 January 2022 £ 000	Cash flows £ 000	Other changes £ 000	At 31 December 2022 £ 000
Cash and cash equivalents	29,125	1,852	-	30,977
Borrowings	(2,498,441)	(53,554)	(144,933)	(2,696,928)
Right-of-use asset leases	(24,711)	(6,759)	(933)	(32,403)
	(2,494,027)	(58,461)	(145,866)	(2,698,354)

2021

	At 1 January 2021 £ 000	Cash flows £ 000	Other changes £ 000	At 31 December 2021 £ 000
Cash and cash equivalents	40,710	(11,585)	-	29,125
Borrowings	(2,447,934)	(48,362)	(2,145)	(2,498,441)
Right-of-use asset leases	(24,150)	(7,002)	6,441	(24,711)
	(2,431,374)	(66,949)	4,296	(2,494,027)

Other changes include accrued interest movement, amortisation of borrowings, new leases, and acquisitions in the year (Note 13).

Company

2022

	At 1 January 2022 £ 000	Cash flows £ 000	Other changes £ 000	At 31 December 2022 £ 000
Cash and cash equivalents	10,403	(10,403)	-	-
Borrowings	(199,778)	164,376	(222)	(35,624)
Loans to the Group	409,738	(145,265)	(356)	264,117
	220,363	8,708	(578)	228,493

2021

	At 1 January 2021 £ 000	Cash flows £ 000	Other changes £ 000	At 31 December 2021 £ 000
Cash and cash equivalents	77,839	(67,436)	-	10,403
Borrowings	(199,042)	-	(736)	(199,778)
Loans to the Group	307,193	102,538	7	409,738
	185,990	35,102	(729)	220,363

30 Classification of financial and non-financial assets and financial and non-financial liabilities

Group

The classification of financial assets and financial liabilities by accounting categorisation for the period ended 31 December 2022 was as follows:

	Financial assets at amortised cost £ 000	Financial assets & liabilities at FVTPL £ 000	Financial assets & liabilities at FVTOCI £ 000	Financial liabilities at amortised cost £ 000	Non-financial assets & liabilities £ 000
Assets					
Non-current assets					
Property, plant and equipment	-	-	-	-	7,562,034
Right of use assets	-	-	-	-	30,976
Intangible assets	-	-	-	-	299,969
Investments in subsidiaries, joint ventures and associates	-	3,982	-	-	-
Retirement benefit obligations	-	-	151,500	-	-
Tax receivable	-	-	-	-	754
Trade and other receivables	4,087	-	-	-	-
Other non-current financial assets	-	-	45,967	-	-
	4,087	3,982	197,467	-	7,893,733
Current assets					
Inventories	-	-	-	-	32,509
Trade and other receivables	199,505	-	-	-	-
Income tax asset	6,454	-	-	-	-
Cash and cash equivalents	30,977	-	-	-	-
Restricted cash	2,823	-	-	-	-
Contract assets	5,824	-	-	-	-
	245,583	-	-	-	32,509
Total assets	249,670	3,982	197,467	-	7,926,242
Liabilities					
Non-current liabilities					
Long term lease liabilities	-	-	-	(26,057)	-
Loans and borrowings	-	-	-	(2,512,624)	-
Provisions	-	-	-	-	(63,018)
Deferred revenue	-	-	-	(1,504,481)	-
Deferred tax liabilities	-	-	-	(408,624)	-
	-	-	-	(4,451,786)	(63,018)

30 Classification of financial and non-financial assets and financial and non-financial liabilities (continued)

	Financial assets at amortised cost £ 000	Financial assets & liabilities at FVTPL £ 000	Financial assets & liabilities at FVTOCI £ 000	Financial liabilities at amortised cost £ 000	Non-financial assets & liabilities £ 000
Current liabilities					
Current portion of long term lease liabilities	-	-	-	(6,346)	-
Trade and other payables	-	-	-	(269,386)	-
Loans and borrowings	-	-	-	(184,304)	-
Deferred revenue	-	-	-	(66,685)	-
Provisions	-	-	-	-	(15,932)
Other current financial liabilities	-	-	(11,813)	-	-
	-	-	(11,813)	(526,721)	(15,932)
Total liabilities	-	-	(11,813)	(4,978,507)	(78,950)

30 Classification of financial and non-financial assets and financial and non-financial liabilities (continued)

The classification of financial assets and financial liabilities by accounting categorisation for the period ended 31 December 2021 was as follows:

	Financial assets at amortised cost £ 000	Financial assets & liabilities at FVTPL £ 000	Financial assets & liabilities at FVTOCI £ 000	Financial liabilities at amortised cost £ 000	Non-financial assets & liabilities £ 000
Assets					
Non-current assets					
Property, plant and equipment	-	-	-	-	7,029,079
Right of use assets	-	-	-	-	24,105
Intangible assets	-	-	-	-	297,925
Investments in subsidiaries, joint ventures and associates	-	3,898	-	-	-
Retirement benefit obligations	-	-	262,200	-	-
Tax receivable	-	-	-	-	363
Trade and other receivables	2,702	-	-	-	-
Other non-current financial assets	-	-	944	-	-
	2,702	3,898	263,144	-	7,351,472
Current assets					
Inventories	-	-	-	-	20,879
Trade and other receivables	165,712	-	-	-	-
Income tax asset	3,130	-	-	-	-
Cash and cash equivalents	29,125	-	-	-	-
Contract assets	7,593	-	-	-	-
Other current financial assets	-	-	204	-	-
	205,560	-	204	-	20,879
Total assets	208,262	3,898	263,348	-	7,372,351
Liabilities					
Non-current liabilities					
Long term lease liabilities	-	-	-	(18,551)	-
Loans and borrowings	-	-	-	(2,074,946)	-
Provisions	-	-	-	-	(11,986)
Deferred revenue	-	-	-	(1,486,460)	-
Deferred tax liabilities	-	-	-	(359,834)	-
	-	-	-	(3,939,791)	(11,986)

30 Classification of financial and non-financial assets and financial and non-financial liabilities (continued)

	Financial assets at amortised cost £ 000	Financial assets & liabilities at FVTPL £ 000	Financial assets & liabilities at FVTOCI £ 000	Financial liabilities at amortised cost £ 000	Non-financial assets & liabilities £ 000
Current liabilities					
Current portion of long term lease liabilities	-	-	-	(6,160)	-
Trade and other payables	-	-	-	(226,478)	-
Loans and borrowings	-	-	-	(423,495)	-
Deferred revenue	-	-	-	(66,261)	-
Provisions	-	-	-	-	(5,358)
	-	-	-	(722,394)	(5,358)
Total liabilities	-	-	-	(4,662,185)	(17,344)

Fair values are derived from level 1 inputs.

30 Classification of financial and non-financial assets and financial and non-financial liabilities (continued)

Company

The classification of financial assets and financial liabilities by accounting categorisation for the period ended 31 December 2022 was as follows:

	Financial assets at amortised cost £ 000	Financial liabilities at amortised cost £ 000
Assets		
Non-current assets		
Investments in subsidiaries, joint ventures and associates	376,289	-
Current assets		
Trade and other receivables	224,117	-
Total assets	600,406	-
Liabilities		
Current liabilities		
Trade and other payables	-	(24,095)
Loans and borrowings	(35,624)	-
Income tax liability	-	(600)
	(35,624)	(24,695)
Total liabilities	(35,624)	(24,695)

30 Classification of financial and non-financial assets and financial and non-financial liabilities (continued)

The classification of financial assets and financial liabilities by accounting categorisation for the period ended 31 December 2021 was as follows:

	Financial assets at amortised cost £ 000	Financial liabilities at amortised cost £ 000
Assets		
Non-current assets		
Investments in subsidiaries, joint ventures and associates	376,289	-
Current assets		
Trade and other receivables	219,738	-
Cash and cash equivalents	9,808	595
	229,546	595
Total assets	605,835	595
Liabilities		
Non-current liabilities		
Loans and borrowings	-	(199,134)
Current liabilities		
Trade and other payables	-	(18,842)
Loans and borrowings	-	(644)
Income tax liability	-	(260)
	-	(19,746)
Total liabilities	-	(218,880)

31 Financial risk review

Group

This note presents information about the Group's exposure to financial risks and the Group's management of capital.

Capital management

The Group manages its capital centrally to ensure that entities in the Group will be able to continue as going concerns while maximising the return to stakeholders through the optimisation of the debt and equity balance. The Group's overall strategy remains unchanged from 2021.

The capital structure of the Group consists of net debt (borrowings as detailed in Note 23 offset by equity of the Company (comprising issued capital, reserves and retained earnings as detailed in Notes 20 and 21)).

The covenants associated with some of the Group's bonds include restrictions on the issuance of new indebtedness and the making of distributions dependent on the scale of the ratio of Senior Total Net Debt to Regulatory Asset Value ("RAV"). The definition of Senior Total Net Debt excludes any subordinated debt and any debt incurred on a non-recourse basis. In addition, it excludes any fair value and accounting adjustments.

The Group's Senior Total Net Debt as at 31 December 2022 totalled £2,296.9m (2021: £2,230.9m). Using the RAV value as at March 2023 as outlined by Ofgem in its ED2 price control financial model published in February 2023, and adjusting for the effects of movements in the value of the Retail Price Index gives an approximation for the RAV value as at 31 March 2023 of £4,222.0m (2021: £3,687.6m). The Senior Total Net Debt to RAV ratio for the Group is therefore estimated at 54.4% (2021: 60.5%).

At 31 December 2022, the Group had available £175.3m (2021: £241.6m) of undrawn committed borrowing facilities in respect of which all conditions precedent had been met.

At 31 December 2022, 99% of the Group's long-term borrowings were at fixed rates (2021: 98%) and the average maturity for these borrowings was 18 years (2021: 16).

During the year all obligations under the various debt covenants have been complied with.

Credit risk

Credit risk refers to the risk that a counterparty will default on its contractual obligations resulting in financial loss to the Group. The Group has adopted a policy of only dealing with creditworthy counterparties. The Group's exposure and the credit ratings of its counterparties are continuously monitored and the aggregate value of transactions concluded is spread amongst approved counterparties. The carrying amount of financial assets recorded in the financial statements, which is net of impairment losses, represents the Group's maximum exposure to credit risk as no collateral or other credit enhancements are held.

The Group's income is primarily generated from use of system revenue from electricity suppliers; suppliers are credit checked by independent ratings agencies. Impaired income from DUoS will be recovered in future periods through system charges and is therefore of no material risk to the Group. The Group's receivables are subject to expected credit loss calculations disclosed further within the trade receivables (Note 17). The Group's credit risk exposure is shown below:

Group

2022	Notes	Gross carrying amount £ 000	Loss allowance £ 000	Net carrying amount £ 000
Trade and other receivables	17	220,694	(17,102)	203,592
Income tax asset		7,208	-	7,208
Cash and short-term deposits	18	30,977	-	30,977
Restricted cash	19	2,823	-	2,823
Contract assets	3	5,824	-	5,824
	17	267,526	(17,102)	250,424

31 Financial risk review (continued)

2021	Notes	Gross carrying amount £ 000	Loss allowance £ 000	Net carrying amount £ 000
Trade and other receivables	17	184,635	(16,221)	168,414
Income tax asset		3,493	-	3,493
Cash and short-term deposits	18	29,125	-	29,125
Contract assets	3	7,593	-	7,593
	17	224,846	(16,221)	208,625

For trade receivables the Group has applied the simplified approach in IFRS 9 to measure the loss allowance at lifetime ECL. The Group determines the expected credit losses on these items by using a provision matrix, estimated based on historical credit loss experience based on the past due status of the debtors, adjusted as appropriate to reflect current conditions and estimates of future economic conditions. Accordingly, the credit risk profile of these assets is presented based on their past due status in terms of the provision matrix. Note 17 includes further details on the loss allowance for these assets.

The carrying amount of the Group's financial assets at FVTPL as disclosed in Note 30 best represents their respective maximum exposure to credit risk. The Group holds no collateral over any of these balances.

31 Financial risk review (continued)

Company

2022	Notes	Gross carrying amount £ 000	Loss allowance £ 000	Net carrying amount £ 000
Amounts due from Group undertakings	17	264,117	-	264,117

2021	Notes	Gross carrying amount £ 000	Loss allowance £ 000	Net carrying amount £ 000
Trade and other receivables	17	-	-	-
Amounts due from Group undertakings	17	409,738	-	409,738

Amounts due from Group undertakings are regarded as low credit risk as the Group has a strong capacity to meet its contractual cash flow obligations and maintains an investment grade credit rating.

Liquidity risk

Ultimate responsibility of liquidity risk management rests with the board of directors, which has established an appropriate liquidity risk management framework for the management of the Company's short, medium, and long-term funding and liquidity management requirements. The Company manages liquidity by maintaining adequate reserves, banking facilities and reserve borrowing facilities, by continuously monitoring forecast and actual cash flows, and by matching the maturity profiles of financial assets and liabilities.

The Group has access to a £200 million revolving credit facility provided by Barclays Bank plc, Lloyds Bank plc, HSBC UK Bank plc and Royal Bank of Canada. The facility was executed in December 2021 for a period of three years expiring in 2024, with two 1-year extension options. During the year the Group exercised the first extension option which extended the termination date to December 2025. In addition, the Group has access to a £42 million overdraft facility provided by Lloyds Bank plc, which is reviewed annually, these borrowings are repayable on demand. At 31 December 22, the Group had available £175.3m (2021: £241.6m) of undrawn committed borrowing facilities in respect of which all conditions precedent had been met.

Maturity analysis for financial liabilities

The following table sets out the remaining contractual maturities of financial liabilities by type.

Group

2022	Less than 3 months £ 000	3 months - 1 year £ 000	1-5 years £ 000	More than 5 years £ 000	Total £ 000
Non-interest bearing	153,808	-	-	-	153,808
Short-term interest bearing	99,175	3,717	30,386	-	133,278
Long-term interest bearing	-	156,801	1,002,634	2,763,261	3,922,696
	252,983	160,518	1,033,020	2,763,261	4,209,782

2021	Less than 3 months £ 000	3 months - 1 year £ 000	1-5 years £ 000	More than 5 years £ 000	Total £ 000
Non-interest bearing	114,379	-	-	-	114,379
Short-term interest bearing	439	-	-	-	439
Long-term interest bearing	-	438,623	500,335	2,629,303	3,568,261
	114,818	438,623	500,335	2,629,303	3,683,079

31 Financial risk review (continued)

Company

2022	Less than 3 months £ 000	3 months - 1 year £ 000	1-5 years £ 000	More than 5 years £ 000	Total £ 000
Non-interest bearing	871	-	-	-	871
	871	-	-	-	871

2021	Less than 3 months £ 000	3 months - 1 year £ 000	1-5 years £ 000	More than 5 years £ 000	Total £ 000
Non-interest bearing	23,002	-	-	-	23,002
Long-term interest bearing	-	214,500	-	-	214,500
	23,002	214,500	-	-	237,502

Market risk

Market risk is the risk of loss arising from movements in market variables such as interest rates, exchange rates and commodity prices. Risks are mitigated by utilising appropriate risk management products.

The Group's policy on interest rate risk is designed to limit the Group's exposure to floating interest rates. Consistent with this policy, at 31 December 2022 the Group had 99% (2021: 98%) of long term debt at fixed rates. Short-term loans under the multicurrency revolving credit facility are charged at a floating rate of interest at SONIA plus 0.20% plus a credit adjustment spread. In aggregate, 14% of the amortising long-term loans and the capital expenditure facility loans are at a floating rate of interest at SONIA plus 1.55% and 1.60% respectively, thus exposing the Group to cash flow interest rate risk. A 1% movement in interest rates would subject the Group to an approximate change in interest costs of £0.3m per year. This is considered to be an acceptable level of risk. All other loans are at fixed interest rates and expose the Group to fair value interest rate risk. The 1% sensitivity is utilised as it is the sensitivity rate used when reporting interest rate risk internally to key management personnel and represents management's assessment of the reasonably possible change in interest rates and is applied to variable interest rate borrowings.

More information on the use of cash flow hedges to manage interest rate risk on is available in note 31.

Financial risk

The Group is exposed to price risk on CE Resources' revenues. During the year there was no revenue relating to the sale of commodities therefore a 1% change in commodity prices would not have a material impact on the financial statements.

The Group is not subject to significant risk relating to foreign exchange. The Group has entities operating in Euros, Australian dollars, and polish złoty; a 1% change in exchange rates in these currencies would not have a material impact on the financial statements.

32 Derivatives held for risk management and hedge accounting

Derivatives held for risk management

Derivatives are financial instruments that derive their value from the price of an underlying item such as interest rates, foreign exchange rates, credit spreads, commodities, equity or other indices. In accordance with Board approved policies, derivatives are transacted to manage our exposure to fluctuations in interest rate. The Group uses derivatives to manage these risks from our financing portfolio to optimise the overall cost of accessing the debt capital markets.

The following table provides a reconciliation of the values arising. Derivative financial instruments related to interest rate swaps for cash flow hedging purposes and embedded derivatives associated with virtual power purchase agreements. The only material value relates to interest rate swaps. Reflecting the immaterial values at 31 December 2022, additional reporting generally arising under the accounting standards for certain embedded derivatives has not been disclosed.

	2022		2021	
	Assets £ 000	Liabilities £ 000	Assets £ 000	Liabilities £ 000
Non-current	45,967	-	944	-
Current	3,484	15,297	204	-
	49,451	15,297	1,148	-

The maturity of financial instruments was as follows:

	Less than 3 months £ 000	3 months to 1 year £ 000	1 to 5 years £ 000	Total £ 000
2022				
Notional principal	1,275	34,918	235,736	271,929
Cash flow hedge	265	3,219	37,716	41,200
	1,540	38,137	273,452	313,129
2021				
Notional principal	-	31,006	143,394	174,400
Cash flow hedge	-	204	944	1,148
	-	31,210	144,338	175,548

Effectiveness testing

Qualitative features of the interest rate swaps demonstrate fully matched terms between the cash flows of the hedging instruments and the cash flows of the hedged items, resulting in full hedge effectiveness.

Nature of the risk being hedged

The Group is hedging the risk of variability in cash flows indexed to SONIA or BBSY. Further details of the Group's risk management is available in the Strategic Report, and in financial risk review, Note 31.

33 Related party transactions

Directors' advances, credits and guarantees

During the year, 2 directors (2021: 2) and 3 key personnel (2021: 3) utilised the services provided by Northern Transport Finance Limited. The amounts included in finance lease receivables owed by these directors and key personnel at the end of the period were £90,000 (2021: £89,000).

Company

The Company has advanced loans to other companies in the Group. The total interest included in investment income in the statement of profit or loss for the year ended 31 December 2022 was £19,976,000 (2021: £15,513,000). Included in assets within the statement of financial position is £264,110,000 (2021: £409,375,000). These amounts relate to subsidiaries of the Company. The Company's amount payable to its parent as of 31 December 2022 is £23.2m (2021: £18.8m).

Group

Income and receivables from related parties

2022	Joint ventures £ 000
Sale of goods	97

2021	Joint ventures £ 000
Sale of goods	180

Expenditure with and payables to related parties

2022	Parent £ 000	Joint ventures £ 000
Purchase of goods	-	11,129
Amounts payable to related party	25,844	216

2021	Parent £ 000	Joint ventures £ 000
Purchase of goods	-	9,938
Amounts payable to related party	24,628	70

Amounts due to parent as shown above relate to amounts owed to Berkshire Hathaway Energy Company for on-going costs and is repayable on demand.

Joint venture in the tables above relate to Vehicle Lease and Services Limited.

34 Parent and ultimate parent undertaking

The Company's immediate parent is Berkshire Hathaway Energy Company.

The ultimate parent and controlling party is Berkshire Hathaway Inc.. These financial statements are available upon request from 3555 Farnam Street, Omaha, Nebraska 68131.

Relationship between entity and parents

The parent of the largest group in which these financial statements are consolidated is Berkshire Hathaway Inc., incorporated in United States of America.

The registered address of Berkshire Hathaway Inc. is:
3555 Farnam Street, Omaha, Nebraska 68131

The parent of the smallest group in which these financial statements are consolidated is Berkshire Hathaway Energy Company, incorporated in United States of America.

The registered address of Berkshire Hathaway Energy Company is:
3555 Farnam Street, Omaha, Nebraska 68131