

# City of Cotati

## RESPONSE TO REQUEST FOR PROPOSAL

ENERGY/WATER RESOURCES AUDIT AND  
IMPLEMENTATION OF ENERGY AND WATER  
RESOURCES EFFICIENCY IMPROVEMENT PROJECTS

SUBMITTED AUGUST 22, 2024

### POINT OF CONTACT

Brooklyn Stewart  
Account Executive  
[brooklyn.stewart@centrica.com](mailto:brooklyn.stewart@centrica.com)

333 S. Anita Drive, Suite 825  
Orange, California 92868

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## SECTION 1 – COMPANY OVERVIEW

### Centrica's Unique Qualifications

Centrica Business Solution Services (CBSS) is pleased to respond to the City of Cotati's (City or Cotati) Request for Proposals for an Energy/Water Resources Audit and Implementation of Energy and Water Resources Efficiency Improvement Projects (RFP). We recognize that the City has been very proactive in delivering to its climate initiatives and providing efficient and sustainable facilities and services for its staff and the public. Through an earlier performance contract and additional initiatives, the City has improved the energy efficiency of its buildings and spaces, including replacing inefficient lighting throughout its buildings and street-lighting, upgrading water meters to AMI technology, providing charging for electric vehicles, and promoting for further EV expansion. In summary, the City has done a great job leading the charge in combatting climate change, and now is looking for more. It is looking for creative solutions, resiliency for grid failures, more control of facilities and energy use, and to continue to reduce grid reliance. Furthermore, the City is looking for a partner that can deliver on the City's goals in a cost-efficient manner through a self-funding program.

We are the right partner to help Cotati with this next phase of city-wide improvements for the following reasons:

### Capabilities

- We have more in-house capabilities around the core measures of interest to the City that will drive better economics of this project than any other ESCO.
- We will develop, design, and implement most of the City's priority measures with our in-house teams. This results in a major cost reduction and allows Cotati to include more measures that may not otherwise have been included in a budget-neutral project because of traditionally longer paybacks. This approach sets us apart from what is typical in our industry, where each measure is sub-contracted, adding markup upon markup.
- We have construction equipment like directional boring that decrease the cost of installing EV infrastructure and solar carports and ground mount systems.

### Experience

- We have teams of engineers specializing in solar, battery storage, and microgrids, as well as EV and electrification, which are experts in dealing with PG&E and Sonoma Clean Power. They are intimately familiar with interconnection processes, determining grid capacity, comparing tariffs and time-of-use plans, maximizing incentives, and modeling for the most efficient deployment of clean energy assets.
- We have experience installing complex microgrid projects.



### CBSS Benefits to the City of Cotati

#### **Collaborative Development Approach**

*Dedicated to uncovering and prioritizing Cotati's goals*

#### **Financial Confidence and Quality Assurance**

*Backing from parent company, Centrica plc*

#### **Industry-Leading Project Delivery**

*DOE qualified, NAESCO accredited, award-winning ESCO*

#### **Established Local Presence and Expertise**

*Diverse CA team, portfolio, and pool of subcontractors*

#### **In-house Implementation and Equipment**

*Self-install capabilities to minimize margin pancaking*

#### **Extensive EV, PV, BESS, and Microgrid Experience**

*178.1 MW solar and 102-MWh BESS installed in the US*



- We have operational EV charging assets we have put in the ground.
- We have experience working with other CA City and Public Sector clients like Park and Recreation Districts implementing a variety of water related solutions including smart irrigation controls and more efficient plumbing systems and fixtures, including motion sensing systems that reduce spread of germs for a safer environment.
- We have a controls team here in CA that with SCADA and BMS systems integration expertise that are very talented at evaluating existing controls and equipment, diagnosing problems and opportunities, and bringing different technologies into a single platform.

We are honored with the opportunity to be a partner in your efforts to expand EV charging capabilities, resiliency/power backup, on-site clean energy production, evaluation of energy and water use and arbitrage, expanding control and monitoring of energy and water use, and discovering other potential measures that can help the City more efficiently manage its resources and facilities, and achieve its climate goals, while improving occupant comfort.

*“The Cotati City Council has declared climate change mitigation and adaptation as one of the main goals of the City and strives to implement greenhouse gas-reducing measures.”*

## History and Experience

Centrica, plc has dedicated its focus and resources on global energy services offering turnkey solutions for energy efficiency and infrastructure upgrade projects for over 200 years. In North America, CBSS, a wholly owned subsidiary of Centrica, plc,) has been a National Energy Services Provider Since 2002. In that time, CBSS has successfully developed and implemented over 2,500 water and energy projects worth over \$450 Million, resulting in guaranteed savings of over \$150 Million. Many of the projects implemented are similar projects to what the City is trying to accomplish: solar, EV charging, controls and monitoring, lighting, mechanical, and water efficiency.

Over the years, we have built a portfolio of distinct but complementary businesses that enable us to operate across the entire energy value chain to help our customers live sustainably and affordably. In America, CBSS has grown both organically and through several acquisitions, including:

*Figure 1: Centrica Family of Businesses-Recent Acquisitions*

Company	Year Founded	Year Acquired	Technology Focus
Astrum Solar	2008	2014	Solar PV (East)
ENER-G Rudox	1949	2016	Cogeneration
Restore	2010	2017	Advanced optimization
SmartWatt Energy	2002	2019	Energy performance contracting
Vista Solar	2008	2018	Solar PV (West)

CBSS operates as an independent business unit within the family of energy and energy-services businesses of Centrica plc. Previously known as SmartWatt Energy, our division was dedicated to energy performance contracting. SmartWatt Energy operated as a private firm for 17 years before being acquired by CBSS in 2019.

In the United States, we are structured to serve the entire nation through geographically aligned business units. Each business unit is staffed with local professionals, engineers, and policy experts whose focus is aligning project strategies to overcome local/regional challenges and providing services and reporting that comply with federal, regional, and local standards, laws, and ordinances.

CBSS is fully qualified and more than meets the minimum requirements of the RFP.

## Financial Strength

Our parent company, Centrica plc, a 200+ year-old Global 500 multinational energy and energy-services company with over \$30 billion in annual revenue and 21,000 employees, backs CBSS' performance. This financial strength allows CBSS to make the necessary investments to complete high-quality projects with guaranteed outcomes. Examples of these investments include:

**Continual Investment in Personnel:** CBSS has continuously invested in our professional staff's strength and expertise in hiring, training, and ongoing professional development.

**100% Performance Assurance:** CBSS has invested in the information technology systems, business management best practices, and project delivery workflow processes necessary for long-term system performance and persistent savings.

### Audited Financial Report

Please refer to our 2023 Audited Financial Report under Appendix A.



## Minimum Requirements

### Accreditation by the National Association of Energy Services Companies (NAESCO)

CBSS have been a long-standing member of NASECO, and in 2023, won the Historic Community Impact Award for a project completed in Coles County, Illinois. These prestigious certifications and accreditations highlight our unique abilities and processes as a company to deliver compliant and satisfactory projects. This also serves as a valuable tool to the City in knowing that we are heavily vetted with a vast number of related and referenceable energy and infrastructure projects, requirements needed to achieve the Accreditation.

### U.S. Department of Energy (DOE) Qualified List of Energy Service Companies

CBSS has been deemed a "Super ESCO" by the U.S. Department of Energy (DOE) and is on the DOE's Qualified List of Energy Service Companies. Like the NAESCO Accreditation, this exclusive list requires a thorough evaluation of our experience and technical capabilities, energy savings calculation methodologies, organization and project management capabilities, financial condition, and resources. We take great pride in our place on this prestigious list, as it is a credential that enables us to build large Energy Savings Performance Contracts for the federal government and Department of Defense facilities worldwide.

### California General Contractor's License

CBSS confirms that we have had an active General Contractor's license in the state of California for a minimum of 24 months.

### Minimum Bonding Capacity

CBSS' bonding capacity is over \$50 million per project and \$100 million aggregate.



## Implementation of Similar Projects

Please refer to our References in Section 3 below which highlight our work with public entities. As detailed, we far exceed the minimum requirement for successful implementation of five similar projects in the past three years.

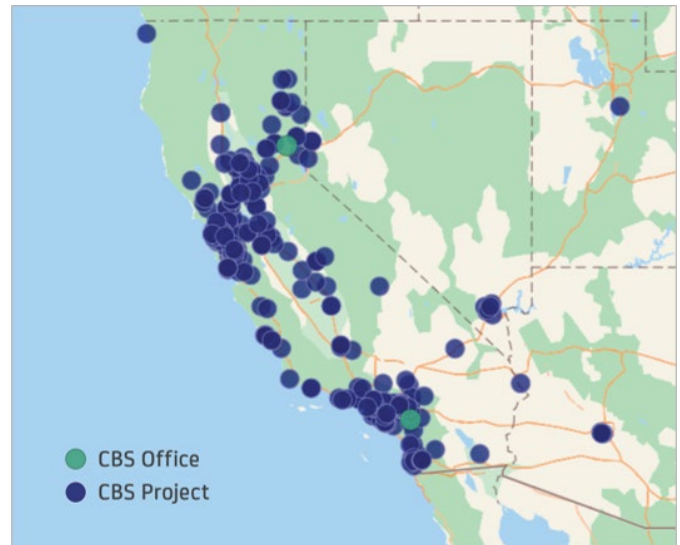
## Experience in Retrofitting Public Agency Infrastructure to Reduce Energy and Water Consumption

As stated in our company's history, CBSS has been a trusted provider of turnkey solutions to reduce energy and water consumption for over two decades. This graphic demonstrates our local experience and impact in the state of California.

### California Licensed Team

CBSS insists on stimulating the local economies where we do business, investing in brick- and-mortar locations with local staff and construction delivery resources in all states where we perform energy and utility savings contracts. This includes our physical offices in Rocklin and Orange, California, and our remote Bay Area and Central Valley employees. Your assigned team is properly licensed as required by state and governmental agencies. Please refer to Section 2 – Project Team and Management Structure for additional information on specific team members.

*Figure 2: CBSS has completed 532 projects in its West Region alone, totaling \$263M*



## Measurement and Verification Protocol

The measurement and verification (M&V) of energy savings is a critical component of every guaranteed energy savings contract, as it serves as the basis for defining and confirming the budget-neutral aspect of the project. We hold ourselves accountable for delivering evidence of savings through a reliable, prescribed M&V process to ensure the project has the required savings for the City. **We have experience utilizing all four IPMVP options, depending on the project type and need of the customer, including the City's preferred "Option C."**

One of our Certified Measurement and Verification Professionals (CMVP) will develop a site-specific M&V plan per the International Performance Measurement and Verification Protocol (IPMVP) guidelines. We will review this with City representatives during a workshop before final delivery of the IGA report. The M&V options presented will follow proven processes, which provide the City with transparency that the savings are achieved while at the same time maintaining an appropriate level of M&V fees.

We aim to deliver a plan to the City that provides a meaningful guarantee while balancing costs. We use an M&V Planning Flowchart (developed by the Federal Energy Management Program) to determine the appropriate M&V option. Please refer to the Sample Centrica M&V Report under Appendix B.

## Litigation

CBSS has no pending or recent litigation regarding savings performance and/or measurement and verification of a guaranteed energy savings project.

## SECTION 2 – PROJECT TEAM AND MANAGEMENT STRUCTURE

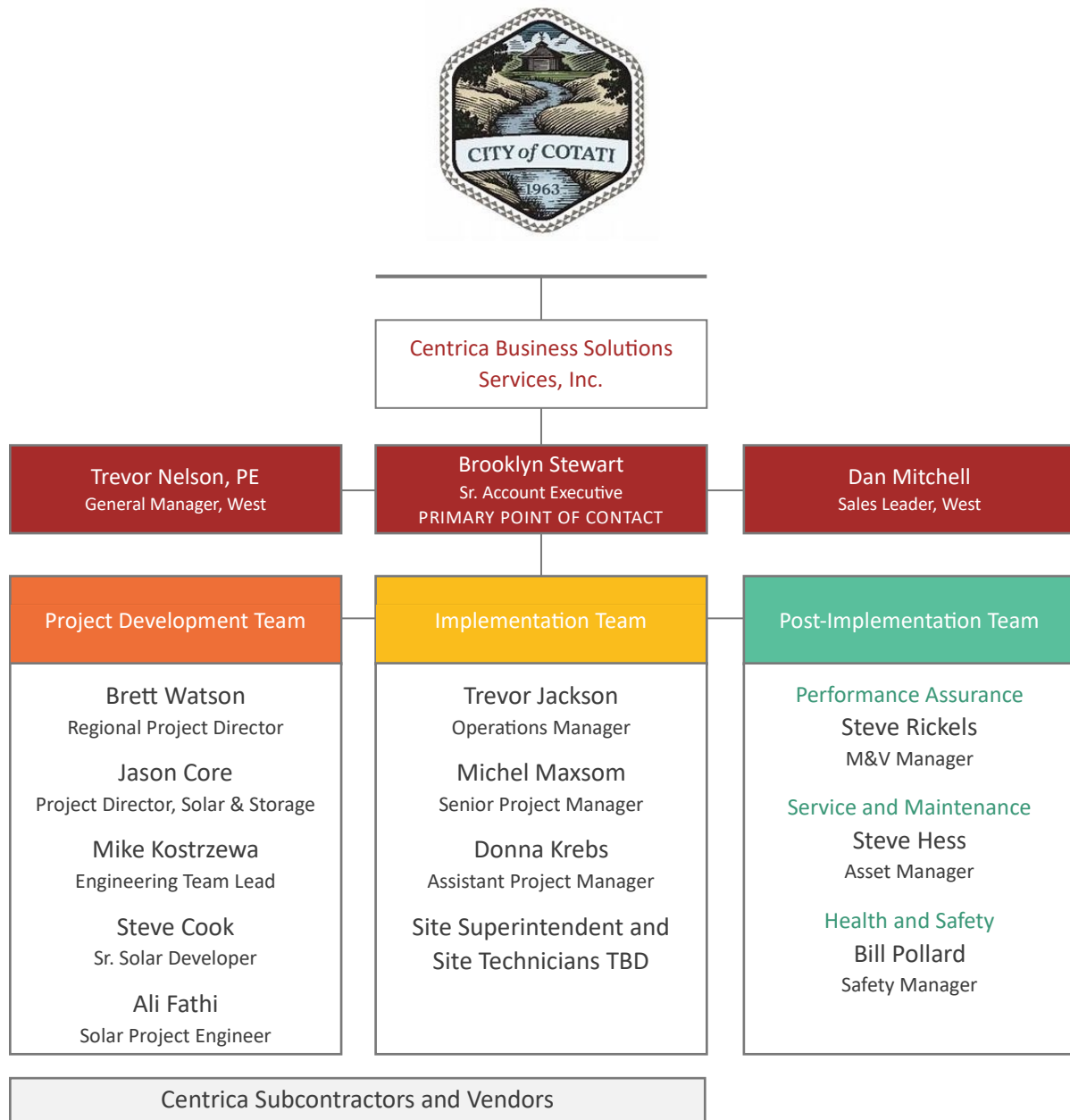
### CBSS California-Based Project Team

To ensure seamless communication and coordination throughout the project, your Senior Account Executive, Brooklyn Stewart, will serve as the City’s primary point of contact. Brooklyn's expertise in project development, financing, and his ability to effectively communicate with stakeholders, is crucial in ensuring that every aspect of the project is executed seamlessly.

Brooklyn is supported by Project Director Brett Watson and Operations Manager Trevor Jackson, who are dedicated to ensuring that every project we develop is delivered on time, within budget, and to the highest standards. Our energy engineers, design engineers, project managers, commissioning engineers, and field technicians work tirelessly to ensure that each project meets the highest standards and is completed within the stipulated timelines. The team is committed to delivering exceptional service that exceeds expectations.

Below is an Organizational Chart and rough breakout of the percentage of their time we anticipate being dedicated to the City of Cotati throughout this project:

## Organizational Chart and Reporting Structure





## Team Commitment

CBSS is committing this team, at a minimum, to the development and construction of this project for the City of Cotati.

*Figure 3: CBSS Team Member Percentage of Commitment to the City of Cotati*

Team Member	Role	Percentage of Commitment to Project
Brooklyn Stewart	Senior Account Executive	30%
<b>Project Development Team</b>		
Brett Watson	Regional Project Director	20%
Jason Core	Solar/Storage Project Director	20%
Mike Kostrzewa	Engineering Team Lead	40%
Steve Cook	Senior Solar Developer	30%
Ali Fathi	Solar Project Engineer	30%
<b>Implementation Team</b>		
Trevor Jackson	Operations Manager	10%
Michael Maxsom	Senior Project Manager	30%
Donna Krebs	Assistant Project Manager	30%
<b>Post-Implementation Team</b>		
Steve Rickels	M&V Manager	20%
Steve Hess	Asset Manager	20%
Bill Pollard	Safety Manager	20%

## Key Team Member Biographies

The team leading this project brings an impressive combined 100 years of experience in design-build projects, with a particular focus on energy-efficiency and infrastructure upgrade projects for municipal buildings. Our unwavering commitment to excellence and a balance sheet exceeding \$33 billion is a testament to our proven record of delivering intricate solutions across diverse markets, including Federal, local government, industrial, and higher education.

CBSS understands the need to include experienced project team members – most notably, senior project leaders who are knowledgeable and fully understand the technical and design requirements and the human impacts our customers experience when we enter their space. The CBSS team and our partners will apply their vision, talent, and creativity to achieve the final design and suite of solutions to balance and meet your resiliency and sustainability goals.

### **Trevor Nelson, PE, LEED AP, CEM, CCP, CMVP**

*General Manager, West Business Unit*

In his role as GM, Trevor will be responsible for contract negotiations, final review, and approval of scope and costing, and ensuring that all staff members have the tools and resources needed to deliver a safe, on-time, and cost-effective project that we can all be proud of. Trevor has worked on the engineering and overseeing construction for similar multi-measure energy projects for UC San Diego, UC Irvine, City of Reedley, Montefiore Hospital at the University of Pittsburgh Medical Center, and several facilities for the University of British Columbia.

**Education:** Bachelor of Science in Mechanical Engineering from California Polytechnic State University

### **Brooklyn Stewart, MBA, LC**

*Sr. Account Executive, West Business Unit*

As the Senior Account Executive, Brooklyn will serve as Cotati's primary contact during all project phases. He will play an instrumental role between the City and CBSS to ensure consistent communication plans are executed throughout the project. Additionally, he will lead efforts in scope and funding development and progress the community outreach plan. Over the past 15 years, he has worked closely with several large CA municipal, state, k-12, higher education, and CA special district clients, assisting them in program development, funding, and implementation. His recent projects include working with the City of Cloverdale, UC Santa Cruz, UC Davis, CA DMV, Cambrian School District, and Auburn Rec & Park District.

**Education:** MBA from Keller Graduate School, and a Bachelor of Science in Telecommunications Management from DeVry University

### **Jason Core**

*Solar and Storage Project Director, West Business Unit*

Jason leads our solar & storage project development team for the West Coast and will be overseeing the analysis, design, engineering, and estimating for this project. Utilizing his 25+ years of experience in engineering and construction management, along with his 9 years of experience managing solar projects in California, he will be able to develop the best possible solutions for the needs of the City. He has developed and managed over 100 commercial solar projects in similar facilities, such as the cities of Elk Grove and Cloverdale, Merced Community College District, and Contra Costa Community College District.

**Education:** NESCOL College, Epsom, UK, HNC, Building Services Engineering

### **Brett Watson**

*Regional Project Director, West Business Unit*

As the Regional Project Director, Brett will lead the project development and engineering teams during the project development phase. He uses his professional, technical, and construction experience to ensure accurate utility bill analysis, benchmarking, scope of work development, energy savings calculations, energy modeling, and utility rebates/incentive analysis. Brett has led teams to develop similar projects at the City of Lynwood, Orange Coast College, River Springs Charter School District, Valley Wide Rec & Park District, and Glendale Community College.

**Education:** Bachelor of Science in Mechanical Engineering from Sacramento State University

### **Mike Kostrzewa, PE**

*Senior Energy Engineer*

Mike is an expert in energy efficiency and sustainability with 40 years of experience. He is responsible for energy engineering from concept to construction. He applies his extensive experience when completing utility bill analysis, preliminary feasibility assessments, investment grade audits, energy savings calculations, incentive identification, cost analysis, and measurement and verification for comprehensive energy performance contract projects.

**Education:** Master of Science in Mechanical Engineering from Colorado State University, and a Bachelor of Science in Petroleum Engineering

### **Steve Cook**

*Project Developer, Solar, Storage, and Resiliency, West Business Unit*

Steve Cook has extensive industry experience and currently serves as a project developer, executing creative solar design solutions for CBSS West Business Unit customers. In this role, he analyzes utility usage, reviews the terrain or building and roof structure, designs the solar system, estimates the cost, and prepares and presents utility and cost savings. Steve works closely with business development, leadership, engineering, project management, and construction staff to identify, assess, and structure technical and financial solutions for our customers' renewable and energy efficiency needs.

**Education:** A.S. in Construction Management from Ohlone College

### **Trevor Jackson**

*Operations Manager, West Business Unit*

Trevor manages all Operations and Project Managers in the West Business Unit and develops regional Project Management strategies. He collaborates with project development to outline the scope of each project, schedules, and manages resources to ensure project completion, communicates project progress with customers and internal staff, and reviews work quality to maintain CBSS' standards. With over 25 years of experience in electrical and communications wiring in California, Trevor has managed installations in various facility types, such as warehouse/distribution, healthcare, higher education, state, and federal government, and refrigerated and freezer warehouses. He has also worked on projects for several of CBSS' national accounts, in addition to his extensive design-build construction and refrigeration experience in healthcare and K-12 schools.

### **Michel Maxsom**

*Sr. Project Manager-Solar Implementation Subject Matter Expert*

Michel is our implementation subject matter expert with over 20 years of knowledge and firsthand experience in the renewables and energy efficiency sectors. Michel has spearheaded the development and construction of hundreds of projects globally and has been hand-selected by our decision-makers to lead Cotati's construction initiatives. Recent similar projects include the City of Cloverdale, Marcum-Illinois Union ESD, Nuestro Elementary SD, Winters Joint USD, East Nicolaus Joint Union High School District, Winship-Robbins Elementary School District, Live Oak Unified School District, DMV Headquarters, the City of Elk Grove, and Auburn Recreation & Park District. **Education:** Bachelor of Science in Business Administration, Management and Operations from The University of Phoenix

### **Donna Krebs**

*Administrative Manager*

Donna is an expert administrator who conveys to your project over 15 years of energy project experience. She supports the West's design, construction, commissioning, and customer service teams, has extensive experience managing complex administrative and purchasing tasks, and is an asset on our large-scale, multi-scoped regional projects. The City will benefit from her expertise in project documentation, processing purchase orders, initiating invoices, labor warranties, project closeout, and various reporting.

**Education:** Bachelor of Science in Business Administration from California Polytechnic State University



## SECTION 3 – EXPERIENCE

### Project 1: Department of Motor Vehicles

**Location:** Sacramento, California

**Proximity to Cotati:** 89 miles

**Owner:** The State of California

**Project Dates:** 2019-2022

**Total Project Cost:** \$9,000,000

**Key Staff:** Brooklyn Stewart, Mike Kostrzewa, Michel Maxsom

**Annual Energy Savings:** \$607,858 (326,271 kWh)

**Reference:** Sjon Woodlyn, Facilities Operations Branch Chief  
Phone: 916-657-7581

Email: [sjon.woodlyn@dmv.ca.gov](mailto:sjon.woodlyn@dmv.ca.gov)

**On Budget and On Schedule:** All project phases were implemented at the estimated costs and on schedule.

**Services Designed and Implemented:** Establish baseline conditions, develop energy profile, determine optimal energy source, develop conceptual design, economic and financial analysis, permitting and regulatory review, production of the final report, project permitting, construction document design and oversight, performance validation. A mix of measures included lighting (interior, exterior), solar, mechanical, and controls.

**Relevance to the City of Cotati:** CBSS developed a project that increased maintenance control while using the energy savings from more favorable measures to offset the costs of measures that do not provide as beneficial of financial payback. CBSS is familiar with municipalities and has extensive experience working within the State of CA over the past 10+ years. Very similar scope, with significant lighting, mechanical, and solar.



Centrica was selected through a competitive bid process through a partnership with PG&E's Sustainable Solutions Turnkey group to provide a design/build energy retrofit at the DMV headquarters in downtown Sacramento. CBSS audited the campus and worked with the DMV to design and construct a replacement of interior fluorescent and exterior HID's with new energy efficient LEDs and Title 24 compliant controls, a replacement of large fans at four air handlers with fan walls, new HVAC controls, retro-commissioning of all HVAC equipment, and repairs of their existing solar array. Like the City of Cotati, the DMV needed multiple ECMs to be supported within the project by the large savings associated with the lighting and lighting controls ECMs for a budget neutral project with \$0 in up-front cost.

## Project 2: City of Reedley

**Location:** Reedley, California

**Proximity to Cotati:** 246 miles

**Owner:** The City of Reedley

**Project Dates:** 2020-2022

**Total Project Cost:** \$2,100,000 (No up-front cost to the City as this was a Power Purchase Agreement)

**Key Staff:** Dan Mitchell, Jason Core, Michel Maxsom

**Energy Savings:** \$17,000 in year 1 with no cost escalator to the City's PPA rate, estimated savings of \$2,800,000 over the 25-year term of the PPA.

**Reference #1:** Nicole Zieba, City Manager

Phone: 559-637-4200 x212

Email: [Nicole.Zieba@reedley.ca.gov](mailto:Nicole.Zieba@reedley.ca.gov)

**Reference #2:** Russ Robertson, Public Works Director

Phone: 559-637-4200 x213

Email: [Russ.Robertson@reedley.ca.gov](mailto:Russ.Robertson@reedley.ca.gov)

**On Budget and On Schedule:** While CBSS experienced challenges with timelines on the required environmental studies (the ground mount solar was situated on undeveloped land), we were able to deliver on the completion date promised to the City by the end of 2022. After contract signing and through the course of the project, CBSS worked with the City to obtain alternate financing that lowered the City's PPA rate from the original agreement by 1.46 cents per kWh, with no other changes to the project other than the lower rate.

**Services Designed and Implemented:** Establish baseline conditions, develop energy profile, determine optimal energy source, develop conceptual design, economic and financial analysis, permitting and regulatory review, production of the final report, project permitting, construction document design and oversight, performance validation. Installed 1,026 kW ground mount solar PV with NEXTracker system on an undeveloped plot of land.

**Relevance to The City of Cotati:** CBSS helped the City of Reedley achieve its goal of locking in a fixed PPA rate to lower utility costs versus paying higher costs to the utility (PGE).



The City of Reedley was seeking a qualified energy services company to deliver proven solutions to reduce their energy consumption and costs. Centrica was selected to deliver solar PV for multiple city buildings and delivered the project under a Power Purchase Agreement (PPA).

Centrica provided audit, design, and construction services for the entire scope of work, and secured financing for the Power Purchase Agreement on behalf of the City.

## Project 3: City of Cloverdale

**Location:** Cloverdale, California

**Proximity to Cotati:** 39 miles

**Owner:** The City of Cloverdale

**Project Dates:** 2022-Present

**Total Project Cost:** \$7,884,824

**Key Staff:** Brooklyn Stewart, Brett Watson, Michel Maxsom

**Annual Energy Savings:** \$540,448

**Reference #1:** David Kelly, City Manager

Phone: 707-894-1710

Email: [dkelley@ci.cloverdale.ca.us](mailto:dkelley@ci.cloverdale.ca.us)

**On Budget and On Schedule:** All project phases to date have met estimated cost on schedule. There are, however, some measures still in construction.

**Services Designed and Implemented:** Establish baseline conditions, develop energy profile, determine optimal energy source, develop conceptual design, economic and financial analysis, permitting and regulatory review, production of the final report, project permitting, construction document design and oversight, performance validation. Mix of measures included lighting (interior, exterior), solar, mechanical, and replacement of city-wide water meters.

**Relevance to Relevance to the City of Cotati:** Like Cotati, Cloverdale is relatively remote, and had limited funds available for infrastructure upgrades. Utilizing grant funding, utility rebates, and a tax-exempt municipal lease, we were able to combine measures to present a budget neutral project to Cloverdale with no up-front capital.



Centrica converted the interior and exterior lighting from T8 to LED and upgraded HVAC systems throughout the city. Pending completion of PG&E service upgrade, an approximately 900kw ground-mount solar system will be installed at the Water Treatment Facility. We are also converting the water meters across the city to AMI technology. Centrica provided audit, design, and construction services for the entire scope of work, encompassing almost all city owned buildings.



## Project 4: Auburn Recreation District

**Location:** Auburn, California

**Proximity to Cotati:** 122 miles

**Owner:** Auburn Recreation and Parks District

**Project Dates:** 2021-2022

**Total Project Cost:** \$2,100,000

**Key Staff:** Brooklyn Stewart, Brett Watson, Michel Maxsom

**Annual Energy Savings:** \$95,435 in year 1 electric and natural gas savings, \$15,704 in year 1 water savings.

**Reference:** Kahl Muscott, City Administrator

Phone: 530-885-8461

Email: [kmuscott@auburnrec.com](mailto:kmuscott@auburnrec.com)

**On Budget and On Schedule:** All project phases were implemented at the estimated costs and on schedule. Services Designed and Implemented: Establish baseline conditions, develop energy profile, determine optimal energy source, develop conceptual design, economic and financial analysis, permitting and regulatory review, production of the final report, project permitting, construction document design and oversight, performance validation. A mix of measures included lighting (interior, exterior), sports lighting, solar, mechanical, controls, hypochlorite generator, and installation of water efficient plumbing fixtures throughout the District.

**Relevance to the City of Cotati:** In this case multiple measures were implemented across several sites; this experience will translate well in our ability to identify and implement a variety of solutions across the various City locations. The project produced savings in electricity, gas, water, and pool chemicals, and was financed with tax exempt municipal lease financing for a budget neutral project with \$0 up-front capital.



Centrica conducted a comprehensive Energy Audit to evaluate energy use and document potential energy savings and costs. The Facility Improvement Measures were evaluated in detail and selected by the District for implementation based on total value and budget neutrality. CBSS worked with Auburn Area Recreation and Park District to reduce energy costs for the District's facilities, maintain or improve existing environment within each facility, and provide and improve operational control of the District's equipment and systems.

## Project 5: Coast Unified School District

**Location:** Cambria, California

**Proximity to Cotati:** 276 miles

**Owner:** Coast Unified School District

**Project Dates:** 2019-2022

**Total Project Cost:** \$2,300,000

**Key Staff:** Dan Mitchell, Brett Watson, Michel Maxsom

**Annual Energy Savings:** \$480K energy savings/ \$100K maintenance cost savings

**Reference #1:** David Bidwell, Operations Coordinator  
Phone: 805-459-1579  
Email: [dbidwell@coastusd.org](mailto:dbidwell@coastusd.org)

**Reference #2:** Annie LaChance, Chief Building Official  
Phone: 805-924-2926  
Email: [alachance@coastusd.org](mailto:alachance@coastusd.org)

**On Budget and On Schedule:** All project phases were implemented at the estimated costs and on schedule.

**Services Designed and Implemented:** Establish baseline conditions, develop energy profile, determine optimal energy source, develop conceptual design, economic and financial analysis, permitting and regulatory review, production of the final report, project permitting, construction document design and oversight, performance validation. A mix of measures included lighting (interior, exterior), solar, and controls.

**Relevance to The City of Cotati:** This was an example of working in a small community school district, installing a mix of measures that solved multiple issues for the customer while remaining budget neutral.



Centrica converted the interior and exterior lighting from T8 to LED at the grammar school, middle school, high school, and District Office. In addition, we implemented a retrofit to the football stadium high intensity discharge lighting at the high school with LED. We also installed new roof-mounted solar arrays at the District Office and middle school, a carport array at the grammar school, and a ground-mounted array at the high school.

Centrica provided audit, design, and construction services for the entire scope of work, encompassing almost all the campus and administration buildings and exterior lighting.

## Project 6: Genentech, Inc.

**Location:** Hillsboro, Oregon

**Proximity to Cotati:** 643 miles

**Owner:** Roche Group

**Project Dates:** 2021-2023

**Total Project Cost:** \$14,300,000

**Key Staff:** Trevor Nelson, John Ferguson, Geoff Frye

**Annual Savings:** Project has less than a 12-month payback

**Reference:** David Cruz

Phone: 787-955-1055

Email: [cruz.david@gene.com](mailto:cruz.david@gene.com)

**On Budget and On Schedule:** All project phases were implemented at the estimated costs and on schedule.

**Relevance to the City of Cotati:** The City of Cotati would like a microgrid to address critical loads for up to two days at City Hall complex, including the Police building. This project highlights our ability to design and develop a complex microgrid solution, incorporating multiple assets, that meets the unique needs of the customer. CBSS will build on our Genetech and other battery microgrid experience to design the right solution to meet the resiliency requirements of the City.



**Description of Services:** Key aspects and technical specifications include:

5MW/10.43MWh BESS system, entire back-up facility for 2 hours at maximum facility demand, paired with a 1.28MWDC solar system, EPC inverters, Custom Siemens MV switchgear, Russ Electric Microgrid Controller, Innova SDS static switch, and Capable of switching speed ~40 milliseconds total. The system design performs other functions like demand response, frequency regulation, and demand charge reduction. In this case, there is a cap on the BESS system reservation capacity to be ready to back up the facility for up to 2 hrs. at full output.

# SECTION 4 – PROJECT APPROACH

## Project Approach

### Introduction to Our Overall Project Approach

We understand overall objectives of this project are:

- To expand the City’s existing fleet electric vehicle charging infrastructure.
- Evaluate how and when existing and future electric vehicles are charged to maximize off-peak usage.
- Add resilience and microgrid capability to key City facilities.
- Identify load-shaving and load arbitrage, reduce grid reliance, and evaluate possibility of virtual net metering.
- Increase control and monitoring of water systems.
- Evaluate use of wells to maximize cost savings.
- Complete objectives in an economically responsible, and most importantly a budget neutral manner.

With advancements in infrastructure technology and current incentives, achieving economic returns with lower energy and utility use is achievable. Certain energy measures like electrifying old, packaged gas/electric HVAC units to heat pump can be challenging when also trying to achieve attractive economic paybacks.

However, measures like purchasing streetlights from PG&E, solar photovoltaic, battery storage, and controls, offer a more attractive payback. Combining quicker and longer payback measures together can create an integrated project that helps achieve a balanced approach to solving infrastructure needs and financial goals, whether paid through financing mechanisms or capital expenditure.

The following is a high-level overview of our project approach which is discussed in more detail in subsequent sections.





## Approach to Energy Audits at the City of Cotati

Our approach mirrors the three-step approach outlined in this RFP. This directly coincides with our normal and day-to-day process when implementing 4,217 projects and energy performance contracts. Our team will thoroughly examine all relevant measures to renew your infrastructure, reduce carbon emissions, and prioritize climate resilience. We will collaborate fully with City stakeholders to support their sustainability goals while including critical deferred maintenance priorities in the project scope.

We also understand the pride the City has in its facilities and will work with the City staff to maintain the look and feel of your facilities while enhancing and upgrading systems. To achieve these goals, our IGA development team follows a tactical plan with four main steps described in detail below.

Our process begins with discussions with key stakeholders to understand goals and objectives and to develop a plan for auditing City buildings on an active campus while minimizing disruption to daily activities.

### Tactical IGA Development Plan

Below is a summary of our audit process and the required involvement of the City. We include additional details about each step in this section. The following graphic highlights the four main phases of the IGA process.

*Figure 4: CBSS IGA Process*





**Data Collection** Our team initiates the process of collecting data by conducting interviews with key stakeholders. This includes but is not limited to facility and operations personnel, sustainability management, and City leadership. By doing this, we build a complete picture of the desired goals and outcomes for a successful and comprehensive program. Utility consumption data is a critical component for establishing the energy baseline and boundary for savings potential for the IGA. CBSS will collect data, which will be used to develop accurate baselines, help to focus time on-site and will act as the basis for assumptions in engineering calculations.



As the project develops, our engineers will confirm utility rates and identify potential escalators, which we will use in calculations and financial models. In recent years, energy rates have spiked in the California market. CBSS will collect up to three years of utility data to understand specific utility trends for the City, share all updated findings, and collectively decide what rate to utilize when finalizing the IGA. Typically, the most current 12 months of continuous, overlapping utility data will be used to develop an Energy Baseline.



**Preliminary Feasibility Study** As an initial step, it is essential to have preliminary audit data on all potential Energy Conservation Measures (ECMs). This first pass allows us to identify additional data needs to assess scope expansions and renewable solutions. As much information is yet to be obtained, upon award, our Project Development Team, led by Brett Watson, will expeditiously review what we have, collect, and analyze all available data from sites, interviews, existing building equipment audits, existing drawing reviews, and operating characteristics surveys to home in on a preliminary scope of work.

**Integrated Solutions Digital Interface (ISDI) Tool:** To present the Good, Better, Best scenarios for our customers, Centrica developed a project-specific Integrated Solutions Digital Interface Tool. This highly customizable, Excel-based interface captures the costs, savings, payback, and, most importantly, the carbon reduction, for each individual ECM or renewable technology proposed. The tool allows the team to “toggle” measures on and off to see how they affect the overall economics, carbon reduction, and cashflow of the project to help our customers make decisions on which solutions to include in the final project scope as a whole or as part of a phased approach. This tool is used throughout the Development Phase and refined through the IGA process.

**From the City’s project goals, several focus areas are key:**

EV Infrastructure and Optimization, Microgrids and Onsite Generation for Resiliency and Demand Response, Water System Measurement and Monitoring, and Energy and Water Efficiency.

For EV Infrastructure and Optimization, CBSS will leverage its experience with multiple EV infrastructure projects across California to analyze the existing charging infrastructure, current EV fleet and future fleet needs, and the current charging models. Our in-house team of Electrical Systems Engineers will utilize industry-standard and accepted modeling tools such as Xendee and Energy Toolbase to build out the charging model further and optimize the needs of the charging infrastructure in consideration of the electric tariffs, normal and resiliency operations, and potential vehicle-to-grid (V2G) applications.

Using the EV charger model, we will further build out the modeling to size out solar PV and battery storage systems (BESS) across the various City facilities and optimize their operation in everyday operations and to the desired level of resiliency. Here too, our in-house Solar Design team uses industry standard tools such as Helioscope to build out the PV systems and performance features. We can then pull the EV, solar PV, and BESS systems and operation models into a larger microgrid model to build out the financial impacts of the microgrid system. The CBSS Solar Team also keeps up with the latest regulatory issues, such as the recent developments with the Net Energy Metering Aggregation (NEMA) regulations, which allows a customer to build a solar array interconnecting at a single meter and use energy generated from the system to offset energy usage for additional meters located on contiguous land. A bill in the California legislature is currently being considered to

reinstate the NEMA and Virtual Net Energy Metering (VNEM) programs that are critical for multi-meter customers such as the City.

**For water system measurement and monitoring,** we will evaluate the current water monitoring systems to understand the capabilities of the system, determine the best options to integrate overall water production/use/loss monitoring into the existing systems, and recommend options to expand the system capabilities. We work with some of the best water efficiency contractors in the U.S. and in California and can look to develop a state-of-the-art water measurement and monitoring system to meet the City's needs. Our in-house Controls Team brings a wealth of expertise in integrating various systems and protocols such as Modbus, BACnet, etc. Our team can also explore upgrading water fixtures with more water efficient models for additional water savings.

Beyond microgrids and water measurement/monitoring, **CBSS also has an in-house staff of Energy Engineers to evaluate the existing City buildings and develop ECMs to improve energy efficiency and reduce energy consumption.** For municipal buildings, common ECMs to consider include (but are not limited to) building envelope measures such as building insulation and infiltration reduction, duct sealing, window upgrades and replacement, HVAC and lighting equipment efficiency upgrades (and end-of-life replacements for both), and decarbonization system upgrades. Our CBSS in-house Controls group will also evaluate the existing building energy management systems and controls strategies and develop systems and controls upgrades for improved performance and energy efficiency.

**For determining energy, water, and cost savings,** CBSS uses in-house tools with industry-accepted calculation methodologies, including TMY weather data. For guaranteed energy savings, these calculations are usually sufficient to estimate savings and we commonly use International Performance Measurement and Verification Protocol (IPMVP) Option A for ECMs that can benefit from measurements of the most critical parameter – like fixture power for LED lighting upgrades. Examples of Measurement and Verification (M&V) Reports are included in Appendix B.

**Meteorological Weather Data:** Typical Meteorological Year (TMY) data is an hourly data set compiled by the National Renewable Energy Laboratory (NREL) from 30 years of collected weather data specific to locations throughout the United States. Because HVAC measures are highly dependent on outdoor air conditions, using the TMY data in our savings calculations isolates variations in weather conditions, minimizing over or understatement of savings. The TMY data is the standard for most energy modeling applications.

CBSS has also used the Option C Measurement and Verification System software available from Abraxas Energy. With this software, we can normalize energy usage for weather and other variables to more clearly track the true energy savings at the meter, building, or campus level. We can also use Option C for load factor analysis, rate analysis, and for regular progress tracking and reporting.

Our engineers develop a comprehensive list of ECMs with associated estimates of energy savings, project costs, applicable state and utility incentives, Federal Treasury credits, and potential grants. With the support of PG&E, we will explore additional mechanical rebates and renewable project incentives to add additional measures. The team will develop an ISDI Tool for your project, which will be reviewed internally and with the City, modified, and refined as we move through the IGA process.

**45% IGA Workshop:** CBSS will refine our IGA assessments based on discussions with you and will conduct a final IGA workshop with the City to formally review the result of the initial audits and potential scenarios for maximizing the project benefits. The goal of the workshop is to determine the right mix of measures to carry forward.



**Investment Grade Audit** Once we finalize the mix of measures from the Preliminary Feasibility Study Workshop, the CBSS team will complete the designs and develop firm fixed pricing for each recommended measure. After this time, depending on the mix of measures, we introduce financing options to the City and discuss what fits best with its financial outlook and budgeting process. We explore both on and off-book financing options (for instance, energy-as-a-service) and leasing options, quantify and verify all available utility rebates, grants, and government incentives, and compete with potential financiers for competitive rates. As a PG&E Trade Pro Partner we have experience financing projects with On-Bill Financing as well as the California Energy Commission's Energy Conservation Assistant Act (ECAA) low interest loans for municipalities and will seek to provide the City of Cotati the best financing options available.



CBSS understands the importance of using life cycle costing to make decisions on which ECMs should be included in the project portfolio. A life cycle costing analysis will be performed and presented during an ECM selection workshop for all ECMs evaluated during the IGA. The Life Cycle analysis will be set at a term represented by the longest payback ECM. The analysis will include the total costs to implement the project, the total utility cost savings, operation and maintenance savings, and any annual expenses to maintain the systems to be installed. CBSS has used BLCC program version 5.3-18 which is the digital version of the NIST Handbook 135, the standard for all government Life Cycle Costing. The output provides the actual life cycle costs of the project and allows a comparison of alternate mechanisms for ECM options and the baseline case.

**IGA Workshop:** CBSS will conduct an IGA workshop with the City to review the result of the initial audits and potential scenarios for maximizing the project's benefits for the City. The goal of the workshop is to determine the final mix of measures that will provide the highest value impact for the City to carry forward to final implementation.

**M&V Workshop:** The measurement and verification of energy savings is a critical component of every guaranteed energy savings contract, as it serves as the basis for defining and confirming the budget-neutral aspect of the project. We hold ourselves accountable for delivering evidence of savings through a reliable, prescribed M&V process to ensure the project has the required savings for the City. One of our Certified Measurement and Verification Professionals (CMVP) will develop a site-specific M&V plan per the International Performance Measurement and Verification Protocol (IPMVP) guidelines. We will review this with City Facilities staff during a workshop prior to final delivery of the IGA report. The M&V options presented will follow proven processes, which provide the City with transparency that the savings are achieved while at the same time maintaining an appropriate level of M&V fees. We aim to deliver a plan to the City that provides a meaningful guarantee while balancing costs. We use an M&V Planning Flowchart (developed by the Federal Energy Management Program) to determine the appropriate M&V option.



**IGA Delivery/Contract Development** Throughout the above-shown development process of the IGA, we conduct several comprehensive reviews and engage in open discussions to ensure that the final scope of work, operations, maintenance (O&M), and monitoring plans meet the necessary standards, requirements, and objectives of the City. The reviews and discussions align the goals and objectives of the City. We assure the City that there are no surprises in the final IGA deliverable. Our team is committed to transparency and open communication, and we will keep the City informed every step of the way.

Once the plans are accepted, we will execute the agreement, secure financing, develop the contract scope of work, and begin the construction phase. Our team will work diligently to ensure the construction phase is executed to the highest standards and completed as efficiently as possible. We are committed to delivering a high-quality project that meets the expectations of the City and the community at large.

# Summary of Project Management Approach and Process



Like our IGA process, CBSS will create a project management plan and approach that is tailored to the individual customer site. Our experience working with municipalities gives us a unique understanding of the challenges posed by implementation. We carefully consider the City’s needs, layout, activities, and safety precautions before we begin our construction plan. By understanding key aspects of how the City functions and discovering how the buildings are operated and occupied, we will develop an informed and realistic construction plan to avoid disruption and deliver the solution on schedule and within budget. For example, we may schedule the installation of lighting upgrades during off-hours to ensure that daily functions within City offices are not impacted. We have also seen challenges with general availability of parking near municipal buildings and will address that with City Facilities staff prior to work that requires our trucks to take up additional space or requiring blocked-off parking areas (i.e., for EV charger installations).

We start the process during the IGA, where our team will work with City staff to understand and proactively plan for priorities to inform the overall construction schedule. Contributing factors include but are not limited to:

Sensitivity around building schedules and necessary quiet hours	Awareness and coordination with concurrent projects	Availability of parking, access, material staging, and laydown areas
Existing infrastructure and other unique site conditions in City buildings and operations	Critical City operations within the Police, Fire, and Emergency Services Departments	Critical City events like the Cotati Accordion Festival, the Cotati Music Festival, Election Days, and seasonal/holiday events

## Communication and Collaboration with City Staff will be critical throughout the construction process.



We adhere to the critical path model of project management to plan and execute projects more efficiently and effectively. As shown in the project reference section of this response, our team has a proven track record of delivering projects on time and within budget. Our project management team uses MS Project or similar tools to build a detailed task and duration schedule for all ECMs and to establish critical path items, which often include design, permitting, and procurement tasks. During construction, the Project Manager will prepare weekly reports for the City and the entire project team, showing actual vs. planned progress. These reports highlight the reasons for any variance, whether we are ahead or behind schedule. If we are behind or anticipate a potential to fall behind, the weekly report will identify actions needed to prevent or remedy the delay.

In addition to weekly reports and tracking progress against the overall schedule, the Project Manager issues a Two-Week Look Ahead each week with detailed plans and tasks to facilitate coordination. When working in congested or mission-critical customer areas requiring close coordination, such as a municipal complex, this Look-Ahead progress planning can be iterated down to Day-Ahead or Intra-Day/Half-Day Look-Ahead Schedules. This detailed planning and active communication promotes schedule adherence, eliminates unnecessary delays and, most importantly, minimizes disruptions to day-to-day City operations.

Like the auditing process, we have ideas for incorporating residents and learning opportunities into the construction process. Whether through communications support, site walks during construction, or Q&A sessions with our construction staff, we look forward to making our combined vision a reality.

**Keeping the Community Informed:** CBSS can provide newsletter and City website content – including project updates, milestones, anticipated disruptions, and project benefits – to be published via established channels familiar to City leadership, staff, and the community.

## Competitive Methodology for Selecting Subcontractors

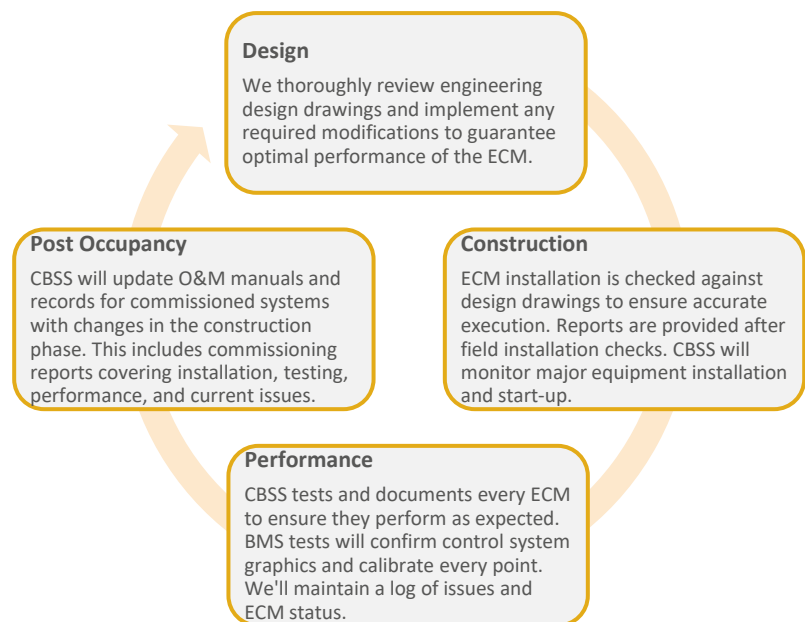


CBSS's preferred methodology for selecting subcontractors is through a competitive bidding process for measures that are not self-performed. For each measure, we use RFPs and invite at least three bidders for each activity including DBE and SBEs to maximize the economic impacts of the project. This allows us to compare and evaluate the strengths and weaknesses of each bidder based on their proposed solutions, expertise, experience, and pricing. Competition in price is a critical element of cost containment and providing the best value to the City. We ensure that detailed scopes of work and applicable drawings are provided to bidders to eliminate confusion. Our subcontractor selection process allows the City to provide input and final acceptance of any subcontractors invited to bid on projects. We ensure that any recommended subcontractor meets any City Safety pre-qualification criteria and CBSS's qualification standards and process.

## Project Closeout and Commissioning

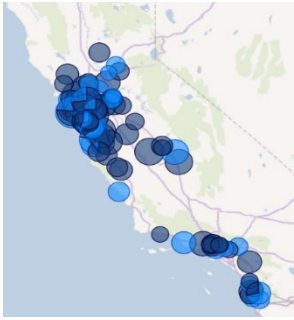


CBSS utilizes a technical approach to project closeout and commissioning, not just a report process. We use a combination of internal resources, our subcontractors, and vendors to commission the installed systems. CBSS will work with our equipment manufacturers to operate their installed equipment and perform factory start-ups as required per the project specifications. CBSS' internal team will collect information on lighting and solar power measures. **The project closeout and commissioning effort is broken down into four phases: Design, Construction, Performance, and Post Occupancy.**





## Operations, Monitoring, and Maintenance (OM&M)



*Above, a visual representation  
of CBSS monitored sites in  
California*

CBSS develops comprehensive strategies for operating, monitoring, and maintaining your energy systems. This starts during the IGA phase as the ECMs are being finalized where you help us understand the bandwidth and capabilities of your facilities staff. We are happy to take on as much or as little of the ongoing services as you need. For example, some past customers have told us, “We (customer) will take care of everything. Just give us training on what you installed, and we’ll take it from there.” Others have said, “We want you (CBSS) to take on all the cost and risk for keeping these systems running. Our staff do not have any bandwidth to take on additional tasks.” And we have seen everything in between.

### What we envision for this project is some combination of the following:

- Training provided to your staff by CBSS and the material manufacturers for the systems installed.
- Monitoring platforms set up by CBSS that your staff can use to check performance. This can be actively monitored by either the City or CBSS. The graphic shown to the left is an actual screenshot of our internal monitoring platform showing systems in California that we are currently actively monitoring.
  - We would like to set up an additional monitoring platform, either online or via a monitor in a prominent administrative or engineering lobby (or both) where residents and staff can see cost, energy, and CO<sub>2</sub>-e savings gained by the City in real time.
- Annual system checks for HVAC, EV, and solar installations may be performed by either City staff, contractors managed by the City, or fully managed by CBSS.

We understand it is the City’s goal to have granular access to information, not only to ensure systems are running at optimal levels, but to track results, report on successes, and identify where additional focus is needed. Whether the decision is made for CBSS to deliver an O&M plan for management of the system, or the City takes on that challenge internally, or a combination of the two, we have solutions that can provide the level of granularity you seek. This includes a member of CBSS’s own suite of products, PowerRadar, a unique sub-metering technology we can customize for tracking water, gas, and electrical usage at a per-building or facility level.

If it is in City’s interest to lean on external assistance in monitoring their systems, our internal Asset Management team has over three decades of combined experience in technical monitoring and customer service. We are dedicated to supporting customers like you in maintaining their building systems over the long term. All monitoring, reporting, and troubleshooting of systems under O&M and Warranty services, as well as energy analysis, remote monitoring platforms, machine language, contract evaluation, and communication, fall under the purview of the Asset.

### **Why CBSS + PowerRadar?** **Cloud-based, secure software**

*Manage your energy data securely from anywhere via desktop or our mobile app.*

### **User-friendly, modern design**

*An intuitive, well-designed user interface enables clear visualization of energy data.*

### **Scalable**

*Continuous energy solution integrations into PowerRadar provide more control as your strategy evolves.*

## SECTION 5 – PRICING AND SAVINGS

As you will notice on the following page in Attachment C, we offer to conduct the Preliminary Feasibility stage and IGA stage with no cost to the City. We anticipate the cost to CBSS will be approximately \$30k, a cost we will recoup by rolling into the construction contract if the City proceeds with the project.

For the construction phase, our proposed markups on all material and subcontracted labor are as follows:

- Overhead 15%
- Profit 10%

## Attachment C – PE/IGA Pricing Proposal

### PE/IGA Pricing Proposal

RFP  
DESIGN-BUILD ENERGY SERVICES

Pursuant to and in compliance with your Notice Requesting Proposals and all other documents relating thereto, the undersigned respondent, having familiarized him/herself with the terms and conditions of the proposal documents, hereby proposes and agrees to perform the work to be done and to provide all labor and materials necessary to perform the work.

Name of Respondent: Centrica Business Solutions Services, Inc.

#### Preliminary Evaluation (PE)

If the respondent charges fees to perform a preliminary evaluation, please provide the price and indicate if it's waived if the City proceeds to the IGA.

\$0 Fees waived if the City proceeds to IGA? YES ☒ NO ☐

#### Investment Grade Audit (IGA):

Does the respondent require an IGA agreement to be entered into before a Guaranteed Savings Agreement scope of work, price and savings can be finalized?

YES ☐ NO ☒

If an IGA agreement is required, does it include exit fees and/or penalties in the event the City chooses to not implement some or all of the IGA findings?

YES ☐ NO ☒

If the City implements some or all of the IGA findings with the proposer, is the price of the IGA waived?

YES ☒ NO ☐

What is the respondent's price to complete an IGA?

\$0

#### Certification by proposer

I hereby certify that I am able to commit the firm to the proposal submitted.

Company: Centrica Business Solutions

Name (printed): Trevor Nelson

Title: General Manager, West Business Unit

Signature:  Date: 8/21/2024

## SECTION 6 – CONTRACTS

### Sample Performance Energy Contract

Please refer to the Sample Performance Energy Contract under Appendix C.

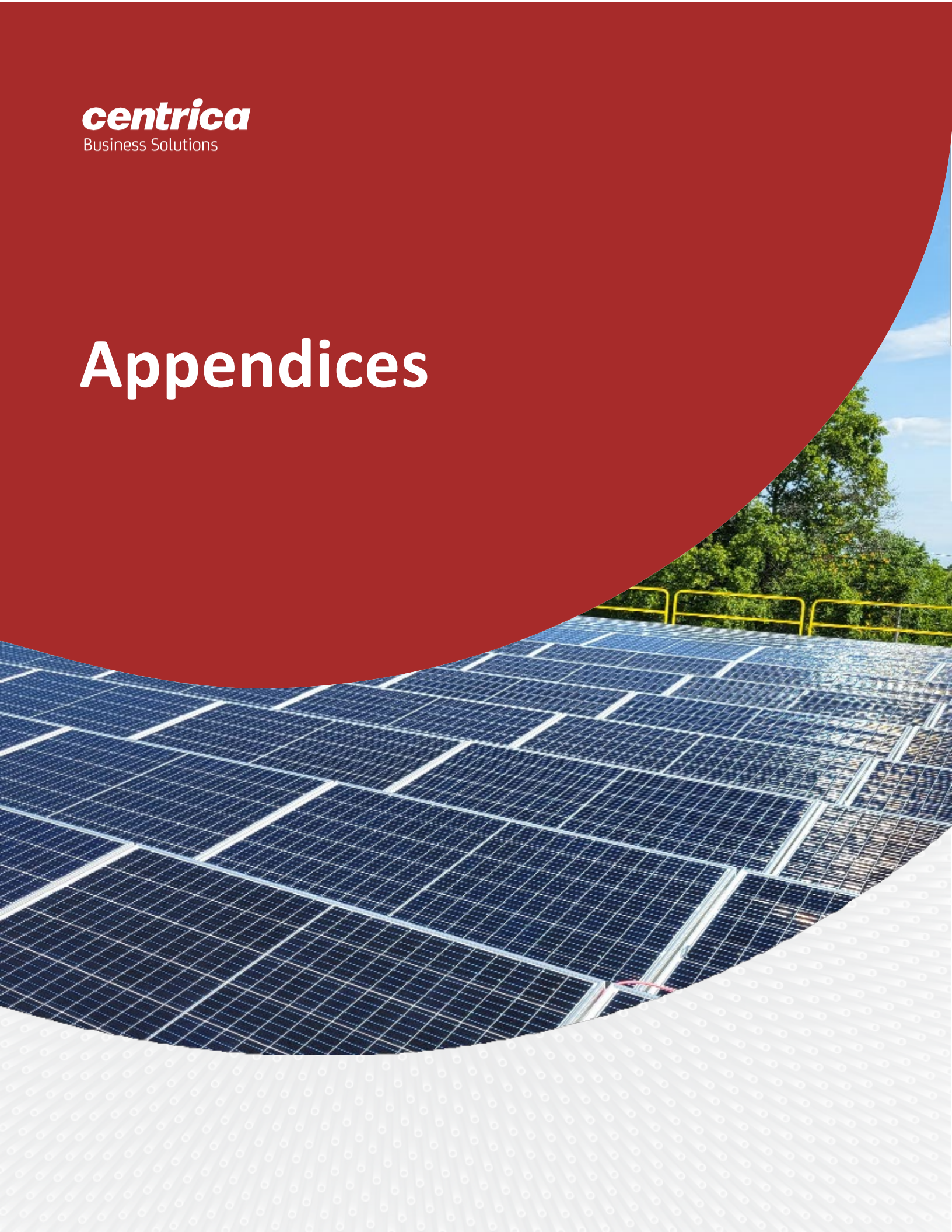
## SECTION 7 – ACKNOWLEDGEMENT OF QUESTIONS

### Acknowledgement

CBSS acknowledges the receipt of all written responses to questions submitted for this request.



# Appendices





# Appendix A – 2003 Audited Financial Statement





The cover features a collage of images: an elderly man and a woman looking at a device, a large industrial gas processing plant at sunset, and a smiling male call center agent wearing a headset and a British Gas shirt. The design is divided into geometric blue and white sections.

**centrica**

CENTRICA PLC ANNUAL REPORT AND ACCOUNTS 2023

# ENERGISING A GREENER, FAIRER FUTURE



# INSIDE THIS REPORT

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## READ MORE ABOUT



### OUR COMPANY

 READ MORE ON PAGES 4 to 5



### OUR PROGRESS IN 2023

 READ MORE ON PAGES 6 to 8



### OUR FINANCIAL PERFORMANCE

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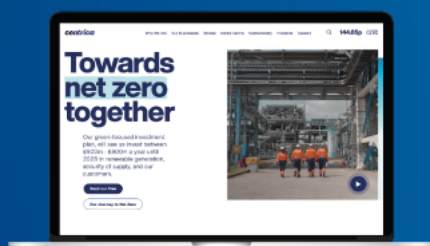
### OUR PEOPLE

 READ MORE ON PAGES 38 to 40



### OUR GOVERNANCE

 READ MORE ON PAGES 57 to 58



[WWW.CENTRICA.COM](http://WWW.CENTRICA.COM)

Unless otherwise stated, all references to the Company shall mean Centrica plc (registered in England and Wales No. 3033654); and references to the Group shall mean Centrica plc and all of its subsidiary undertakings and equity-accounted associate/joint venture undertakings; and references to operating profit or loss, taxation, cash flow, earnings and earnings per share throughout the Strategic Report are adjusted figures, reconciled to their statutory equivalents in the Group Chief Financial Officer's Report on pages 18 to 21. See also notes 2, 4 and 10 to the Financial Statements on pages 134 to 135, 143 to 149 and 160 for further details of these adjusted performance measures. In addition see pages 244 to 248 for an explanation and reconciliation of other adjusted performance measures used within the document. This Annual Report and Accounts does not offer investment advice, and does contain forward-looking statements. The Disclaimer relating to this Annual Report and Accounts is included on page 253.

## GROUP HIGHLIGHTS

We reported another strong financial result in 2023, against a backdrop of continued elevated commodity prices and volatility for much of the year. We've also been focused on improving colleague engagement and operational performance, resulting in improved customer outcomes as we look to underpin customer retention, growth and long-term profit sustainability.

### GROUP OPERATIONAL METRICS

British Gas Services & Solutions – Services Engineer Net Promoter Score (NPS)<sup>(1)</sup>



Total recordable injury frequency rate (per 200,000 hours worked)



Colleague engagement<sup>(2)</sup>



Total greenhouse gas emissions (tCO<sub>2</sub>e)<sup>(3)</sup>



### GROUP FINANCIAL METRICS (YEAR ENDED 31 DECEMBER 2023)

**£6,512m** <sup>2022</sup> £(240)m

Group statutory operating profit/(loss)

**£2,752m** <sup>2022</sup> £3,308m<sup>(5)</sup>

Group adjusted operating profit

**70.6p** <sup>2022</sup> (13.3)p

Group statutory basic EPS

**33.4p** <sup>2022</sup> 34.9p<sup>(5)</sup>

Group adjusted basic EPS

**£2,752m** <sup>2022</sup> £1,314m

Group statutory net cash flow from operating activities

**£2,207m** <sup>2022</sup> £2,487m

Group free cash flow from continuing operations

**£2,744m** <sup>2022</sup> £1,199m

Adjusted net cash

**4.0p** <sup>2022</sup> 3.0p

Full year dividend per share

† Included in DNV Business Assurance Services UK Limited (DNV)'s independent limited assurance engagement. See page 249 or [centrica.com/assurance](https://centrica.com/assurance) for more.

(1) Measured independently, through individual questionnaires, the customer's willingness to recommend British Gas following a gas engineer visit.

(2) Colleague engagement methodology has changed from percentage favourable to an average score out of 10, measuring how colleagues feel about the Company.

(3) Comprises scope 1 and 2 emissions as defined by the Greenhouse Gas Protocol.

(4) Restated due to availability of improved data.

(5) 2022 comparator as reported. Excluding disposed Spirit Energy Norway assets 2022, adjusted operating profit was £2,823m and adjusted EPS was 34.2p.

## CENTRICA AT A GLANCE

We are unique amongst energy companies in the UK and Ireland, operating across the energy value chain through our distinct, but complementary businesses. Our Purpose is to energise a greener, fairer future as we journey towards net zero for our customers and Centrica.

### OUR PURPOSE, CULTURE AND VALUES

Our Purpose is – ‘energising a greener, fairer future’. Our culture and values remain firmly embedded in who we are and guide everything we do.

[READ MORE ON PAGE 9](#)

### OUR STRATEGY AND BUSINESS MODEL



#### RETAIL

Focused on providing leading customer service and experience, helping customers to save money and decarbonise through innovative offerings.



#### OPTIMISATION

Supporting the responsible buying and selling of energy, managing risk across our business and accessing value from green generation in our trading business while continuing to build out the flexibility required for the future energy system.



#### INFRASTRUCTURE

Investing to build a low carbon, reliable energy system including power generating renewables, flexible peaking generation and energy storage through batteries and geological storage.

[READ MORE ON PAGE 10](#)





## WHAT SETS CENTRICA APART AS AN INVESTMENT OPPORTUNITY?

Centrica is a uniquely integrated energy company operating primarily in the UK and Ireland. We aim to deliver long-term value for investors by driving and leading the energy transition through our distinct, but complementary businesses.

# 21,000

Colleagues worldwide

# Top 50

Ranked in The Times Top 50 Employers for Gender Equality

# 7,000

Engineers

# 13.0GW

Route to market for renewables under our management

# 7,200

Volunteering days

## OUR BUSINESS UNITS

### RETAIL



British Gas has been supplying energy to British homes and businesses for over 200 years.

In **British Gas Energy**, we are strengthening our operations to drive innovation, retention and better customer outcomes, to underpin long-term profit sustainability.



Energy supply, services and solutions for residential and business customers in the Republic of Ireland.

**Bord Gáis Energy** is creating value from its integrated model, investing in the future energy system to help underpin energy security and decarbonisation in Ireland.



Our team of around 7,000 engineers provide customers with repairs, home improvements, maintenance and heating installations.

**British Gas Services & Solutions** has significantly improved operations in service and repair, whilst driving growth in on-demand and heating installs.

### OPTIMISATION



A global energy trading company which helps move energy from source to use, and managing energy procurement & risk.

**Centrica Energy** strengthened its portfolio in 2023, delivering a 3% increase in renewable assets under management to 13.0GW.

### INFRASTRUCTURE



Energy supply and low carbon solutions for businesses, building and operating a portfolio of flexible assets.

**Centrica Business Solutions** is focused on customer service and delivering improved margins in energy supply while building out its asset portfolio.



Oil and gas production from existing UK assets fuelling homes and business across the UK and Europe.

**Spirit Energy** was awarded a carbon storage licence for Morecambe Bay, which has the potential to be one of the UK's largest carbon storage hubs.



A 20% interest in the UK's portfolio of existing nuclear power stations.

In **Centrica Nuclear**, we extended the lives of existing nuclear power stations in 2022 and are exploring further investment in Nuclear generation.



The owner and operator of Rough, the UK's largest gas storage facility, helping manage seasonal demand and energy security.

**Centrica Energy Storage+** has increased the capacity at Rough to 54bcf and continues to explore its role in the future of hydrogen.

(1) Included within Retail and Infrastructure. Read more on page 10.

## OUR PEOPLE & PLANET PLAN



### SUPPORTING COMMUNITIES, OUR PLANET AND EACH OTHER

Our People & Planet Plan aims to create a more inclusive and sustainable future – from being a net zero business by 2045 and helping our customers be net zero by 2050, to creating the diverse and inclusive team we need to get there and contributing to the communities we're all part of.

[READ MORE ABOUT OUR PEOPLE & PLANET PLAN ON PAGE 41](#)

[READ MORE ABOUT OUR APPROACH AND OUR JOURNEY TO NET ZERO AT CENTRICA.COM/PEOPLEANDPLANET](https://www.centrica.com/peopleandplanet)



## CHAIR'S STATEMENT



**Scott Whewey** | Chair

Centrica occupies a unique place in the energy market. It is a place I am very proud that we occupy. We are a lynchpin of stability in a market that for the last few years has been in turmoil.

This instability in energy markets has largely been caused by global conflicts, and these conflicts look set to continue. Whilst we cannot control this, we are acutely aware of the impact that price fluctuations have on all our customers.

While other suppliers in the UK have collapsed due to the volatility and uncertainty in the market, we have not only stepped in to support their customers but actually improved our resilience and business model to ensure we can be there for all of our customers, old and new. You can read more about this in the 'Business Model' section on page 10.

It is this resilience that means we can add value across the entire energy value chain. We are integrated in a way that differentiates us from our competitors. This is important in itself; our business model is built on each part of Centrica supporting the others, but it has also been important for ensuring we can

support those who are struggling most during the crisis. I am very pleased with what we have achieved in 2023.

### OUR PERFORMANCE

When I became Chair of the Board in 2020 the business was in a very different position. Over the last few years, we have been going through a turnaround process and can now say the vast majority of that is complete. We can see the impact of the turnaround in the strong performance of the business.

I believe people have started to appreciate the quality of the Company we have here. We have a resilient balance sheet, good or improving returns across business units, and we have a clear plan for the future. We have shown that the way our business fits together really compounds the overall value of it.

A strong Centrica is vital for the customers who rely on us every day and is good for our

shareholders. Our performance has allowed us to resume and grow our dividend, whilst remaining prudent, and we have also returned capital to shareholders through our share repurchases. These actions reflect the Board's confidence in the strength of Centrica and its ability to deliver.

### OUR SUPPORT FOR CUSTOMERS

Our performance matters to our shareholders – including those thousands of private retail shareholders of whom many were the original 'Sids' who bought shares during the privatisation of British Gas in the 1980s. It also matters to our customers. It is only because we are in such a strong, resilient position that we can go above and beyond for our customers.

In 2023 we brought our total commitment to helping customers since the start of 2022 to £140 million, we hired 700 more UK-based colleagues to support customers over winter and into the future, and net promoter scores in our Retail businesses have been improving.

The way the price cap is structured means that if customers don't pay their bills, costs are added to the bills of all other customers. We will continue to strive to find the right balance between supporting those in difficulty whilst keeping bills as low as possible for all our customers.

This work shows leadership and it is something we can be proud of. Leadership also means responding responsibly when something goes wrong.

Early in 2023 it was brought to our attention that the supplier we worked with to install prepayment meters under warrant had, in some instances, not been showing our customers empathy and respect. This is a complex area, and the business took swift action to investigate and report publicly on the findings.

Our in-depth investigation highlighted some issues in the installation of prepayment meters. However, whilst these were not systemic, we take the view that even one failure, is one too many. Chris O'Shea and his team showed leadership and humility in investigating the issues and putting them right. Centrica takes pride in the fact that we do more to support customers that are in financial difficulties than anyone else in the markets we serve and we will always strive to do the right thing by our customers.

## OUR CONTRIBUTION TO ENERGY SECURITY

Security of supply has climbed in importance over the last two years and is likely to remain important as long as global conflicts continue. Our performance has meant we could take a leading role in this area. I know the team at Centrica are hugely proud of the contribution we've made to energy security in the UK and Ireland.

Over 2023 we've expanded the capacity of the Rough storage field, improving the UK's gas storage levels. However, the capacity of the storage field at Rough is unlikely to be expanded further without the certainty of a regulatory model that would underpin a very significant investment for the future. Our colleagues in Centrica Energy have also played a pivotal role in securing Liquefied Natural Gas (LNG) through multi-billion-dollar deals, including a new deal with Delfin Midstream in the US that will enhance energy security for the customers we serve.

## OUR FUTURE

Alongside our Interim Results in July 2023, Chris and the Centrica Leadership Team presented our new, Green Focused Investment Strategy. We announced that Centrica intends to invest between £600m and £800m a year over the next five years primarily in security of supply and flexibility, renewable generation, and our customers. We also gave guidance on our expected range of annual operating profit in our Retail and Optimisation businesses and provided clarity on a new financial framework, including our progressive dividend policy.

Centrica's direction was already clear to our investors and our wider stakeholders, but the July update provided a clear overview of the approach Centrica will take in the future. I'm glad the update was received positively by the market.

I am excited to see what Centrica can accomplish in the coming years and I want to take this opportunity to assure our shareholders that your Board will be prudent custodians of your money.

## OUR SUPPORT FOR NET ZERO

Our Green Focused Investment Strategy will also mean that Centrica is playing its part to underpin the energy transition.

We are unequivocal in our support for net zero. We believe it is an opportunity for the UK and Ireland and we will continue to feed into live discussions with our valuable experience of energy markets. Gas is likely to continue to be a transition fuel for some time, and your Board is acutely aware that we have a responsibility to ensure that energy is affordable for everyone through the transition.

Last year I said that to meet net zero a combination of technologies will be required, and that these technologies would create opportunities for companies with strong balance sheets, flexible business models and detailed knowledge of markets. This year, it is my belief that we have cemented our position as one of those companies.

We are one of the largest heat pump installers in the UK's emerging heat pump market, we are leading on hydrogen innovation across the UK and Ireland, and our strategy shows the scale of our ambitions in renewables. Our commitment is not merely words, it can be seen in our actions.

## OUR COLLEAGUES

None of this would be possible without the fantastic work of our colleagues. It is a great source of pride for me that Centrica continues to grow and that we continue to show leadership in the areas people care about, such as our Carers Leave Policy.

Over the course of 2023 we have seen the engagement of our colleagues increase, no doubt due to the supportive culture that Chris and Centrica's Leadership Team have nurtured in the business. I was also very happy to see the continuation of our Shadow Board initiative. It is absolutely right that a representative group of our colleagues should have the opportunity to share their views on the management decisions that impact them.

Of course, we have also welcomed new employees to the business this year and I welcome all of them, not least the 700 permanent employees that were hired in time to support our customers over the winter. I am also delighted to welcome Russell O'Brien to Centrica on his appointment as Group Chief Financial Officer and Executive Director in March 2023, and Philippe Boisseau who was appointed to the Board as a Non-Executive Director in September 2023.

Towards the end of the year, we were also very pleased to announce the appointments of Jo Harlow and Sue Whalley as Non-Executive Directors. They bring an exciting mix of experience to our Board, and I know their contribution to the Remuneration Committee and Nominations Committee will be highly valued.

Thank you to all colleagues across Centrica for your contribution in 2023.

## SUMMARY

This year Centrica has taken significant steps forward on performance, on delivering the things that people care about and on showing where our future lies. We are never satisfied and there is still work to do, but I hope our stakeholders across society can see a company that cares about what it does and makes a significant contribution to the UK's energy system.

I am confident that our capabilities, our resilience, and our determination will deliver great things in 2024, and I look forward to reporting on our progress next year.

**Scott Wheway, Chair**

14 February 2024

## GROUP CHIEF EXECUTIVE'S STATEMENT



**Chris O'Shea** | Group Chief Executive

I am increasingly coming to the conclusion that the speed with which things seem to change is now simply indicative of the world we live in. The news cycle has shortened, the urgency with which things need to happen has increased, and the pace at which we are moving in our quest to make your Company the best is as fast as I've seen it in my five and a half years at Centrica.

Despite that pace of change, I stand by the statement I made in last year's report. I said:

“My belief is that climate change is the biggest single threat facing civilisation today, and net zero is the biggest single opportunity we have at Centrica. Climate change is real, it's here, and it's impacting lives across the planet. Transforming how we generate, store and use energy can make a huge difference to reducing the warming of our planet. Longer term, if the net zero transition is thoughtful and targeted, it can keep prices stable for customers and drive economic growth, especially for those companies and countries at the forefront of the transition.”

As I write at the end of 2023, I am even more convinced that this is the case. Your Company is incredibly well placed to both drive forward, and benefit from, the energy transition. This will require a relentless focus on performance and continuous improvement, and disciplined but bold capital allocation to ensure we have a portfolio of investments across a mix of technologies. We have a lot to play for.

I believe we get more right than we get wrong, but the real test of character is how you respond when things go wrong. It's my view that we need to put things right when this happens, and we need to learn from our experience.

Sadly, we saw an example of getting it wrong early in 2023 when a report highlighted some of our contractors were not treating our customers with the respect they deserved

when installing prepayment meters under warrant. We immediately apologised, we suspended the installation of prepayment meters under warrant, and we launched an investigation overseen by an independent third party. Whilst our investigation found no wide-ranging problems with our systems and processes, it did highlight some isolated instances that fell short of the high standards of behaviour that we expect when engaging with customers. As a result, we have brought all such activity 'in house' (as opposed to using contractors) and have spent the past year ensuring our policies, procedures and practices are updated and that our colleagues are fully trained in these areas. We also contributed to the development of new industry rules to protect vulnerable customers. At the time of writing, we have not yet restarted the installation of prepayment meters under warrant. However, we may choose to do so in the future, as, done properly, they are an effective tool both in helping customers manage their costs and in helping energy companies manage bad debts, which is even more important as people struggle with the cost of living. This is important because under the price cap, those who pay for their energy ultimately end up paying for those who choose not to pay, and we don't think that's right.

However, we are not sitting on our hands waiting for others to solve the problem of people who can't pay for their energy. We have taken decisive steps to support consumers who are facing hardship and we've done more than any other UK energy company. Since 2022, we have committed £140 million to support customers struggling with their energy bills in the UK and Ireland, which is on top of around £400 million of contributions we are required to make each year. It is a huge amount of money but our customers are at the heart of everything we do, and we must support them when they're in need. Unfortunately it cannot address all of the issues our customers face today because these are not limited to energy costs – people are struggling to pay their mortgage or rent, their council tax, their food costs, and so much more. This is a societal issue which requires a societal response.

We have been vocal in our calls for regulatory reform, both in terms of how energy companies are made more robust to avoid failures in the future, and in terms of how we can have a system which is fairer for consumers.



For consumers, we believe that the standing charge for gas and electricity where people pay a fixed fee to cover things like network costs (roughly £300 each year) should be eliminated. Those costs should be recovered through the unit rate for gas and electricity so that those who consume less pay less and those who consume more pay more. We also believe a social tariff should be introduced where those who are the most vulnerable pay less for energy. We believe that this, along with all policy costs, should be funded from general taxation but that is not something which has universal support.

For energy companies, we believe that they should be made to hold sufficient capital to ensure that if more companies go bust, their shareholders pick up the costs rather than the unacceptable situation in recent years where the costs were picked up by consumers. We have seen some progress on this, with Ofgem requiring energy companies to hold £115 of capital for each customer by March 2025. This is welcome but it is our view that this does not go far enough, nor fast enough. We believe that all companies should be required to hold in the region of three times this amount and that they should not be able to take on additional customers until they can demonstrate they are financially sound. As of now, a number of energy companies effectively have a free bet, using customer deposits to fund their businesses. If their bet comes good, their owners get all of the rewards; and if it doesn't, consumers bear all of the cost. This cannot be right, and we urge Ofgem to be more focused on establishing a fairer market for consumers and to ensure energy companies who are not yet financially resilient enough are forced to meet proper capital adequacy requirements.

## 2023 PROGRESS AND PERFORMANCE

We can support customers and credibly make the case for market reform only because we are a very resilient company. That resilience comes from our uniquely integrated business model and strong balance sheet.

We have a well-balanced portfolio with market-leading positions across the entire energy value chain. In our Retail business we are the largest supplier of energy to residential customers in the UK through British Gas Energy and the second largest in Ireland through Bord Gáis Energy, and we have a strong and growing B2B energy supply position. Our Infrastructure business brings electricity and gas to the market every single day. Then at the heart of these energy flows sits the Optimisation business, the glue that binds our group together.

As I look at our portfolio, I see a number of high performing businesses. But the real value-add that makes us unique at Centrica comes at the portfolio level as we integrate our businesses with each other. I believe this model means we are well-positioned to adapt to any future changes in the energy landscape.

You can see just how this integration works in practice in our performance and achievements over the last year. At a Group level, our performance in 2023 was very strong. Our Group adjusted operating profit was £2.8bn compared to £3.3bn at year end in 2022. Our adjusted basic EPS was 33.4p in 2023 compared to 34.9p in 2022, 4.1p in 2021, and 2.8p in 2020, and our free cash flow was £2.2bn. We ended the year with £2.7bn of net cash – just three years ago we had £2.8bn in net debt. In short, your Company has been transformed. There is still so much more that we can go for, but as Russell points out in his CFO report, there were some large one-off benefits in the 2023 results which we don't expect to repeat in future years.

## RETAIL

**British Gas Energy** performed well in the year and benefitted in 2023 from the recovery of costs incurred in previous years under Ofgem's price cap adjustments. By the end of the year, we had migrated around two thirds of our customers on to our new software platform and we should complete the transfer in the next 12 months or so. This allows us to develop our new energy offering, which will help give our customers insight into the best time to use their energy, putting more power in their hands. Our PeakSave Sundays product already has half a million customers and we are learning every day how our customers vary their energy use depending on costs changing during the day.

**Bord Gáis** was quite a mixed picture in 2023. We continued to see pressure in the retail market in Ireland and had another year of making losses in that market, all of which were offset by profits made in our infrastructure (the Whitegate power station in Cork) and optimisation activities. We believe that the issues in the Irish retail market are temporary and we hope to see a return to normality in 2024.

It is very pleasing to see the continued recovery in **British Gas Services and Solutions** with the operational foundations of the business as strong as they've been for many years. Our customer service has improved materially and we're seeing the benefits in improved customer satisfaction and higher customer retention rates. This allows us to focus on increasing customer numbers whilst maintaining the improved operational delivery and getting into a positive cycle of growing the business. Our growth opportunities in this business are not only in our traditional contract market but in the 'on demand' market. There are 20 million households in the UK who pay tradespeople to fix things as and when they break down, a market we have not traditionally served. In 2023 we delivered 218,000 'on demand' jobs to 201,000 'on demand' customers (2022: 122,000 jobs to 114,000 customers) and we expect to continue to grow this area in 2024 and for many years to come.

## OPTIMISATION

**Centrica Energy** had another strong performance and continues to ensure we make the most of all our business areas. This year we saw a range of corporate power deals with partners such as Deutsche Bahn and Vodafone, among others, and were delighted to improve energy security with our deal with Delfin Midstream to buy LNG.

## INFRASTRUCTURE

We made good progress across our entire infrastructure business in 2023, building and advancing our portfolio of investment opportunities in clean electricity generation and storage whilst focusing on maximising the value of our existing assets. We were very pleased to see **Centrica Business Solutions** deliver a range of projects including Centrica's first major solar asset in the Codford solar farm earlier this year, and committing to a range of other projects for the future including a 65MW battery storage plant in Perthshire.

In **Spirit Energy** we extended the life of our Morecambe Bay gas field in the East Irish Sea into the 2030s and we were awarded a carbon storage licence allowing us to further our plans to invest around £1bn in developing one of the largest carbon storage facilities in the world. In **Centrica Energy Storage+** we doubled the capacity of our Rough storage facility, now providing half of the UK's entire gas storage capacity and we continued to advance our plans to invest up to £2bn to convert this to become the world's largest hydrogen storage facility which we believe is necessary to unlock the UK's decarbonisation.



**WE MAKE IT** – we produce gas at Spirit Energy, and we generate electricity through our green-focused investments and our nuclear stake.



**WE STORE IT** – we can store gas through Centrica Energy Storage+, and electricity through our battery projects in Centrica Business Solutions.



**WE MOVE IT** – Centrica Energy is one of Europe's largest wholesalers of gas and electricity.



**WE SELL IT** – millions of homes across the UK and Ireland are supplied with gas and electricity through British Gas and Bord Gáis.



**WE MEND IT** – we install, maintain, and fix, heating systems in millions of homes.

## CENTRICA'S CONTRIBUTION TO SOCIETY IN 2023

It is because our business performs so strongly that we can contribute more to society than the jobs and essential services we provide to our 21,000 colleagues and our 10 million customers. Our profits have a purpose. We have continued to encourage colleagues to volunteer in their local communities with over 7,200 days donated to the communities we operate in throughout 2023.

We've also fundraised and donated £4m to charitable causes we all care about in our local communities; we've paid over £1bn in tax across all of the countries we operate in; and as I mentioned earlier, we've committed £140m to supporting customers since the start of the energy crisis.

This year we've signed major new partnerships with Team GB, ParalympicsGB, Scottish Rugby, and the Scottish Football Association, all of which will have significant and lasting impacts on grassroots sport across the UK and demonstrate how net zero can be an opportunity for clubhouses and sports facilities across the country.

## WHAT DOES THE FUTURE HOLD FOR YOUR COMPANY?

I am particularly proud of my colleagues because in 2023, not only did we achieve all of the things we set out, but we also gave direction on Centrica's future. In July we outlined our new Green Focused Investment Strategy, which will see Centrica invest up to £4bn over the next five years in security of supply and flexibility, renewable generation, and our customers. We expect to invest across three pillars:

- o **Customer solutions.** We will help customers better understand their energy usage and fully grasp their energy spending through innovation in smart metering and other flexibility tools and services that give customers the information to make better decisions about their energy costs.
- o **Security of supply and flexibility.** You can already see our experience in batteries and other flexible assets – over the next five years we will accelerate this. You can expect to see more from Centrica on how this investment will support the roll out of more intermittent power generation such as wind and solar by balancing the grid when the wind doesn't blow, and the sun doesn't shine.
- o **Green electricity generation.** We will look to increase our investment in clean energy with a focus on the areas we are strong in, looking at wind in Ireland, green hydrogen production and a continuation of our investment in solar, having opened our first solar farm during the year.

In addition to this investment programme, we will continue to progress our plans for hydrogen storage at Rough, carbon storage at Morecambe, and we will continue to evaluate the potential to bring further low carbon energy to our customers through investments in new nuclear generation. We have a rich set of investment opportunities, but we are also disciplined in our deployment of capital, and we will only invest where the returns are acceptable, the risks are manageable, and the balance sheet sustainable.

Notably, our business model and our investment plans are robust regardless of the pace at which net zero is delivered. I would argue that Centrica is well placed to provide stability, remain sustainable, and deliver value across all our stakeholder groups irrespective of changes to the pace of net zero.

## SUPPORTING OUR COLLEAGUES AND ENHANCING OUR CAPABILITIES

We have supported our colleagues on their own professional journeys in 2023 and I am pleased to see that our colleague engagement score improved to almost 7.7 by the end of the year, which is approaching top quartile performance for our sector. We will continue to provide training for growth, space for our employee-led networks to flourish, and opportunities to nurture wellbeing into 2024.

The next phase of our journey is focused on driving growth in all of our businesses. To this end we have refreshed our Purpose.

Colleagues across Centrica will work to **energise a greener, fairer future** as we journey towards net zero for our customers and Centrica.

In addition, we're looking at how we can improve our capabilities in a number of areas. In Infrastructure, we have demonstrated that we have a team who knows how to deliver growth over a number of years. There is more to do in both our Retail and Infrastructure businesses and I am delighted that our new Chief Customer Officer will join on 1 May 2024 with a remit to drive relentless improvements in customer experience and help our retail businesses access the growth that we all know is there.

## CONCLUSION

2023 has been a strong year for Centrica. We have not got everything right, but where we get things wrong, we put them right. Our business is on an incredibly strong footing, our future is laid out ahead of us and we are firmly on the path to continue the growth we've seen in recent years.

Going into 2024 I want to take this moment to thank all our customers, colleagues and shareholders for their support this year, and I want to take this opportunity to assure you that our progress will continue. We will continue to support our customers, we will continue to improve energy security, and we will continue to provide the sensible, expert-based input into the net zero discussion.

It is always invigorating and a privilege to be your Chief Executive. I look forward to seeing what we can achieve in the year ahead.

**Chris O'Shea**, Group Chief Executive  
14 February 2024





## OUR PURPOSE, CULTURE AND VALUES

At Centrica our Purpose is – ‘energising a greener, fairer future’ – because we believe in energy that works for colleagues, customers and communities, today and into the future. It’s why we exist. Our strategy is driven by our Purpose, and we live by our values. While we have evolved our strategy to help meet today’s challenges and prepare us for a net zero future, our values remain firmly embedded in who we are and guide everything we do.

### OUR VALUES



#### CARE

We care deeply about our impact on the planet, our customers and our colleagues. We want to make a difference to society and the safety and wellbeing of our team and customers is paramount

We are providing crucial help through the exceptional cost of living crisis by delivering material, targeted support to customers and communities during the energy crisis, including via the British Gas Energy Trust.



#### COLLABORATION

Together we win, we build winning relationships throughout our own organisation and with others to deliver on the scale challenges the industry faces

We collaborate closely across our businesses to understand how our Group is exposed and responding to the climate challenge. Our ability to draw insights effectively between our businesses through close collaboration is demonstrated by our strong performance in climate disclosures.



#### COURAGE

We step up and take responsibility. We recognise the importance of challenging the industry to make difficult decisions for our future and we stand by our beliefs

We’ve stepped up to support the UK’s security of supply, reinstating the Rough field as gas storage. We recognise the long-term needs for the UK and will invest in long-term security through hydrogen and carbon capture.



#### AGILITY

We are nimble, curious and innovative; we adapt to our markets rapidly and seek out opportunities to support the system and succeed

Our Optimisation businesses have rapidly responded to volatile energy markets, managing risk across our Group and proactively supporting our customers through access to scale long-term gas supply and LNG deals.



#### DELIVERY

We do things right and deliver for all of our stakeholders

We value delivering great service and customer outcomes. We are rigorous, and do things the right way. We have been recognised by Ofgem as a well-run supplier, been protecting customer credit balances and invested an additional £25m in customer service through the energy crisis.

## BUSINESS MODEL

Our strategy is driven by our Purpose of energising a greener, fairer future for colleagues, customers and communities.

In July 2023, we introduced our refreshed strategy, which is focused on creating value through the energy transition. Since 2020, Centrica has been on a journey to simplify and de-risk our business, strengthening our balance sheet and delivering material performance improvements along the way. While we remain focused on continuous improvement, we are also underpinning our future by delivering sustainable earnings from our core businesses, investing for longer-term value and growth, and delivering attractive shareholder returns.

## OUR STRATEGIC FRAMEWORK

Centrica is a uniquely integrated energy company comprising a balanced portfolio of market leading businesses that complement, de-risk and add value to one another. Together, we are greater than the sum of our parts.



### INFRASTRUCTURE

Investing to build a low carbon, reliable energy system including power generating renewables, flexible peaking generation and energy storage through batteries and geological storage.

**Centrica Energy Storage+**  
(formerly Centrica Storage Limited)  
Storing and withdrawing gas to manage seasonal demand and energy security

**Centrica Business Solutions<sup>(1)</sup>**  
Low carbon solutions for businesses, building and operating a portfolio of flexible assets

**Bord Gáis<sup>(1)</sup>**  
Power generation, asset management and low carbon solutions for businesses, building and operating a portfolio of energy assets focused on decarbonisation

**Centrica Nuclear**  
Minority stake in the UK's portfolio of operating nuclear power stations

**Spirit Energy**  
Oil and gas production in existing UK assets

### RETAIL

We remain relentlessly focused on providing a leading customer service and experience helping customers to save money and decarbonise through innovative offerings.

**British Gas Energy**  
Energy supply for residential and small business customers in England, Scotland and Wales

**British Gas Services & Solutions**  
Services & solutions for residential customers in England, Scotland, and Wales

**Bord Gáis<sup>(1)</sup>**  
Energy supply, services and solutions for business and residential customers in the Republic of Ireland

**Centrica Business Solutions<sup>(1)</sup>**  
Energy supply for large business customers in England, Scotland and Wales

### OPTIMISATION

We are supporting the responsible buying and selling of energy, managing risk across our business and accessing value from green generation in our trading business while continuing to build out the flexibility required for the future energy system.

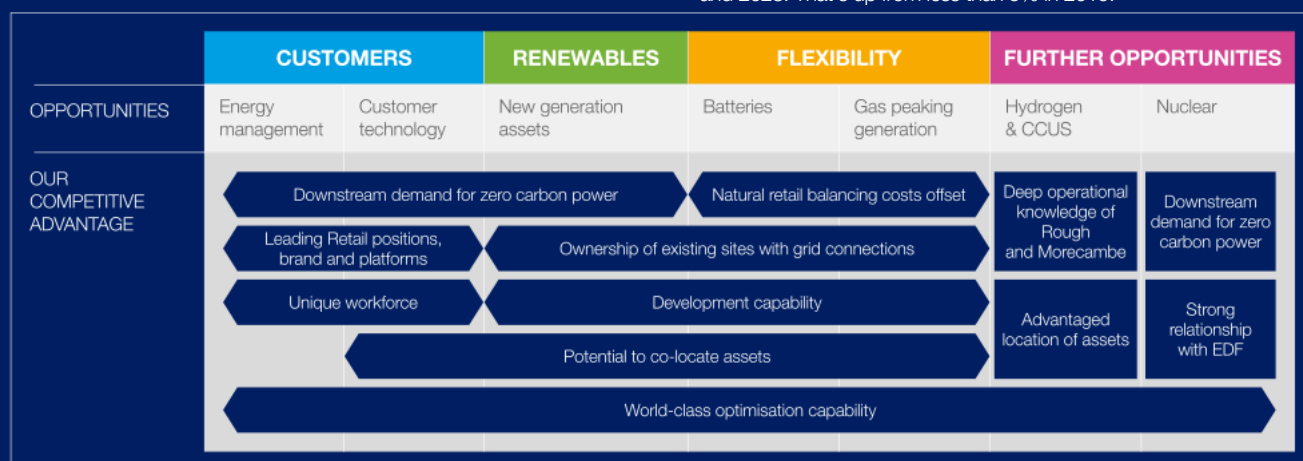
**Centrica Energy**  
(formerly Centrica Energy Marketing & Trading) Trading and optimisation of energy globally, managing energy procurement and risk

(1) Note within the Group Chief Financial Officer's Report, Centrica Business Solutions is included within Optimisation, and Bord Gáis is included within Retail.

## GREEN-FOCUSED GROWTH AND INVESTMENT STRATEGY

Our business model is well positioned to benefit from the energy transition, regardless of how fast it materialises. Our balance sheet strength, investment grade credit ratings and strong existing capabilities give us the building blocks to begin a material green-focused investment programme.

Achieving net zero will provide opportunities for us to grow and create value for our shareholders. It's good for the planet and for our Company. In line with the targets published in our Climate Transition Plan in 2021, more than 50% of our capital is expected to go into green taxonomy eligible projects, such as solar and batteries between 2024 and 2028. That's up from less than 5% in 2019.



We see a myriad of attractive investment opportunities across our value chain, which are aligned to our net zero ambitions. We expect to deliver average post-tax unlevered returns of at least 7-10% at the asset level with additional upside expected from being part of Centrica's portfolio. Our investment programme will also allow us to maintain balance in the portfolio as existing infrastructure assets naturally decline, helping underpin future sustainable profits that will enable further investments, future growth and a progressive dividend.

### To give a flavour of the kinds of investments we anticipate:

**Renewable generation:** This could be in our own projects or ones where we invest with

partners. We can add value to these projects through using our route-to-market capabilities in Centrica Energy and selling the zero carbon power to our Retail customer base.

**Security of supply:** We have existing capability and are already invested in battery storage and gas peaking generation, as well as owning a range of sites with valuable grid connections.

We know how to develop energy assets and can also look to co-locate complementary technologies.

**Customers:** We will invest in capabilities that will reinforce our leading market positions and unique workforce. We launched our

own Smart Meter Asset company in 2023 and will consider further opportunities designed to unlock the adoption of 'big ticket' household energy technologies, such as financing or leasing heating systems to households.

Any large-scale investments, such as expanding gas storage capacity and converting to hydrogen storage at Rough or carbon capture utilisation and storage (CCUS) at Morecambe, would be additional to the options outlined above.

*Our disciplined approach to capital allocation: In our Interim Results announcement in July 2023, we laid out our disciplined capital allocation framework, which comprises five key elements:*



#### Sustainable earnings:

We expect to deliver around £800m of operating profit from our Retail and Optimisation businesses by 2026, with material cash generation expected from our Infrastructure businesses over the medium-term.



#### Maintaining a strong balance sheet:

We aim to maintain a Net Debt/EBITDA ratio of <1, which provides enough of a buffer to ride out any energy market volatility and provides flexibility to invest in the future and maintain and grow our shareholder distributions.



#### Progressive dividends:

We maintain a progressive dividend policy and expect dividend cover from earnings to move to 2x coverage over time.



#### Investing for value:

We aim to deploy £600-800m per year to 2028, focusing on assets that generate attractive returns, complement our existing capabilities, provide balance to the portfolio, and align to the needs of the energy transition.



#### Returning surplus capital:

In July 2023, we increased our share buyback programme to £1bn since November 2022. Any future distributions will be reviewed against our revised capital framework and future outlooks.

## MARKET TRENDS

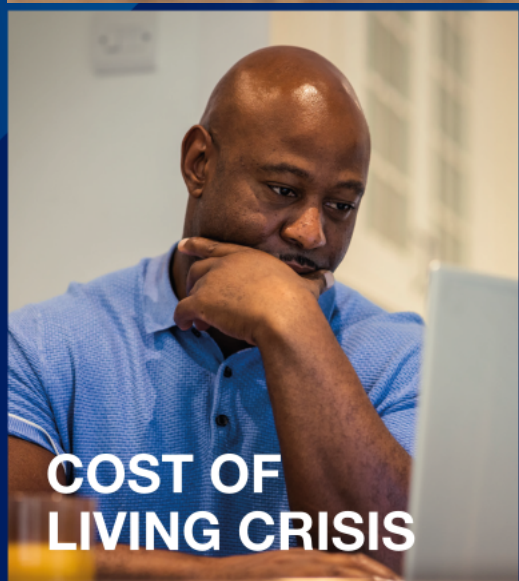


### EVOLVING MARKET CONDITIONS

After a tumultuous year in UK energy markets, 2023 saw market volatility return to pre-energy crisis levels, although energy prices remained relatively high. Consumer energy bills were somewhat shielded through the Energy Price Guarantee during the first half of 2023. Macroeconomic conditions, including elevated inflation and interest rates, negatively affected asset returns and capital costs.

#### HOW WE'RE RESPONDING

- Our vertically integrated model has allowed us to capture value across our business, demonstrating the benefits of having a balanced and diversified portfolio
- The progress we have made in strengthening our balance sheet will allow us to continue to invest in a diversified asset portfolio despite the challenging investment environment
- Our strategy is designed to remain robust under all market conditions, and positions us for growth and value creation



### COST OF LIVING CRISIS

Like last year, our customers, colleagues and businesses continue to feel the squeeze on their budgets from rising costs and a challenging macroeconomic environment

#### HOW WE'RE RESPONDING

- Since 2022, Centrica has committed £140m in energy bill support delivered directly and via key partners like the British Gas Energy Trust and Focus Ireland, to help them through the energy crisis
- We introduced innovative energy propositions including PeakSave Sundays, Hive SmartCharge and the Dimplex Quantum Storage Heater tariff that help customers access cheaper energy rates at particular times of the day
- In addition to our colleague energy allowance and broader benefits package, we launched the Centrica Colleague Support Foundation, an independent charitable trust that provides grant funding to colleagues in extreme financial difficulty



### GREEN SHOOTS

High energy prices, increasing climate consciousness and supportive Government incentives continued to drive interest in green technologies for homes and businesses.

#### HOW WE'RE RESPONDING

- From Hive thermostats to EV chargers to heat pumps, we install, maintain and optimise a range of devices in customer homes that place them on their individual journeys to net zero
- We offer a Home Health Check for residential customers, which helps them better understand the energy fabric of their home and potential pathways to net zero
- Through Bord Gáis, we are working with the Irish Farmers' Association to install solar power systems on Irish farms, helping them to reduce their energy bills and making their operations greener



## MACRO TRENDS

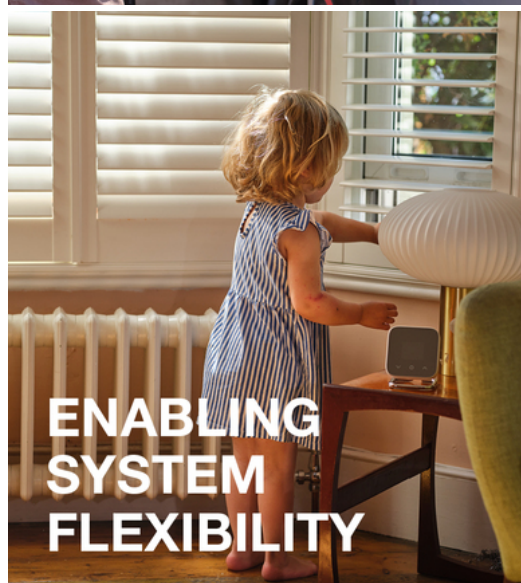


### THE DRIVE TO NET ZERO

Climate change and the imperative to decarbonise remain central concerns for our customers and key stakeholders across society. The last several years have brought the impacts of climate change to our doorstep, as we've experienced hotter summers, extended droughts, unprecedented flooding and extreme weather with increasing frequency. As a UK and Ireland energy industry leader and a responsible business, our strategy remains focused on the drive to net zero.

#### HOW WE'RE RESPONDING

- We committed to an ambitious investment programme that aims for >50% of total capex invested in green taxonomy investments through 2028, thereby underpinning our transition to net zero
- We created a new business intended to be a one-stop green home services shop for residential customers
- We are working with partners to explore decarbonisation opportunities for our existing conventional power generation and molecule storage assets



### ENABLING SYSTEM FLEXIBILITY

Unlocking the full benefit of renewables will require more fast-acting generation and storage, flexible energy consumption, and intelligent systems working in the background to seamlessly manage the two. Centrica already plays a key role in this area by optimising energy flows to and from grid-side assets, as well as within the home. Through further investment and continued customer engagement, we will continue unlocking opportunities for flexible energy generation and utilisation to reduce cost and carbon.

#### HOW WE'RE RESPONDING

- We create additional value for renewable asset operators and investors through our advanced trading and optimisation business
- We help customers to reduce the cost and carbon footprint of their biggest household energy devices, like electric cars and home batteries, through British Gas and Hive's myriad of smart energy propositions
- We are investing in batteries and gas peakers to meet the near-term flexibility needs of the grid, and looking into other forms of energy storage that will meet the needs of the future energy system



### OPPORTUNITIES TO DELIVER VALUE WITH AI

Customers rightfully expect a lot from their home energy and services providers, which drives competition in the market and requires us to constantly innovate and improve. With recent advances in artificial intelligence and machine learning, we see an opportunity to further leverage the power of technology and data to create a step change in our service delivery and customer value proposition.

#### HOW WE'RE RESPONDING

- We appointed a Chief Data Analytics Officer, who will work across the business to identify and execute opportunities that harness the power of data to personalise our propositions and service delivery
- We are closely collaborating with leading technology companies to implement AI tools and systems across our business, helping our colleagues to do more and better for our customers
- We are in the midst of a digital transformation that will fundamentally change the way we work in the digital environment, providing material cost savings to the business and unlocking new capabilities needed for future propositions

# OUR STAKEHOLDERS

Engaging our key stakeholders enables us to create stronger outcomes for people, planet and our business.

Energy is at the heart of how we all live, work and move. That's why we regularly engage key stakeholders to understand their interests and how they may be impacted by our actions, so that we can carefully consider their views and evolve our strategy accordingly. In doing so, we can better harness opportunities and reduce risk as we work to fulfil our Purpose of energising a greener, fairer future, whilst maximising the wider positive contribution we make in society. Engagement is often led by senior leaders who regularly update the Board. This arms the Board with the knowledge to make informed decisions that take into account the long-term consequences of its decisions from the perspective of a diverse range of stakeholders.

## SECTION 172(1) COMPANIES ACT 2006 STATEMENT

The Directors consider that they've performed their duty as required under Section 172, by promoting the success of the Company for the benefit of our stakeholders through their decision making.

These pages set out our key stakeholders together with an example of how engagement was vital to navigating the energy crisis, which was one of the most significant issues faced by the Company and our stakeholders in 2023. Further detail on how the Board engaged and balanced the needs of different stakeholders during 2023, together with the principal decisions made as a result, are also disclosed.

### OUR KEY STAKEHOLDERS



COLLEAGUES



GOVERNMENT  
AND REGULATORS



CUSTOMERS



SUPPLIERS



INVESTORS



COMMUNITIES  
AND NGOs



## OUR KEY STAKEHOLDERS



### COLLEAGUES

**Importance** – Our 21,000-strong team are the beating heart of our business. Through engagement, we can help create a culture where everyone can be themselves and thrive. In doing so, we can attract, promote and retain the diverse and talented team we need to succeed.

**Main focuses** – Health, safety and wellbeing, reward, development, inclusion, engagement and communication.

**Engagement** – Dialogue occurs through a range of channels including our colleague networks, Shadow Board, townhalls and structured engagement with trade unions. We also track sentiment and gather feedback through our engagement survey. We use these interactions to co-create a fairer, safer and more inclusive culture, underpinned by a competitive package of reward, training and policies, as well as our Diversity, Equity and Inclusion Action Plans.

[READ MORE ON PAGES 38 to 40, 42 to 45 and 70](#)



### CUSTOMERS

**Importance** – Our long-term success is dependent on being able to attract and retain customers. The Directors therefore recognise the need to act on customer feedback, so that we can deliver on their expectations.

**Main focuses** – Customer service, energy prices and bill support, alongside affordable energy efficient and low carbon services and solutions.

**Engagement** – We predominantly engage through focus groups, surveys, proposition and usability testing. To meet feedback, we're investing in our customer service systems and customer-facing team, as well as our ability to deliver services and solutions that help customers save time, money and energy. At the same time, we provide dedicated channels to ensure support for those who need extra help with their energy bills.

[READ MORE ON PAGES 6 to 7, 16 to 17 and 43-45](#)



### INVESTORS

**Importance** – Shareholders and debt holders from across the world provide funds that help us run and grow our business.

**Main focuses** – Financial and operational performance, shareholder returns and dividend, strategy and growth, alongside Environmental, Social and Governance (ESG) matters which includes our approach to net zero.

**Engagement** – Investors are predominantly engaged via post-financial result investor roadshows, the Annual General Meeting (AGM) and ad-hoc meetings. We additionally respond to information requests and assessments from ESG ratings agencies. Engagement enables us to consider and reflect the views of different investors when updating on our strategy, to ensure a sustainable return on investment.

[READ MORE ON PAGES 17, 47 and 70](#)



### GOVERNMENTS AND REGULATORS

**Importance** – Policies set by governments and regulators can have a material impact on how we do business. Consequently, we work closely to help create a stable regulatory environment where policy is developed in the interests of consumers, whilst ensuring a sustainable and investable market.

**Main focuses** – Market design, customer service, skills, inclusion, net zero, energy security and energy prices.

**Engagement** – To exchange expertise, we participate in consultation processes, attend meetings and host technology teach-ins and site visits. This enables us to effectively inform policy development and reforms that deliver on key issues, such as ensuring the UK has a secure and affordable supply of energy and that progress is being made on the energy transition.

[READ MORE ON PAGES 16, 29 and 47](#)



### SUPPLIERS

**Importance** – Our suppliers are vital to securing a reliable supply of services and solutions for customers. To reduce risk across our supply chain, the Directors fully support collaboration to ensure they uphold the same high standards of business conduct as us.

**Main focuses** – Payment practices together with social and environmental compliance on important issues like human rights.

**Engagement** – Suppliers are engaged through multiple methods such as tendering, onboarding surveys, site audits and remote worker surveys. These interactions help us uphold fair payment and enforcement of our Responsible Sourcing Policy, which sets out the standards we expect so that everyone operates in a way that benefits people and planet, including fulfilling obligations under anti-modern slavery laws.

[READ MORE ON PAGES 45 and 50](#)



### COMMUNITIES AND NGOS

**Importance** – Local communities expect companies to champion issues that are important to them. By working in partnership with charities, non-governmental organisations (NGOs) and community groups, we create more inclusive and sustainable communities.

**Main focuses** – Tackling urgent social and environmental issues like fuel poverty and climate change.

**Engagement** – Through meetings and research, the Directors understand community issues and how the Company can make the greatest difference – from donating to the British Gas Energy Trust to provide expert advice and grants alongside energy efficiency measures that help reduce energy bills and emissions, to volunteering, fundraising and sponsoring local charities, schools, clubs and more.

[READ MORE ON PAGES 16, 43 and 45](#)

## HELPING PEOPLE WITH THEIR ENERGY BILLS IN THE UK

Although 2023 saw lower wholesale energy prices than in 2022, the cost of energy remained high for consumers. Energy bills therefore remained a key concern for many.



In 2023, global supplies continued to be constricted and government support schemes introduced to help consumers at the start of the crisis, had concluded. We see it as our duty to help customers and communities through difficult times, so we maintained close relationships with stakeholders to explore what more we could do. This enabled the Board to take meaningful action.

We more than doubled our energy support fund to £140 million, making it the biggest voluntary support package provided by an energy company in the UK and Ireland. Of this, we have committed £134 million in the UK since 2022. This results in total donations of around £60 million to the British Gas Energy Trust, to predominantly create a dedicated cash support fund for customers and help communities. To further strengthen support at the heart of communities, £2 million was additionally provided to front-line charities like StepChange. The remaining funding, managed directly by British Gas, is helping residential and business customers with a

particular focus on prepayment customers. To ensure support gets to those who need it most, we proactively reached out to customers and ran campaigns encouraging people to come forward. This included targeting older people who we found were reluctant to seek support and volunteering to provide energy advice at over 150 Post Office Pop-Ups at 100 locations.

Having worked so hard to help customers through the crisis, we were deeply saddened about the lack of empathy and respect shown by some contractors employed to install prepayment meters under warrant. We immediately paused installations and whilst our investigation resulted in no systemic issues being identified, we introduced improvements including bringing the installation of prepayment meters in-house. Like other energy suppliers, we will not restart installations until Ofgem have permitted it. The Directors alongside specialists in the Company, have worked constructively with the regulator to ensure customers are protected during this time, and provided related evidence at two Parliamentary Committees.

We also worked with parliamentarians to ensure they were up to date with the wider consumer support available during the energy crisis via information leaflets, meetings and drop-in sessions.

Additionally, we worked together on short and longer-term improvements for a more secure and sustainable energy market. We increased investment in renewable and low carbon energy, worked with US and Norwegian partners to secure gas supplies, and expanded gas storage capacity at our Rough facility whilst progressing our thinking on net zero optionality at the site. Although this will likely see our greenhouse gas emissions rise in the short-term, our action has been vital to future-proof the UK's energy security and reduce costs for consumers. Throughout, we've needed to balance the needs of different stakeholders and the transition to net zero, to ensure we help people today and avoid another energy crisis in the future.

[READ MORE ON PAGE 43](#)

## SECTION 172(1) STATEMENT PRINCIPAL DECISION BY THE BOARD

### PRINCIPAL DECISION BY THE BOARD

A refreshed strategy focused on creating value for all our stakeholders through the energy transition.

### BOARD CONSIDERATIONS

With the turnaround of Centrica now materially complete and the balance sheet strengthened, the Board carefully considered the refreshed strategy developed by management and how that would impact our stakeholders.

The Board anchored its consideration of the strategy on the expected macro-economic environment over the next decade, noting the widespread view of market experts that a period of material acceleration in the energy transition is anticipated. In that context, the Board considered the future of retail energy and services, the future of optimisation and trading as well as Centrica's People & Planet Plan targets, including the Climate Transition Plan. This was overlaid against a detailed review of Centrica's long-term financial forecasts and the expected financial framework through to 2028. In particular, the Board noted both how some of Centrica's existing assets were approaching end of life but also how, with investment, many of them could play important roles in supporting energy security and the energy transition.

From that foundation, the Board assessed that the green-focused investment strategy was aligned to those key market trends, and therefore carefully reviewed the strategy from the perspectives of stakeholders.

**Customers:** the Board considered customer perspectives around the cost of the energy transition and the impact on pricing when the cost of living remains high. The Board noted how investment could benefit the customer experience, and the strategy could support customers in the transition to net zero.

**Colleagues:** The Board considered employee perspectives around developing the skills needed to deliver our net zero plans. Our colleagues are essential in implementing our strategy, and the Board recognises the importance of investing in their skills and in our organisational culture. The capabilities and passion of our colleagues is central to achieving our strategy.

**Investors:** The Board considered investor perspectives on Centrica's financial sustainability and how the refreshed strategy seeks to underpin Centrica's financial health and earnings potential. Following the announcement of the strategy, investor feedback was presented to the Board. Investors commented that following the

investor presentation, Centrica's strategy was better understood, they had more clarity on Centrica's view of sustainable earnings, and on investment plans and returns.

### OUTCOMES

After carefully evaluating the relevant stakeholder perspectives, the Board concluded that the refreshed strategy will successfully deliver for all our stakeholder groups while helping improve the UK's energy security in our core markets and supporting the transition to net zero.

The green-focused growth and investment strategy ensures our customers, colleagues and our communities are at the forefront of the energy transition. It has the potential to bring customers greener energy and at an affordable price, while helping insulate the UK from energy shocks in the future. We are also investing to build a better customer experience, with our strong operational foundations already beginning to drive better levels of customer satisfaction. Additionally, we remain well positioned to help our customers with the changing retail energy trends, rewarding customers for flexing their energy use through PeakSave, helping customers understand and control their energy use through energy insights and optimising customers' energy consumption through Smart Charge.

Our strategy will support Centrica's aim of connecting more closely with customers and provide a number of opportunities for colleagues. In 2023, we hired an additional 700 UK based front line colleagues to support customers, and the skills required for the net zero transition will create opportunities for colleagues far into the future.

Having simplified our portfolio and improved operational performance, our refreshed strategy is aligned to delivering sustainable profitability from our portfolio, and we expect to deliver around £800 million of adjusted operating profit on average each year over the medium term from our Retail and Optimisation activities. Additionally, our Infrastructure assets

in Spirit Energy, Nuclear and Centrica Energy Storage+ will continue to play a vital role in the UK's energy security. Recent life extensions in Spirit Energy and Nuclear and a capacity increase to our Rough gas storage facility mean we expect our existing Infrastructure businesses to continue to contribute material medium-term cash flows.

We will also pursue new opportunities to create value from wider market trends, with investment expected to build to £600-£800 million per year until at least 2028. As part of this, we will invest in flexible and renewable power assets, replacing our existing declining infrastructure, as well as investing in an in-house smart meter asset provider business, supporting the roll-out of innovative tariffs and allowing a more direct relationship with customers. Over time, the residential heating technology mix is expected to transition away from gas boilers towards newer technology such as heat pumps. We are uniquely placed to support this transition with the UK's largest energy services workforce. Overall, across 2023 to 2028, at least 50% of our capital expenditure is expected to go into green taxonomy eligible projects, compared to only 5% in 2019. This will help us meet our targets to achieve net zero by 2045, and help our customers reach net zero by 2050.

Longer term, and subject to the appropriate regulatory frameworks being in place, we also retain net-zero aligned optionality for potential hydrogen and carbon capture investments, through our Rough and Spirit Energy assets, and continue to consider potential investment in nuclear new-build projects.

We will do this while maintaining strong liquidity, balance sheet strength and capital discipline, with the appropriate medium-term leverage for the Group assessed as being up to 1x Net Debt to EBITDA. This provides us with enough headroom to manage volatility in the energy system and to continue to invest for the future. In addition, we remain focused on delivering compelling shareholder returns, including for over 440,000 retail shareholders, with a progressive dividend policy, and an expectation that dividend cover will move to around 2x over the coming years supported by the sustainable earnings of the Retail and Optimisation businesses, whilst returning surplus capital to shareholders where appropriate.

 [READ MORE ON PAGE 68](#)

# GROUP CHIEF FINANCIAL OFFICER'S REPORT



**Russell O'Brien** | Group Chief Financial Officer

Our 2023 financial performance was strong as we start to deliver against our refreshed strategy. The benefits of our balanced portfolio were demonstrated with robust earnings, free cash flow and a very healthy closing balance sheet position.

## RELENTLESS FOCUS ON VALUE CREATION



Sustainable earnings



Maintaining a strong balance sheet



Progressive dividends



Investing for value



Returning surplus capital

 [READ MORE ON PAGE 11](#)

## FINANCIAL OVERVIEW

The Group's adjusted operating profit was £2.8bn (2022: £3.3bn), with lower Infrastructure and Optimisation results partially offset by a higher Retail contribution. Reflecting this, along with both a lower net finance charge and taxation on business performance, Group adjusted earnings attributable to shareholders were £1.9bn (2022: £2.1bn) and Group adjusted EPS was 33.4p (2022: 34.9p).

From a statutory perspective, operating profit was £6.5bn (2022: £0.2bn loss). This includes a large certain re-measurement gain during the year of £4.4bn (2022: £3.4bn loss) predominantly due to unwinds of 2022 out-of-the-money positions and release of the onerous energy supply contract provision. In addition an exceptional loss of £0.6bn (2022: £0.2bn) was recognised driven predominantly by impairments to both our Nuclear investment and Rough gas storage asset reflecting changes in commodity prices and spreads. Statutory profit attributable to shareholders was £3.9bn (2022: £0.8bn loss) and statutory EPS was 70.6p (2022: 13.3p loss).

None of the items reported in the middle column of the Income Statement are considered to reflect the underlying performance of the business.

The Group's total Free Cash Flow (FCF) reduced to £2.2bn (2022: £2.5bn), with the impact of lower operating profit and the timing of tax payments partially offset by a net working capital inflow of £0.2bn (2022: £0.7bn outflow).

From a statutory perspective, net cash flow from operating and investing activities was £2.9bn (2022: £0.7bn). This was higher than the FCF noted above largely because of the exclusions from that measure of movements in variation margin and collateral, which support our commodity hedging activity and Centrica Energy optimisation activity and generated an inflow of £0.6bn (2022: £1.2bn outflow).

The Group's net assets increased to £4.2bn (2022: £1.3bn) with the impact of the increase in statutory profit partially offset by the impact of £1.1bn from items reported in other comprehensive income or directly in equity, including impacts of the share buyback programme, net actuarial losses on defined benefit pension schemes and dividends paid to both shareholders and non-controlling interests.



## REVENUE

Total Group statutory revenue increased by 11% to £26.5bn (2022: £23.7bn). Total Group revenue included in business performance, which includes revenue arising on contracts in scope of IFRS9, decreased by 1% to £33.4bn (2022: £33.6bn).

Gross segment revenue, which includes revenue generated from the sale of products and services between segments, decreased by 5% to £35.3bn (2022: £37.2bn). This was driven largely by the impact of lower commodity prices and volatility on revenue in Centrica Energy, partially offset by the impact of commodity prices on retail tariffs in British Gas Energy, Bord Gáis Energy and Centrica Business Solutions.

A table reconciling the different revenue measures is included in note 4(b) of the accounts.

## OPERATING PROFIT/(LOSS)

YEAR ENDED 31 DECEMBER (£M)	2023	2022
<b>Retail</b>	<b>799</b>	<b>94</b>
British Gas Services & Solutions	47	(9)
British Gas Energy	751	72
Residential energy supply	726	23
Business energy supply	25	49
Bord Gáis Energy	1	31
<b>Optimisation</b>	<b>878</b>	<b>1,444</b>
Centrica Business Solutions	104	44
Centrica Energy (formerly Energy Marketing & Trading)	774	1,400
<b>Infrastructure (excl. disposed Spirit Energy assets)</b>	<b>1,083</b>	<b>1,308</b>
Spirit Energy (retained)	235	245
Centrica Energy Storage+	312	339
Nuclear	536	724
<b>Colleague profit share</b>	<b>(8)</b>	<b>(23)</b>
<b>Operating profit from business performance excl. disposed Spirit Energy assets</b>	<b>2,752</b>	<b>2,823</b>
Spirit Energy disposed assets	-	485
<b>Operating profit from business performance (Adjusted operating profit)</b>	<b>2,752</b>	<b>3,308</b>
Exceptional items and certain re-measurements	3,760	(3,548)
<b>Group operating profit/(loss) (Statutory operating profit)</b>	<b>6,512</b>	<b>(240)</b>

Adjusted operating profit decreased by £556m, or by £71m when excluding the impact of the disposal of Spirit Energy's Norwegian assets in 2022, to £2,752m (2022: £3,308m or £2,823m excluding the disposed Spirit Energy assets).

More detail on specific business unit adjusted operating profit performance is provided in the Business Review on pages 23 to 25.

Statutory operating profit was £6,512m (2022: £240m loss), with the difference between the two measures of profit relating to a net gain on exceptional items and certain re-measurements of £3,760m (2022: £3,548m loss).

### Certain re-measurements

The Group enters into a number of forward energy trades to protect and optimise the value of its underlying production, generation, storage and transportation assets (and similar capacity or off-take contracts), as well as to meet the future needs of our customers. A number of these arrangements are considered to be derivative financial instruments and are required to be fair valued under IFRS 9.

The Group shows the fair value movements on these commodity derivative trades separately as certain re-measurements, as they do not reflect the underlying performance of the business because they are economically related to our infrastructure assets, capacity/off-take contracts or downstream demand, which are typically not fair valued.

The operating profit in the statutory results includes a net pre-tax profit of £4,405m (2022: £3,393m loss) relating to re-measurements. This was largely made up of the components outlined below:

- A net gain of £3,573m on the re-measurement of derivative energy contracts. This predominantly reflects the unwind of 2022 out-of-the-money energy supply contract hedge purchases, while there was also an unwind of our infrastructure businesses and Centrica Energy out-of-the-money positions from December 2022. The net positive impact of these two factors was £3,529m. In addition, we saw a net unrealised mark-to-market gain of £44m from our wider portfolio as we were in a net sell position at certain points in the year as commodity prices fell.

- A net gain of £833m from the onerous energy supply contract provision utilisation and reversal. At the 2022 year-end, an onerous provision was held on the balance sheet relating to our non-domestic customers on longer-term fixed contracts agreed at levels below the forward commodity prices in December 2022. This was because, although the Group is predominantly hedged and so does not expect to make a true economic loss on these contracts, the hedges are generally market trades which are reflected as derivatives and are marked-to-market through the middle column as certain re-measurements. At 2022 year-end, the unrealised hedges were still in-the-money and this led to retaining an onerous contract provision. However, following the fall in commodity prices seen in 2023, the supply hedges were out-of-the-money at the end of the year and as a result, the remaining energy supply onerous provision has been fully unwound.

Further details can be found in note 7(a).

### Exceptional items

An exceptional pre-tax charge of £645m was recognised within the statutory Group operating profit (2022: £155m), made up of:

- A £549m impairment of the nuclear investment, as a result of lower forecast commodity prices, partially offset by the positive effect of life extensions at Heysham 1 and Hartlepool.
- An £82m impairment of the Rough gas storage asset as a result of a reduction in both forecast gas prices and forecast summer/winter gas price spreads.
- A £14m impairment in Centrica Business Solutions predominantly related to a battery storage asset and a gas engine, also as a result of the lower forecast commodity prices.

Further details on exceptional items, including on impairment accounting policy, process and sensitivities, can be found in notes 7(b) and 7(c).

## GROUP EARNINGS AND DIVIDEND

YEAR ENDED 31 DECEMBER (£M)	Notes	2023			2022		
		Business performance	Exceptional items and certain re-measurements	Results for the year	Business performance	Exceptional items and certain re-measurements	Results for the year
<b>Group operating profit/(loss)</b>	4(c)	<b>2,752</b>	<b>3,760</b>	<b>6,512</b>	3,308	(3,548)	(240)
Net finance cost	8	(39)	—	(39)	(143)	—	(143)
Taxation	9	(838)	(1,595)	(2,433)	(1,046)	793	(253)
<b>Profit/(loss) from operations</b>		<b>1,875</b>	<b>2,165</b>	<b>4,040</b>	2,119	(2,755)	(636)
Less: Profit attributable to non-controlling interests		(16)	(95)	(111)	(69)	(77)	(146)
<b>Adjusted earnings/(loss) attributable to shareholders</b>		<b>1,859</b>	<b>2,070</b>	<b>3,929</b>	2,050	(2,832)	(782)
<i>Adjusted earnings attributable to shareholders excluding disposed Spirit Energy assets</i>		1,859			2,005		

### Finance costs

Net finance costs decreased to £39m (2022: £143m), largely due to increased interest income on cash balances reflecting higher UK interest rates, partially offset by increased interest costs on floating debt.

### Taxation

Business performance taxation on profit decreased to £838m (2022: £1,046m). After taking account of tax on joint ventures and associates, the adjusted tax charge was £912m (2022: £1,077m).

The resultant adjusted effective tax rate for the Group was 33% (2022: 34%), with the profit mix moving slightly away from highly taxed E&P activities. The adjusted effective tax rate calculation is shown below:

YEAR ENDED 31 DECEMBER (£M)	2023	2022
Adjusted operating profit before impacts of taxation	<b>2,752</b>	3,308
Add: JV/associate taxation included in adjusted operating profit	<b>74</b>	31
Net finance cost	(39)	(143)
Adjusted profit before taxation	<b>2,787</b>	3,196
Taxation on adjusted operating profit	(838)	(1,046)
Share of JV/associate taxation	(74)	(31)
Adjusted tax charge	(912)	(1,077)
Adjusted effective tax rate	<b>33%</b>	34%

A charge totalling £326m related to the Electricity Generator Levy is included in the Group's cost of sales and in our share of the results of joint venture and associates operating profits. The Levy is not an income tax and is not deductible for corporation tax purposes. If this had been treated as a tax, the Group's adjusted effective tax rate would have been 40%.

Re-measurements and exceptional items generated a taxation charge of £1,595m (2022: £793m credit).

See note 1(b), 3(b), 7(a), 7(b) and 9 for more details.

### Group earnings

Reflecting the adjusted operating profit, net finance cost and adjusted taxation as described above, profit for the year from business performance after taxation was £1,875m (2022: £2,119m). After adjusting for non-controlling interests relating to Spirit Energy, adjusted earnings were £1,859m (2022: £2,050m, or £2,005m after excluding the disposed Spirit Energy assets).

Adjusted basic EPS was 33.4p (2022: 34.9p, or 34.2p after excluding the disposed Spirit Energy assets), which also includes the impact of a lower weighted average number of shares than in 2022 reflecting the ongoing share repurchase programme.

After including exceptional items and certain re-measurements, including those attributable to non-controlling interests, the statutory profit attributable to shareholders for the period was £3,929m (2022: £782m loss).

The Group reported a statutory basic EPS of 70.6p (2022: 13.3p loss).

### Dividend

In addition to the interim dividend of 1.33p per share, the proposed final dividend is 2.67p per share, giving a total full year dividend of 4.0p per share (2022: 3.0p per share).

## GROUP CASH FLOW, NET CASH AND BALANCE SHEET

### Group cash flow

Free cash flow (FCF) is the Group's primary measure of cash flow as management believe it provides relevant information to show the cash generation of the business after taking account of the need to maintain its capital asset base. FCF is reconciled to statutory net cash flow from operating and investing activities in the table below.

See explanatory note 4(f) for more details.



YEAR ENDED 31 DECEMBER (£M)	2023	2022
Statutory cash flow from operating activities	<b>2,752</b>	1,314
Statutory cash flow from investing activities	<b>115</b>	(566)
Statutory cash flow from operating and investing activities	<b>2,867</b>	748
Add back/(deduct):		
Sale and purchase of securities	<b>12</b>	398
Interest received	<b>(267)</b>	(46)
Movements in collateral and margin cash	<b>(585)</b>	1,173
Defined benefit pension deficit payments	<b>180</b>	214
Free cash flow	<b>2,207</b>	2,487

FCF was £2,207m (2022: £2,487m), as reconciled to statutory cash flow measures in the table above.

Net cash flow from operating activities increased to £2,752m (2022: £1,314m), with the impact of lower adjusted EBITDA more than offset by collateral and margin cash inflows and positive working capital movements.

Adjusted EBITDA decreased to £3,085m (2022: £3,993m), reflecting the movements in adjusted operating profit as described on page 19.

The collateral and margin cash inflow was £585m (2022: £1,173m outflow), as wholesale commodity prices reduced from their elevated levels last year.

The net inflow of working capital was £244m (2022: £656m outflow). This included an inflow of £579m in Centrica Energy, as profit on 2022 derivative positions cash settled in 2023, which was partially offset by an outflow of £505m in British Gas Energy reflecting the settlement of high December 2022 commodity costs in January 2023 and the timing of customer and Government support and regulatory scheme cash flows.

Net cash inflow from investing activities was £115m (2022: £566m outflow). Within this, interest received increased to £267m (2022: £46m) reflecting the higher interest rate environment, while dividends from our Nuclear associate increased to £220m (2022: £60m). Capital expenditure (including small acquisitions) increased to £415m (2022: £377m or £258m excluding Spirit Norway) as we build momentum in our green-focused growth and investment strategy. Of the 2022 investing activities outflow, £400m related to a loan to the pension schemes in October 2022 to help them manage through volatile market conditions.

Net cash outflow from financing activities increased to £1,414m (2022: £917m). This includes a reduced distribution of £17m (2022: £273m) to Spirit Energy's minority partner, with the outflows in both years related to the disposal of Spirit Energy's Norway assets. It also includes materially increased cash distributions to shareholders, with £613m (2022: £43m) relating to the Group's share buyback programme and £186m (2022: £59m) related to ordinary dividend payments.

#### Group adjusted net cash

The above resulted in a £1,453m increase in cash and cash equivalents over the year. Gross debt reduced by £162m, reflecting the repayment of a bond upon its maturity in October 2023 which was partially offset by new lease arrangements during the year. When also including the impact of foreign exchange adjustments on cash, the Group's adjusted net cash position at the end of December 2023 was £2,744m, compared to £1,199m on 31 December 2022.

Further details on the Group's sources of finance and net debt are included in note 24.

#### Balance sheet

Net assets increased to £4,233m (2022: £1,280m), predominantly driven by the statutory profit. This was partially offset by the impact of items reported in other comprehensive income or directly in equity, including a £500m reduction from the share buyback programme, £288m net actuarial losses on defined benefit pension schemes and £203m of dividends paid to both shareholders and non-controlling interests.

#### Pension deficit

The Group's IAS 19 net pension deficit was £117m at the year-end, compared with a £40m surplus at 31 December 2022, with the impact of pension deficit contributions during the year being more than offset by a decrease in high quality corporate bond yields used to discount the pension liabilities, a lower than expected return on scheme assets and an actuarial adjustment due to inflation experience. The technical provisions deficit is based on more conservative assumptions and is used to determine the agreed level of cash contributions into the schemes. In September 2022, we reached agreement with the pension trustees on a March 2021 technical provisions deficit of £944m, with annual deficit contributions remaining unchanged at £175m until 2026. On a roll-forward basis using the same methodology, consequent assumptions and contributions paid, the technical provision deficit would be around £900m at 31 December 2023.

Further details on post-retirement benefits are included in note 22.

#### Acquisitions, disposals and disposal groups classified as held for sale

During the period deferred consideration of £55m was received in respect of the Spirit Norway disposal in 2022 and £17m was distributed to SWM Bayerische E&P Beteiligungsgesellschaft mbH.

Further details on assets purchased, acquisitions and disposals are included in notes 4(e) and 12.

#### EVENTS AFTER THE BALANCE SHEET DATE

Details of events after the balance sheet date are described in note 26.

#### RISKS AND CAPITAL MANAGEMENT

The nature of the Group's principal risks and uncertainties are broadly unchanged from those set out in its 2022 Annual Report, although the Group's top three Principal Risks are now credit and liquidity risk, market risk (including the outage risk of financial loss due to impact of lost asset production) and weather risk. In our assessment, overall credit and liquidity risk has increased due to a notable increase in customer debt driven by cost of living challenges, high levels of fuel poverty and relatively high inflation impacting our customers' ability to pay for their energy supply. Market and weather risks have reduced given lower volatility in commodity markets and a fall in global wholesale energy prices from their 2022 peaks. In addition, political, legal and regulatory risks have heightened due to continued financial pressures facing many consumers and an impending UK general election.

The Group has actively responded to these risks. Further support measures and processes have been developed to help customers repay their debt, a Risk Capital Steering methodology has been developed to bolster our current robust monitoring and to improve our ability to react to changes in our financial risks, while we have successfully refinanced multi-year credit facilities to fortify our liquidity capacity. We also remain engaged with regulators and political parties and will continue to monitor and assess the impact of any changes in government policy in our markets.

Details of how the Group has managed financial risks such as liquidity and credit risk are set out in note S3. Details of the Group's capital management processes are provided under sources of finance in note 24.

#### ACCOUNTING POLICIES

The Group's accounting policies and specific accounting measures, including changes of accounting presentation and selected key sources of estimation uncertainty, are explained in notes 1, 2 and 3.

**Russell O'Brien**, Group Chief Financial Officer

14 February 2024

## OUR VIEW ON TAXATION

The Group takes its obligations to pay and collect the correct amount of tax very seriously.

Responsibility for tax governance and strategy lies with the Group Chief Financial Officer, overseen by the Board and the Audit and Risk Committee.

### OUR APPROACH

Wherever we do business in the world, we take great care to ensure we fully comply with all our obligations to pay or collect taxes and to meet local reporting requirements.

We are committed to providing disclosures and information necessary to assist understanding beyond that required by law and regulation.

We do not tolerate tax evasion or fraud by our employees or other parties associated with Centrica. If we become aware of any such wrongdoing, we take appropriate action.

Our cross-border pricing reflects the underlying commercial reality of our business.

We ensure that income and costs, including costs of financing operations, are appropriately recognised on a fair and sustainable basis across all countries where the Group has a business presence. We understand that this is not an exact science and we engage openly with tax authorities to explain our approach.

In the UK we maintain a transparent and constructive relationship with His Majesty's Revenue & Customs (HMRC). This includes regular, open dialogue on issues of significance to HMRC and Centrica. Our relationship with fiscal authorities in other countries where we do business is conducted on the same principles.

We carefully manage the tax risks and costs inherent in every commercial transaction, in the same way as any other cost.

We do not enter into artificial arrangements in order to avoid taxation nor to defeat the stated purpose of tax legislation.

We seek to actively engage in consultation with governments on tax policy where we believe we are in a position as a Group to provide valuable commercial insight.

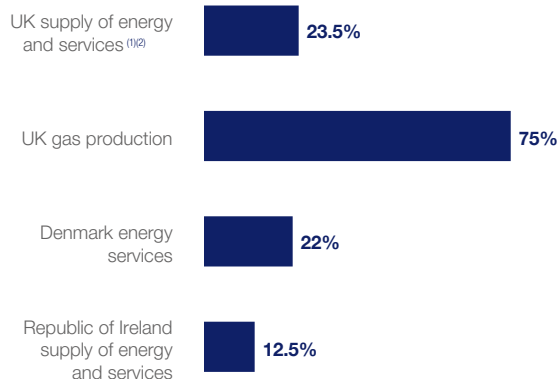
### THE GROUP'S TAX CHARGE, TAXES PAID AND THE UK TAX CHARGE

The Group's businesses are subject to corporate income tax rates as set out in the statutory tax rates on profits table.

The overall tax charge is dependent on the mix of profits and the tax rate to which those profits are subject.

## STATUTORY TAX RATES ON PROFITS

### Group activities



- (1) From 1 January 2023, revenues from our Nuclear and solar business (included in energy supply and services) are subject to Electricity Generator Levy (EGL) at 45% on wholesale revenues sold at an average price in excess of £75/MWh, exceeding an annual threshold of £10 million. The EGL is accounted for as an expense and is included in cost of sales.
- (2) With effect from 1 April 2023 the statutory rate applicable to UK supply of energy and services increased from 19% to 25%. The average corporation tax rate for the year is 23.5%.

## TAX CHARGE COMPARED TO CASH TAX PAID

	2023 Current tax charge/(credit)	2023 Cash tax paid/ (received)
UK (including Petroleum Revenue Tax)	572	687
Denmark	96	121
Singapore	—	25
Republic of Ireland	2	(29)
Rest of world	—	(1)
	<b>670</b>	<b>803</b>
Electricity generator levy	285	285
<b>Total tax paid</b>		<b>1,088</b>

Corporation tax is paid in instalments, generally based on estimates; one-off items and fluctuations in mark to market positions may cause divergence between the charge for the year and the tax paid.

- 📄 FURTHER INFORMATION ON THE TAX CHARGE IS SET OUT IN NOTE 9 OF THE ANNUAL REPORT AND ACCOUNTS.
- 📄 OUR GROUP TAX STRATEGY, A MORE DETAILED EXPLANATION OF THE WAY THE GROUP'S TAX LIABILITY IS CALCULATED AND THE TIMING OF CASH PAYMENTS, IS PROVIDED ON OUR WEBSITE AT [CENTRICA.COM/RESPONSIBLETAX](https://www.centrica.com/responsible-tax)

## BUSINESS REVIEW

### BUSINESS UNIT OPERATIONAL, COMMERCIAL AND FINANCIAL PERFORMANCE

We expect to deliver around £800m of sustainable adjusted operating profit on average each year from Retail and Optimisation by 2026, with additional growth potential. We also expect to deliver material medium-term cash flows from Infrastructure.

Of the £800m per year, we expect UK residential energy supply to make £150m-£250m, British Gas Services & Solutions to continue to recover to £100m-£200m, Centrica Energy to make £250m-£350m, and UK business energy supply and Bord Gáis Energy to deliver combined adjusted operating profit of £100m-£200m.

In any given year the actual results by business are likely to fluctuate, so these ranges should be seen as an average over time. However, one of the key benefits of our balanced portfolio is that our businesses de-risk each other and this reinforces our confidence in the delivery of these overall profit projections.

#### RETAIL

In Retail, we have ramped up investment in our operations and customer service. This has resulted in improved performance metrics, with lower complaints and improving NPS scores across our businesses. Total Retail adjusted operating profit increased to £799m (2022: £94m), largely due to the material recovery of costs incurred in prior periods through the regulatory price cap mechanism in British Gas Energy.

#### British Gas Services & Solutions

YEAR ENDED 31 DECEMBER	2023	2022	Change
Services & Solutions customers ('000) (closing) <sup>(1)</sup>	2,950	3,193	(8%)
On-demand jobs ('000) <sup>(2)</sup>	218	122	79%
Boiler installs ('000)	95	99	(4%)
Services complaints per customer (%) <sup>(3)</sup>	6.0%	7.0%	(14%)
Services Engineer NPS <sup>(4)</sup>	71	64	7pt
Adjusted operating profit/(loss) (£m)	47	(9)	nm

All 2023 metrics and 2022 comparators are for the 12 months ended 31 December unless otherwise stated.

- (1) Services & Solutions customers are defined as single households having a contract or an on-demand job with British Gas Services & Solutions.
- (2) On-demand jobs are defined as Services & Repair one-off on-demand repairs, home improvements and maintenance.
- (3) Total complaints, measured as any expression of dissatisfaction where we identify material distress, inconvenience or financial loss, as a percentage of average customers over the year.
- (4) Measured independently, through individual questionnaires, the customer's willingness to recommend British Gas following a gas engineer visit.

In British Gas Services & Solutions we have significantly improved our operations, as we look to stabilise our core activity of contract service and repair, whilst driving growth in on-demand and heating installs.

Operational metrics continued to improve over the year, including a halving of job reschedule rates, to 3%. This improved operational performance underpinned improved customer satisfaction, which was reflected in lower complaints and higher engineer NPS. Customer numbers were broadly stable in the second half of 2023, having fallen by 6% in the first half, which had reflected a high inflation backdrop and cost of living pressures, and the final roll-off of 'free product' customers from the portfolio. Reflecting this, revenue per customer increased from £286 to £310.

Our improved operational performance and increased engineer capacity means we can now better target the significant opportunity that exists in the on-demand and heating installation markets.

Reflecting this, on-demand customers increased to 201,000 and on-demand jobs increased to 218,000, up 75% and 79% on 2022 respectively. We also grew our market share and margins in boiler installations in a declining market, underpinned by more innovative commercial offerings.

Adjusted operating profit was £47m (2022: £9m loss), with improved productivity allowing better margin capture in the core contract service and repair and installation businesses, and lower pension costs. These positive impacts were partially offset by the impacts of lower average customer numbers and ongoing inflationary cost pressures.

#### British Gas Energy

YEAR ENDED 31 DECEMBER	2023	2022	Change
Residential energy customers ('000) (closing) <sup>(1)</sup>	7,529	7,516	0%
Small business customer sites ('000) (closing)	552	480	15%
Energy complaints per customer (%) <sup>(2)</sup>	13.3%	14.4%	(8%)
Energy Touchpoint NPS <sup>(3)</sup>	17	13	4pt
Cost per residential energy customer (excl. bad debt) (£)	91	83	10%
Adjusted operating profit (£m)	751	72	943%

All 2023 metrics and 2022 comparators are for the 12 months ended 31 December unless otherwise stated.

- (1) Residential energy customers are defined as single households buying energy from British Gas.
- (2) Total complaints, measured as an expression of dissatisfaction in line with submissions made to Ofgem, as a percentage of average customers over the year.
- (3) Measured independently, through individual questionnaires, the customer's willingness to recommend British Gas Energy following contact.

In British Gas Energy, we continue to invest in strengthening our operational foundations to drive innovation, retention and better customer outcomes in order to underpin long-term profit sustainability.

The number of residential customers remained broadly flat over the year, as price competition remained low in the market and suppliers competed more on service and brand. The number of small business customers increased by 15% in the year.

In line with our strategy we have invested further in customer service, including the hiring of 700 additional contact centre colleagues. Reflecting this, we saw lower complaints and a higher NPS, and improving these metrics further will remain a focus. The NPS is higher for customers who are on our new platform, and we continue to make good progress on customer migration. A further 2m customers were migrated in the second half of 2023, taking the total to over 5m and we aim for our customers migration to the new platform to be substantially complete by 2025.

Reflecting our investment in customer service and migration, our annualised cost per residential energy customer (excluding bad debt) increased by £8, including a £4 increase from dual running IT costs. When combined, the impact from incremental investment in service and from total dual running IT costs was around £100m in 2023.

Adjusted operating profit increased to £751m (2022: £72m) following a strong first half result which included an industry-wide one-off recovery of around £500m of prior period costs. These were largely related to unexpected standard variable tariff demand and the phasing of commodity costs and associated revenues; a supplier's costs may not perfectly match the revenues received under the price cap in a given period. We also delivered effective risk management and optimisation during the year, while higher commodity costs naturally drove higher unit margins.

These positive impacts were partially offset by a number of other factors predominantly related to a weak economy and the cost of living crisis. The bad debt charge increased to £541m (2022: £297m), including impacts from pausing field debt collection activity, with an increase in both residential (up £158m) and small business (up £86m). We also saw an underlying reduction in consumption per customer, with customer bills remaining elevated compared to historic levels alongside the reduction of wider government support for both residential and small business customers. In addition, 2023 profit was impacted by the increase in cost per customer reflecting our investment in customer service and system migration, and our voluntary commitment of a further £84m to support customers struggling to pay their bills.

### Bord Gáis Energy

YEAR ENDED 31 DECEMBER	2023	2022	Change
Customers ('000) (closing)	<b>503</b>	526	(4%)
Complaints per customer (%) <sup>(1)</sup>	<b>1.7%</b>	2.2%	(23%)
Journey NPS <sup>(2)</sup>	<b>18</b>	19	(1pt)
Adjusted operating profit (£m)	<b>1</b>	31	(97%)

All 2023 metrics and 2022 comparators are for the 12 months ended 31 December unless otherwise stated.

(1) Total complaints, measured as any oral or written expression of dissatisfaction, as a percentage of average customers over the year.

(2) Weighted NPS for the main customer interaction channels.

In Bord Gáis Energy we are focused on creating value from our integrated energy model, while investing in the future energy system to help underpin energy security and decarbonisation in Ireland.

Against a backdrop of challenging conditions in the retail energy supply business, customer numbers declined by 4% as the business reduced its focus on customer acquisition. We continued to invest in customer service, resulting in lower complaints per customer compared with 2022 and a 5pt improvement in NPS over the second half of the year, following a reduction in the first half. In line with our commitment to support our customers, we donated an incremental £3m to our energy support fund to help vulnerable customers struggling with bills, doubling the total to £6m over the past two years.

We continued with the construction of our two, hydrogen ready, 100MW flexible natural gas peaking plants in Athlone and Dublin, with our investment expected to total around €300m. We expect these plants to be commissioned by around the middle of 2025.

Adjusted operating profit reduced to £1m (2022: £31m), reflecting pricing pressure in energy supply as we absorbed higher energy costs, particularly in the first half of 2023. This was partially offset by continued strong performance from our Whitegate power station and wholesale optimisation activities. The second half of the year saw the beginnings of more sustainable energy supply performance, with continued easing in commodity prices affording us the opportunity to pass on price reductions to customers.

### OPTIMISATION

In Optimisation, we continue to develop and leverage our physical positions and world class capabilities. Total Optimisation adjusted operating profit remained elevated at £878m (2022: £1,444m), although was lower compared to 2022 against a backdrop of lower absolute prices and volatility in commodity markets.

### Centrica Energy

YEAR ENDED 31 DECEMBER	2023	2022	Change
Renewable capacity under management (GW) <sup>(1)</sup>	<b>13.0</b>	12.6	3%
Adjusted operating profit (£m)	<b>774</b>	1,400	(45%)

All 2023 metrics and 2022 comparators are for the 12 months ended 31 December unless otherwise stated.

(1) Including assets that have signed contracts but are not yet operational.

In Centrica Energy (previously Energy Marketing & Trading), our world class asset-backed trading and logistics business, we are looking to build on our diverse portfolio of physical contracted positions, while continuing to leverage our differentiated risk management and optimisation capabilities to add further value across the Group.

Centrica Energy had another strong year in 2023, against the backdrop of much lower market volatility than experienced in 2022. We continue to build out our portfolio of physical contractual positions, delivering a 3% increase in renewable assets under management in Renewable Energy Trading and Optimisation (RETO) to 13.0GW. Total renewable and flexible assets increased to 16.3GW (2022: 15.8GW).

We also added to our global LNG portfolio. In July 2023 we signed a 15-year Sale and Purchase agreement with Delfin to take 1 million tonnes of LNG, free on board, from their floating facility in the Gulf of Mexico. Volumes are expected to commence towards the end of this decade.

Adjusted operating profit remained elevated at £774m (2022: £1,400m). Lower levels of market volatility impacted our gas and power trading business. However, we saw the benefit of our diverse portfolio, with increased profit in both the LNG and RETO businesses reflecting our ability to capture some longer-term value from the volatile environment seen in 2022. Included within the total operating profit was a £35m loss from the Sole Pit legacy gas contract (2022: £19m profit), with further losses from the contract at current forward prices expected to be around £30m in total until 2025, when the contract ends.

### Centrica Business Solutions (CBS)

YEAR ENDED 31 DECEMBER	2023	2022	Change
Energy supply total gas and electricity volume (TWh)	<b>20.7</b>	22.3	(7%)
Energy supply complaints per customer (%) <sup>(1)</sup>	<b>12.2%</b>	9.1%	34%
Energy supply Touchpoint NPS <sup>(2)</sup>	<b>32</b>	31	1pt
Services order intake (£m)	<b>225</b>	212	6%
Net investment (£m)	<b>114</b>	19	500%
Adjusted operating profit (£m)	<b>104</b>	44	136%

All 2023 metrics and 2022 comparators are for the 12 months ended 31 December unless otherwise stated.

(1) Total complaints, measured as any oral or written expression of dissatisfaction, as a percentage of average customers over the year.

(2) Measured independently, through individual questionnaires and the customer's willingness to recommend.

In Centrica Business Solutions we continue to focus on strengthening our customer service foundations and delivering improved margins and sales performance in energy supply to larger businesses, while building a portfolio of flexible, green-focused assets.

We continued with our planned shift in focus away from supplying energy to the lower margin large-scale Commercial and Industrial sector, and total volumes fell by 7% as a result. However, within this, volumes supplied to medium sized enterprises grew 14% to 11.6TWh (2022: 10.2TWh), with consistent organic growth alongside the customer book acquisition of Avantigas ON Limited in H2 2022.

We continue to focus on delivering high levels of customer service, although complaints per customer increased against a backdrop of customer concern from high energy bills and complexity relating to government support schemes. Despite this, customer service delivery remained strong, with Touchpoint NPS increasing by 1pt year-on-year.



Having announced our green-focused investment strategy in July 2023, we have made incremental early stage progress in developing our asset pipeline. Net investment in CBS was £114m in 2023 (2022: £19m) as we continued with a range of solar, battery and gas-peaking investments, and we now have around 550MW of assets in detailed planning or delivery in the UK and Continental Europe. We also commenced commercial operations on the 18MW Codford solar farm in the first half of 2023 and acquired the operational 13MW Roundponds solar farm in the second half, taking total operational capacity in CBS to 132MW.

Adjusted operating profit increased to £104m (2022: £44m). Energy supply profit increased driven by strong risk management and commodity procurement performance, supported by the increase in volumes supplied to medium-sized enterprise customers. This was partially offset by an increased loss in Services and Assets, reflecting the impact of lower market price volatility on our flexible assets, and restructuring actions taken in our services business to improve profitability in the coming years.

## INFRASTRUCTURE

Our Infrastructure businesses consist of our ownership in the Spirit Energy gas production business, the UK's nuclear fleet, and Centrica Energy Storage+, the operator of the UK's largest gas storage facility, Rough. These businesses all saw asset lives extended in 2023 and will continue to play an important role for UK energy security. Total Upstream adjusted operating profit fell to £1,083m (2022: £1,793m or £1,308m excluding disposed Spirit assets).

### Upstream

YEAR ENDED 31 DECEMBER	2023	2022	Change
Spirit Energy retained total production volumes (mmboe)	<b>14.8</b>	17.5	(15%)
Nuclear power generated (GWh)	<b>7,456</b>	8,719	(14%)
Adjusted operating profit (£m)	<b>1,083</b>	1,793	(40%)

All 2023 metrics and 2022 comparators are for the 12 months ended 31 December.

Total volumes from the retained Spirit Energy assets were down 15%, with lower production across the portfolio in line with expected natural decline rates. In May 2023, Spirit Energy was awarded a carbon storage licence for the Morecambe Hub, and its potential to be one of the UK's largest carbon storage hubs provides us with long-term net zero optionality.

Centrica Energy Storage+ (CES+) delivered good operational reliability from the Rough asset following its return to gas storage operations in the second half of 2022, and from the Easington gas processing plant which CES+ also owns. An increase in capacity at Rough to 54bcf was announced in June 2023, with third party exemption granted until at least 2030. We continue to develop plans to enable us to increase capacity at the asset, and ultimately convert to a hydrogen storage facility, with any material investment subject to an appropriate regulatory support mechanism.

Centrica's share of Nuclear generation volumes was 14% lower than 2022, reflecting the Hinkley Point B closure in August 2022 and higher scheduled outages. During 2023, the expected closure dates for Heysham 1 and Hartlepool were extended by two years to March 2026, with a plus or minus one year window either side of this date. Additionally, in January 2024, an ambition was announced to further extend the lives of Heysham 1, Hartlepool, Heysham 2 and Torness, subject to inspections and regulatory approvals.

Adjusted operating profit from the retained Spirit Energy business was £235m (2022: £245m), with the impact of lower production volumes largely offset by a higher average achieved gas price, underpinned by our rateable hedging strategy. Centrica Energy Storage+ adjusted operating profit was £312m (2022: £339m), with strong performance in the first half of 2023 driven by high seasonal gas price spreads in winter 2022/23 and further optimisation from market price volatility, followed by a second half which saw lower seasonal spreads for winter 2023/24 and reduced optimisation opportunities due to lower levels of volatility. Nuclear adjusted operating profit was £536m (2022: £724m), with higher achieved prices and lower balancing charges more than offset by the combined impacts of lower generation volumes and a £326m impact of the Electricity Generator Levy, of which £285m is recorded in cost of sales and £41m within the share of profit after tax from associates.

Details of our forward hedging positions for 2024 and 2025 are outlined below:

	Volume hedged	2024 Average hedged price	Volume hedged	2025 Average hedged price
Spirit Energy	<b>443mmth</b>	<b>174p/th</b>	197mmth	139p/th
Nuclear	<b>5.4TWh</b>	<b>£153/MWh</b>	1.7TWh	£110/MWh



# KEY PERFORMANCE INDICATORS

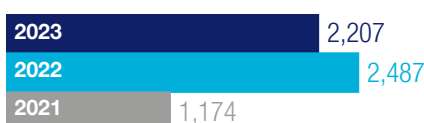
Our Key Performance Indicators (KPIs) help the Board and executive management team assess performance against our refreshed strategy laid out in July 2023.

- (i) See notes 2, 4 and 10 to the Financial Statements for definition and reconciliation of these measures.
- (ii) Net zero goal measures scope 1 (direct) and 2 (indirect) GHG emissions based on operator boundary. Comprises emissions from all operated assets and activities including the shipping of Liquefied Natural Gas alongside the retained Spirit Energy assets in the UK and the Netherlands. Non-operated nuclear emissions are excluded. Target is normalised to reflect acquisitions and divestments in line with changes in Group structure against a 2019 base year of 2,132,680mtCO<sub>2</sub>e. It's also aligned to the Paris Agreement and based on science to limit global warming, corresponding to a well below 2°C pathway initially and 1.5°C by mid-century. 2022 restated due to availability of improved data.

[READ MORE ABOUT OUR STRATEGY REFRESH ON PAGES 10 TO 11](#)

[READ MORE ABOUT OUR FINANCIAL PERFORMANCE ON PAGES 18 TO 21](#)

## Group free cash flow from continuing operations (£m)<sup>(i)</sup>



Free cash flow from continuing operations is the Group's primary measure of cash flow. It reflects the cash generation of the business after taking into account the need to continue to invest.

Free cash flow decreased by 11% reflecting the reduction in Group adjusted operating profit and an increase in taxes paid, largely related to 2022 profits. These impacts were partially offset by working capital inflows compared with outflows in 2022, with inflows in Centrica Energy as 2022 profits converted to cash more than offsetting outflows in British Gas Energy, largely related to the impact of falling commodity prices.

## Group adjusted operating profit from continuing operations (£m)<sup>(i)</sup>



Group adjusted operating profit from continuing operations is one of our fundamental financial measures,

Group adjusted operating profit fell 17% predominantly reflecting decreased profit in Upstream (part of our Infrastructure business), reflecting the sale of the Spirit Energy Norway assets and the introduction of the Electricity Generator Levy and in Centrica Energy reflecting lower energy price volatility. This was partially offset by increased profit in British Gas Energy, including the recovery of costs incurred in prior periods through the default tariff cap.

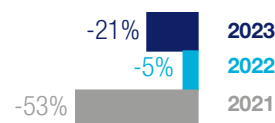
## Group adjusted basic earnings per share from continuing operations (EPS)<sup>(i)</sup>



EPS is a standard measure of corporate profitability. Adjusted EPS is used to measure the Group's underlying performance against its strategic financial framework.

Group adjusted basic EPS was down 4%, reflecting the decreased operating profit, partially offset by reduced finance costs with higher interest rates resulting in increased interest income on cash held and a lower effective tax rate due to the profit mix moving away from highly taxed gas production activities, as well as a reduction in the number of shares as a result of the share buyback programme.

## Total greenhouse gas (GHG) emissions – 40% reduction by 2034 and net zero by 2045 (base year 2019)<sup>(ii)</sup>



Getting to net zero is vital for our planet, which is why we have a green-focused investment strategy. Towards this, we cut our emissions by 21% from our 2019 base year, building on the 5% reduction achieved the previous year. Further gains were mainly driven by emission reductions from our Whitegate power station as well as our gas production operations. Overall, we've made positive progress against our long-term goal to be a net zero business by 2045 (see page 44).

### British Gas Services & Solutions – Services Engineer Net Promoter Score (NPS)<sup>(i)</sup>



Providing a great service is fundamental to our ability to attract and retain customers. With our focus on productivity and improved operational performance, we were able to provide a better service for customers. This led to our NPS rising by seven points.

### Total customers (m)<sup>(ii)</sup>



Our business exists to serve customers, who drive our growth. Following year-on-year gains, overall customer numbers remained stable with 0% change. This broadly reflects the challenging inflationary backdrop and cost of living pressures.

(i) Measured independently, through individual questionnaires, the customer's willingness to recommend British Gas following a gas engineer visit. For wider business unit NPS, see pages 23 to 25.

(ii) Includes British Gas Energy, British Gas Services & Solutions and Bord Gáis Energy households, as well as business customer sites in British Gas Energy and Centrica Business Solutions. 2022 restated due to availability of improved data. For business unit customer numbers, see pages 23 to 25.

(iii) Colleague engagement methodology has changed from percentage favourable to an average score out of 10, measuring how colleagues feel about the Company. We are unable to provide a 2021 comparison due to the change in methodology.

[READ MORE ABOUT OUR NON-FINANCIAL PERFORMANCE ON PAGES 41 TO 55 AND 249 TO 251](#)

### Total recordable injury frequency rate (TRIFR)



Keeping colleagues and customers safe is essential to running our business responsibly. We therefore maintain a strong safety culture through preventative initiatives including manual handling, safe driving and winter readiness training. As a result, our TRIFR per 200,000 hours reduced by 25%. Incidents mainly related to slips, trips and musculoskeletal injuries.

### Colleague engagement<sup>(iii)</sup>



Having an engaged and motivated team is key to our success because colleagues are the beating heart of our business. Through our continued focus on creating a more inclusive and supportive place to work whilst connecting colleagues with our purpose and strategy, colleague engagement improved by 0.3 points to 7.7, which is approaching top quartile performance for our sector.

# OUR PRINCIPAL RISKS AND UNCERTAINTIES

We manage risks to support our Group strategy.

## RISK MANAGEMENT

In the following pages, we set out an overview of Centrica's risk management framework. Our Principal Risks and the Group's risk appetite is expressed in relation to our four categories of risk: Strategic, Operational, Financial and Compliance.

## RISK MANAGEMENT AND INTERNAL CONTROL

Centrica's Group Enterprise Risk and Internal Controls Framework remains a core element of the Group's Governance Model which is set out below. The most significant Principal Risks to the Group are set out on pages 30 to 34, in order of magnitude to the Group.

## RISK APPETITE

The Board is ultimately responsible for aligning the risk appetite of the Group with our long-term strategic objectives, taking into account the emerging and Principal Risks. Risk appetites for the categories of Strategic, Operational, Financial and Compliance risks are in place and the key risks within Centrica's Risk Universe have been mapped into these categories.

Due to the industry and the nature of some of the markets in which the Group operates, we have high to moderate risk appetites for our strategic and operational risks. However, we have a minimal risk appetite for operational safety risk and we continue to strive for an incident-free workplace. For financial risks we adopt a conservative approach to manage our liquidity position and balance sheet strength. However, due to the higher risks inherent in managing the commodity and weather variables within our energy supply businesses, we accept a higher appetite for those elements of financial market risk. We are committed to operating our businesses in compliance with relevant laws and regulations.

Risks are identified and assessed at a Business Unit (BU) level to determine impact and likelihood, with an appropriate risk response subsequently evaluated and implemented. The different risk responses are:

- Terminate: cease the activity that creates the risk;
- Transfer: pass the risk to another party;
- Tolerate: accept a level of risk;
- Treat: act to reduce the likelihood or impact of risk.

During BU and Group risk reviews, the net residual risk scores are compared to the Group risk appetite to review the adequacy of existing mitigating actions/controls, with further action taken to control and monitor risks as required.

## RISK FRAMEWORK

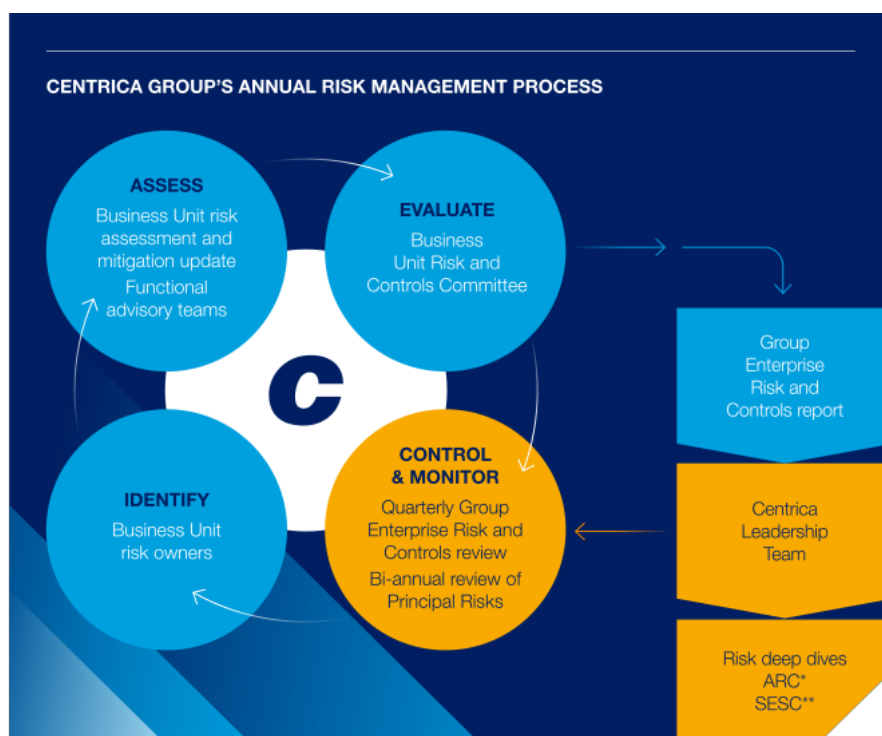
Day-to-day ownership of risk sits with business management under the regular scrutiny of the Centrica Leadership Team (CLT) to whom the Board has delegated principal responsibility for risk oversight. The Group Principal Risks are those which could potentially impact delivery of our strategic objectives over the medium to long term, where medium term is up to three years, as determined through our strategic planning process. The annual risk management process is summarised in the diagram below.

## QUARTERLY BUSINESS UNIT RISK REVIEWS

- Each BU is responsible for identifying and assessing its significant risks with support from functional subject matter experts. Current and emerging risks and issues are reviewed quarterly by the BU leadership teams;
- The finalised risk reporting and assessment of each BU's control environment is then discussed at a Group Risk and Controls Review for each BU. The meetings are chaired by the Group Chief Financial Officer;
- At these quarterly reviews, recent assurance reports and findings from internal audits and other assurance reviews are discussed. Actions from previous audits and assurance reviews are tracked to ensure close out in line with agreed timescales.

## EXECUTIVE AND BOARD COMMITTEE REVIEWS

- Bi-annually the Group Principal Risks are presented to the CLT for review and challenge.
- These include the aggregate risk assessments from the BU 'bottom-up' process and any Group-level risk assessments.



\* Audit and Risk Committee (ARC).

\*\* Safety, Environment and Sustainability Committee (SESC).

- The Group Principal Risk profile, as reviewed by the CLT, is presented to the Audit and Risk Committee (ARC) for review;
- Internal Audit presents four times a year to the ARC on any material findings as a result of independent assurance work;
- Risk deep dives are undertaken by the ARC and Safety, Environment and Sustainability Committee (SESC) to review high priority risks, ad-hoc topics and emerging matters.

In our assessment of viability, we consider the potential impact of 'severe but plausible' risks and note linkages to the Group Principal Risks as described on pages 35 to 37. The annual viability assessment has been presented to and approved by the ARC.

## BOARD

- The Board receives adequate information to review risk as part of its strategy review process and during the year conducted a robust assessment of the Company's emerging and Principal Risks;
- At the year-end the Board reviewed and approved the Principal Risk and Uncertainties disclosure;
- We evaluate our System of Risk Management and Control annually, which is supported by a certification of controls and adherence to Group policies by senior management.

## CHANGES IN RISK CLIMATE

BUs and Functions review their risks and report key changes as part of their Business Performance and Risk Reviews. Major emerging risks and issues are escalated immediately. During 2023 no new material risks were identified but a number of Group-level areas of risk were closely monitored, and actions taken to mitigate their impact on the Group.

### *Inflation and cost of living*

The cost of living crisis continued in 2023, with food, fuel and energy prices remaining high. In October 2023 the fall in the energy price cap enabled by falls in wholesale energy prices helped to reduce the Consumer Price Inflation rate to 4.7%, compared to a high of 11.1% in October 2022. In November 2023, Ofgem announced that from 1 January 2024 the energy price cap will be set at an annual level of £1,928 (previously £1,834, a 5% rise) for a dual fuel household paying by direct debit based on typical consumption. This may result in further pressure on household bills.

The Energy Bills Support Scheme and the Energy Bills Relief Scheme, both of which were introduced by the Government in 2022 have concluded. The Government has committed to the Energy Price Guarantee (EPG) remaining in place until the end of March 2024 should energy prices increase above £3,000 per year. The Ofgem price cap is lower than the EPG. Government support is focused on aligning costs for comparable prepayment meter (PPM) and direct debit customers, ensuring that PPM users no longer

pay a premium for their energy. For eligible non-domestic customers, the Energy Bills Discount scheme is in place until March 2024.

The impact of the Government support schemes is considered in the bad debt provision (see note 17), which is also factored into the Going Concern review.

### *Energy market*

Global wholesale energy prices have reduced since their peaks in 2022, however European gas and power prices remain above historical averages. While the war in Ukraine continues, alternative sources of gas to replace the Nord Stream 1 pipeline have been secured across Europe, largely through Liquefied Natural Gas (LNG) shipped from outside the European continent. The Gaza conflict has the potential to increase market volatility if wider Middle Eastern states are caught up in the conflict.

The gas storage capacity for Rough has been increased from 30 to 54 bn cubic feet of gas, and Ofgem (the UK regulator) has agreed to extend the exemption to negotiated third-party access until April 2030. The strategic goal for Rough is to act as one of the world's largest natural gas and hydrogen storage facilities and to play a key part of energy security infrastructure within Great Britain and the wider European market.

Centrica has concluded a 15-year LNG off-take agreement with Delfin Midstream. The additional 1m tonnes per annum of LNG will provide another key foundation to ensuring energy security whilst providing Centrica with increased optimisation capacity from 2029.

A Risk Capital Steering methodology has been developed to bolster our existing robust monitoring and to improve our ability to react to changes in our Financial risks.

### *Government and regulatory intervention*

In the November 2023 Autumn Statement, the Government announced it will legislate for a new investment exemption for the Electricity Generator Levy (EGL). The EGL is a temporary 45% levy on receipts from the production of nuclear and renewable electricity sold at an average price in excess of £75/MWh applicable from 1 January 2023 to 31 March 2028. We are reviewing the Government's technical note on the new investment exemption and developing our approach on how to implement.

Other announcements impacting the Energy sector include £1,000 off electricity bills for a decade for those living near energy infrastructure such as pylons or onshore turbines; committing the Electricity System Operator to work with Government to produce a new Strategic Spatial Energy Plan; introducing competition into onshore electricity networks in 2024 to benefit consumers and confirmation from the Chancellor that full expensing for certain capital expenditure will be made permanent for businesses, and will not expire in 2026.

The Government will commit £4.5bn to strategic investment in UK manufacturing over

the next five years and this includes a £2bn investment in the zero-emissions vehicle sector. A further £960m will be made available for new green industry growth, focusing on Carbon Capture Utilisation, Electricity Networks, Hydrogen, Nuclear and Offshore Wind.

Additionally in November 2023, the Government and Ofgem jointly published a Connections Action Plan, setting out a series of reforms to the process for connecting generation projects to the transmission network, with substantial progress expected in 2025 at the latest.

We will review the measures announced in the Autumn Statement and the Connections Action plan and the potential risks and opportunities they present to the Group.

Environmental, Social and Governance (ESG) management and reporting requirements are being developed at the UK, EU and international level. We continue to sustain our focus on ESG matters and on meeting our corresponding reporting obligations.

We await the outcome of a General Election in 2024 and are in close contact with the main political parties to understand their policies on overall governance of the energy industry, taxation, storage and net zero (including transport infrastructure for hydrogen) and will monitor to assess the impact of any change in Government.

The Financial Reporting Council published an updated UK Corporate Governance Code in January 2024. We are already working to improve our Governance, control frameworks and assurance policies and will ensure this work aligns with the latest requirements.

### *Technology*

We continue to invest in our Finance systems to improve our controls, reduce duplication and manual intervention, and the risk of errors or omissions. We are strategically replacing or integrating our Trading and SAP ERP systems.

In British Gas Energy, 5m customers have been migrated to our new energy platform. This is strategically critical to reduce our cost to serve and deliver a quality service to energy customers at a competitive price.

Deployment of the Simplified Integrated Planning and Dispatch system (SIPD) and Supply Chain Transformation in our Services business is also key to transforming our service to customers, allowing us to better meet customer demand through streamlined processes, increased efficiency and improved responsiveness to customer needs.

This has not led to any changes in Principal Risks, but transformation risk will be monitored within the BUs and functions as these technology changes are delivered and embedded.

## PRINCIPAL RISKS

The following Principal Risks were adopted by the Board in 2023 and reflect the position of the Group at the point of signing the accounts. The risks are presented in order of highest to lowest magnitude to the Group based on net residual risk, after mitigations. The Risk Climate is the expected change in the risk landscape from the previous year's risk review, based on the environment and controls in place.

### CREDIT AND LIQUIDITY RISK

#### Overview

##### Risk Category — Financial

Risk of financial loss due to counterparty/customer/third party default or a credit event limiting the availability of financial facilities or unsecured credit lines

- Hedging commodity price risk in the markets exposes Centrica to (i) credit risk, which is the risk of a loss if a counterparty fails to perform on its obligations or (ii) liquidity risk when trades on exchange or with margining agreements result in collateral postings
- Trending directional price moves can lead to a build-up of mark to market positions which is a key component of credit and liquidity risk
- Volatile commodity markets can also increase cash and working capital requirements for both ourselves and our counterparties (with the latter increasing the risk that one of our counterparties fails to perform and consequently increases the risk of contagion)
- Further information is included in the S3: Financial risk management section within the Supplementary Information to the Financial Statements
- Cost of living, higher levels of fuel poverty, and relatively high inflation are impacting customers' ability to pay for their energy supply, which means overall customer bad debt has notably increased. This has been further impacted by Ofgem's moratorium on the installation of prepayment meters (PPMs) under warrant (in place from February 2023 to January 2024). BG Energy are considering the timescales and permissions required in order to restart this activity

#### Mitigations

- Financial risks reviewed regularly in dedicated Risk Committee forums
- Credit risk teams actively manage and reduce credit exposures, taking account of liquidity considerations
- Credit mitigation instruments negotiated, as needed, including guarantees, and letters of credit and/or tenor and volume restrictions imposed to avoid exposures building
- Centrica Energy and Group Treasury work closely to monitor liquidity requirements under normal and stressed market conditions
- Capital Reporting is distributed to CLT members monthly and bi-annually to the Board, who agree a risk capital buffer to underpin Centrica's strategy
- Access to diversified sources of committed and uncommitted liquidity
- Monitoring of forecast versus actual customer debt position, and review of the bad debt provision
- Increased bad debt risk from the restrictions on fitting prepayment meters under warrant is partly mitigated through additional support processes to help customers to repay their debt

#### Developments

- Market prices persist at levels higher than historical averages, albeit lower than 2022 record highs
- Credit exposures have significantly reduced from 2022 levels and stand within the Group Credit Risk limits
- The higher interest rate environment has adversely affected some smaller sized, highly leveraged counterparties. These exposures are being actively monitored through the various credit review forums
- In 2023, the multi-year committed credit facilities which are provided by Centrica's relationship banks were successfully refinanced
- Sources of liquidity have been increased and diversified over the year in response to the volatile energy markets witnessed in 2022
- In British Gas Energy the planned implementation of an end-to-end debt management system in H1 2024 will help to manage and respond to energy customer debt

#### RISK CLIMATE

**DETERIORATED**

### MARKET RISK

#### Overview

##### Risk Category — Financial

Risk of financial loss due to trends and volatilities in commodity prices

- Commodity exposure arises within the trading businesses, which provide a route to market for Centrica's upstream/infrastructure and power generation operations, sourcing of electricity and gas for the Group's energy supply businesses and proprietary trading activities. We also have commodity exposures driven by our LNG portfolio, and in particular the Cheniere contract
- Material movements in commodity prices can impact in-year P&L through revenue on sale of asset production, and impact on the long-term valuation of asset portfolios
- Hedging commodity price risk in the markets exposes Centrica to supply shock, an unexpected event that changes the supply of a commodity, resulting in a sudden change in price
- Changes in our customer demand requirements can result in a commodity exposure as we balance our established hedges at market prices

#### Mitigations

- Review of hedging policies in bi-annual Group Risk Hedging Policy Committee
- The monthly Downstream Energy Margin Meeting is a forum for all relevant parties to review demand forecasting performance, hedge positions, risk and P&L, with actions recorded and tracked to completion
- Hedging decisions and risk are agenda items at the monthly Finance Performance Reviews across the Group
- Financial risks reviewed regularly in dedicated Risk Committee forums, financial risk reporting is monitored against limits on a daily basis in Centrica Energy

#### Developments

- Prices and volatilities have reduced but remain elevated versus historical averages
- Optimisations to the Route to Market process ensure that hedging decisions are made and executed efficiently
- The financial impact of outage risk associated with the output of upstream/infrastructure assets remains high due to the higher price environment and the ageing asset infrastructure

#### RISK CLIMATE

**IMPROVED**



## WEATHER RISK

### Overview

#### Risk Category – Financial

The impact on present or future profitability resulting from volume impacts as a result of deviation to normal weather

- Downstream is exposed to revenue loss in warm weather which may be compounded by selling hedges at a loss
- When commodity prices are higher than the energy price cap allowance and the risk exposure is primarily to cold weather, additional volumes may be required for downstream customers at a cost higher than can be recharged

#### Mitigations

- Dynamic hedging strategy approved by the Group Chief Executive, to reduce the exposure to high price and cold weather risk
- Options to mitigate weather risk in British Gas Energy, to narrow the range of gross margin outcomes, are reviewed ahead of winter seasons with decision rights held by the Group Chief Executive
- The monthly Downstream Energy Margin Meeting is a forum for all relevant parties to review weather impact and hedging proposals and performance, with actions recorded and tracked to completion
- Regular reviews ensure there is adequate access to liquidity in stressed cold weather scenarios

#### Developments

- Higher European gas storage levels have helped to mitigate the risk of winter supply shocks
- The risk is skewed to warm weather affecting revenue generation by the downstream business together with potential losses from selling back hedges

## RISK CLIMATE

**STABLE**

## POLITICAL, LEGAL, REGULATORY OR ETHICAL INTERVENTION/COMPLIANCE

### Overview

#### Risk Category – Compliance/Strategic

The risk of political or regulatory intervention and changes, failure to comply with laws and regulations, or greater regulatory scrutiny detecting unknown areas of non-compliance

- The level of regulatory scrutiny particularly in relation to the retail energy supply and insurance businesses in the UK remains significant; driven by a heightened political focus on the cost of living challenges for many consumers against the backdrop of an impending election
- Increased focus on ESG interventions and the impact on investor confidence in our responses
- Material or sustained non-compliance with legal or regulatory obligations could lead to financial penalties, reputational damage, customer churn and/or legal and/or regulatory action
- Any material real or perceived failure to follow Our Code would undermine trust in our business

#### Mitigations

- Continuous engagement with policy makers and consumer groups to help form future regulatory requirements
- Dedicated Corporate Affairs and Regulatory teams which examine upcoming political and regulatory changes and their impact, with reporting to the Centrica Leadership Team on an ongoing basis
- Understanding the expectations of stakeholders through reputational surveys and the review of media sentiment
- Continuous dialogue with Ofgem and the FCA to influence the regulatory environment
- The Board sets the tone from the top through Our Code and leadership behaviours
- Regulatory compliance monitoring activities performed by dedicated teams to drive Group-wide consistency and quality
- The Energy Compliance team has built capability in Energy Assurance to support the business with meeting complex regulatory requirements
- Control frameworks in place to deliver customer experience in line with requirements over sales compliance, billing, retentions, customer correspondence and complaints handling. These are regularly reviewed by relevant leadership teams through KPIs
- The Financial Crime team monitors threats throughout the business and adequacy of response to the threat of bribery and corruption
- Our Code employee annual training represents our commitment to doing the right thing and acting with integrity. The training includes new mandatory topics such as Consumer Duty and a refresher on all topic areas covered by our code of conduct
- A global 'Speak Up' helpline exists to provide a consistent Group-wide approach to reporting unethical behaviour

#### Developments

- Keeping pace with the volume, speed of implementation and complexity of political and regulatory change impacting the Group has proved challenging
- Ofgem will run a broad Compliance programme in 2024, including customer service complaints, direct debits and prepayment meter installation obligations
- New licence obligations introduced regarding installation of prepayment meters for reasons of debt. Ofgem is overseeing the process for a controlled 'restart'
- Power granted to the Electricity System Operator to remove unviable projects from the grid connections queues
- We continue to advocate for a revised policy framework for Smart meters with Ofgem and Government
- Ofgem's non-domestic market review is concluding, focused on improving transparency. Broker conduct remains a concern, with Ofgem seeking powers to regulate this sector directly
- Centrica Energy is impacted by a number of regulatory changes to MiFID (Markets in Financial Instruments Directive), Remit (EU Regulation on Wholesale Energy Market Integrity and Transparency) and EMIR (European Market Infrastructure Regulation)
- Centrica Energy investing in a Compliance Transformation Programme to respond to regulatory risks and improve Governance and controls frameworks

## RISK CLIMATE

**DETERIORATED**

## CLIMATE CHANGE

### Overview

#### Risk Category — Strategic

Risk of market, regulatory and policy changes driven by climate change affecting the ability of the Group to execute its strategy

- Increased pressure from Government, investors and customers to commit to meaningful carbon reduction targets
- Execution of the Group's strategy to realise opportunities from the energy transition
- Timing and execution of British Gas pivot to decarbonised heating, power and transport products and services
- ESG management and reporting requirements are being developed at the UK, EU and international level and many have defined timelines in which Centrica, or its subsidiary businesses, will be legally obligated
- Increased focus on 'greenwashing' and greater rigour on how organisations market low carbon products and propositions

#### Mitigations

- Monitoring of progress against People and Planet targets including net zero targets for our business and our customers
- Centrica's Climate Transition Plan which outlines our approach to move to a low carbon future, published in 2021, will be updated in 2024 and subject to a non-binding vote at the 2025 AGM
- Progress against our Climate Transition Plan has been incorporated into executive remuneration
- The SESC, which is chaired by an independent Non-Executive Director, typically reviews climate change information and the Climate Transition Dashboard three times a year. The SESC additionally maintains oversight over material climate-related matters
- We have achieved full compliance in our 2023 Task Force on Climate-related Financial Disclosures (TCFD) reporting, reflected in pages 47 to 55
- New Business and Net Zero lines of business and Centrica Business Solutions develop innovative and competitive products and propositions to gain a significant footprint in the growing low carbon market
- Green Claims Principles have been developed and implemented to manage 'greenwashing' risk across the Group

#### Developments

- Continued geopolitical focus on COP28 and on how corporations respond to climate change
- The Government has extended the deadlines for both the phase-out of gas boilers and the ban on petrol/diesel vehicles to 2035 and increased the grant for Heat Pump installations by £2.5k to £7.5k
- The European Corporate Social Responsibility Directive (CSRD) aims to create a sustainable economy for the EU. The CSRD requirements are broader in scope, complexity and granularity of reporting on ESG matters and require assurance activity

In July 2023 the Group announced a new Investment Plan, to invest between £600m–£800m a year until 2028 in renewable generation, security and flexibility of supply, and our customers. Our investment strategy will channel capital investment to realise investment opportunities from moving to a low carbon future. Examples of low carbon energy projects include:

- Solar farm at Codford and battery storage development at Brigg
- Hydrogen initiatives include a partnership with HiiROC, testing injection at Brigg
- Centrica Energy Storage+ is investing to support potential repurposing of the Rough asset for production and hydrogen storage
- Spirit Energy is exploring the feasibility of converting the Morecambe gas terminal to a Carbon Capture Storage asset and has been awarded a carbon storage licence in 2023
- British Gas has published a second net zero homes index to understand public sentiment and to develop relevant products and solutions

## RISK CLIMATE

STABLE

## CUSTOMER

### Overview

#### Risk Category — Operational/Strategic

Failure to deliver satisfactory customer service leading to complaints or loss of customers

- Cost of living, higher levels of fuel poverty and relatively high inflation are impacting customers' ability to pay for their energy supply, overall customer bad debt has notably increased. This has been further impacted by Ofgem's moratorium on the installation of PPMs under warrant (in place from February 2023 to January 2024). British Gas Energy are considering the timescales and permissions to restart this activity
- Increased call volumes driven by Ofgem Price Cap changes and the Government's EBRS and EBSS schemes concluding
- British Gas Services & Solutions peak services demand exceeding engineer capacity
- Bord Gáis Energy continue to operate in a highly competitive landscape with expected political and customer pressure to reduce prices further in Q1 2024

#### Mitigations

- Customer facing business units focusing on complaints reduction, root cause analysis and understanding customer pain points
- Customer Conduct Boards provide oversight to minimise customer detriment, complaints and regulatory action
- British Gas Services & Solutions continues to build delivery capacity measures through optimised planning and forecasting methodologies, and winter resilience activity incorporating lessons learnt from 2022
- Continued deployment of SIPD
- British Gas Energy's ongoing recruitment of frontline colleagues to maintain adequate attrition and recruitment levels with the aim of increasing the level of onshore Customer Service teams; and the introduction of 'blended' working patterns and multi-skilling

#### Developments

- The energy crisis and customer affordability challenges, continue to drive unprecedented levels of customer contact
- British Gas Energy and Bord Gáis Energy has more than doubled its energy support package in 2023 compared to 2022, which now totals £140m since the start of the energy crisis, and includes dedicated support for customers with PPMs in the UK (see page 6 and 16 for more)

British Gas Energy:

- PeakSave, the National Grid's discount scheme to manage peak demand has been extended to Winter 2023/2024. The scheme rewards customers for using less electricity at peak times

British Gas Services & Solutions:

- Consumer Duty Embedding Program established to ensure ongoing product value for our customers
- Improvement activities focused on enhancing customer service include data analytics to enable us to respond to our customers more effectively

Bord Gáis:

- Domestic energy customers will receive further assistance from the Government, a new €450 electricity credit payment to be paid in three instalments from December 2023. The 9% VAT rate on electricity and gas will be extended for 12 months

## RISK CLIMATE

STABLE

## PEOPLE

### Overview

#### Risk Category — Operational

Risk of failure to attract, develop, engage and retain key talent

Risk of deterioration to the health and wellbeing of colleagues

- Failure to attract and retain key capabilities and safeguard the health and wellbeing of the workforce across the business could have a detrimental impact on our ability to meet our strategic objectives
- The cost of living crisis and inflation impact on colleague mental health and wellbeing
- Labour market shortages for key skills impacting retention in some BUs and locations

#### Mitigations

- Quarterly Performance Conversations in place as part of the Terms and Conditions governance framework
- Monitoring of key metrics including the Quarterly Employee Engagement index, absence and attrition rates. Proactive implementation of actions to support colleagues
- Tailored strategies in place to address localised retention and recruitment issues
- Succession planning continues locally with assessments of critical roles and people, rolling up to a conversation with the CLT and with the Board
- Diversity, Equity and Inclusion Action Plans by BU and Function to increase diversity of representation at senior levels, improve equity of opportunity and promote continuous behaviours
- Continuous focus on our values and culture aligned to our Purpose
- The Shadow Board provides a forum to engage with the CLT to influence decisions, positively disrupt assumptions, and challenge executives' thinking to support colleague-centred decision-making
- Open access to colleague-led employee networks, including working parents, fertility and carers networks, to build communities within Centrica

#### Developments

- Organisational change taking place to ensure our continued success and to help achieve growth through our net zero strategy. We will continue to monitor the impact on our colleagues via wellbeing and engagement data sources
- Externally, the Trade Union environment remains active across all sectors. There are numerous high-profile disputes relating to pay and the increased cost of living
- Internally, we are in negotiation for a full pay review to be implemented in March 2024. Discussions are ongoing; the outcome of this negotiation is currently unknown
- Following the introduction of FlexFirst during lockdown, we have committed to adopting a hybrid working approach
- A Centrica-wide working group continues to support colleagues with the cost of living crisis including the introduction of lifestyle savings
- Colleague Support Foundation successfully launched with charity status and is supporting colleagues that need financial help and have exhausted other means
- As part of our ongoing commitment to Diversity, Equity and Inclusion, we have launched Courageous Conversations about Race training to provide colleagues with the foundation to start their journey in helping us become an anti-racist organisation

## RISK CLIMATE

STABLE

## SAFETY

### Overview

#### Risk Category — Operational

Risk of occupational, transportation, customer/third-party fatality or injury due to safety hazards

- Our operations have the potential to result in personal harm
- Significant Health, Safety and Environment (HSE) events could have regulatory, financial and reputational repercussions that would adversely affect some or all our brands and businesses

#### Mitigations

- Regular review of HSE risks to ensure they are reduced to as low as reasonably practicable
- Continued investment in training and competency to ensure maintenance of safe operating practices
- HSE Management Systems are established to include policies, standards and procedures to protect employees, third parties and our environment
- Assurance over our HSE processes and controls provided by our in-house HSE teams supported by external subject matter experts, where needed
- Leadership to drive improvements in HSE maturity and continuous improvement in key metrics
- Our approach to customer visits is continually reviewed to ensure that employees are operating in line with Government guidelines and/or industry best practices and that the health and safety of employees and customers is maintained

#### Developments

Management is enhancing existing HSE frameworks to respond to changing risks as the Group strategy evolves to include the following activities:

- The continued operation of Rough as a storage facility and potential repurposing for hydrogen production and storage
- The expansion of the services businesses
- Development of new peaking plants in the UK & Ireland
- Construction of a battery storage project at Brigg
- Ongoing trial with HiiROC (a Green Technology company) to inject hydrogen into a gas peaking plant at Brigg

## RISK CLIMATE

STABLE

## CYBER

### Overview

#### Risk Category — Operational/Compliance

Risk of failure to prevent impacts from denial of service, cyber espionage and the related theft/disclosure of confidential/customer data leading to reputational, regulatory and financial impacts

A cyber-attack could present to Centrica as follows:

- Confidentiality: leakage of customer or company confidential data by threat actor, third party, staff or system error, either maliciously or by accident
- Integrity: inaccuracy of Centrica's data due to malicious or accidental alteration by internal or external parties, or malicious actors
- Availability: loss of assets, including data, due to a cyber compromise

Due to the diversity of Centrica's technology, the Group could suffer any or all of the above which could lead to:

- Regulatory compliance impact or fines, including but not limited to, General Data Protection Regulations (GDPR), Smart Metering obligations (Ofgem), Security of Network & Information Systems Regulations 2018 and enhanced NIS II

#### Mitigations

- Ongoing threat intelligence gathering, collaboration and information sharing with industry peers and National Cyber Security Centre
- The Cyber Security Change Programme builds security capabilities and improvements in controls that increase the difficulty of targeting Centrica and being able to exploit weaknesses without detection
- The Ransomware Programme has delivered improvements to enhance Centrica's ability to co-ordinate and recover from a ransomware attack
- Enhanced cyber controls dedicated to protecting operational technology (control systems used to manage domestic, commercial and industrial processes) have been implemented
- Training and awareness campaigns delivered to all employees in 2023 and focused training has been developed for key groups to raise awareness and highlight responsibilities in protecting data
- Cyber-attack simulations to identify and remediate control gaps

#### Developments

The current geopolitical situation and advancements in technology have increased the complexity of the external threat landscape. This can be attributed to several factors:

- Political instability in certain regions of the Middle East
- In Ukraine there have been several high-profile cyber-attacks on energy infrastructure
- The rapid pace of technological development has made it easier for cyber criminals to launch sophisticated attacks on all sectors including energy and utilities
- Artificial Intelligence (AI) poses a new threat to cyber security. The risk of misuse of AI to create complex attacks is expected to increase rapidly with AI tools becoming cheaper and more accessible
- The targeting of supply chains as a mechanism to attack firms by exploiting the trust between known suppliers
- The volume, sophistication and frequency of ransomware attacks has evolved, with the most catastrophic bringing down IT systems within very short timeframes, and in some circumstances leading to publication of exfiltrated data
- The increased connectivity of operational technology presents an opportunity for attackers that if exploited could cause major harm and disruption to industrial processes including processes in the energy sector

Our business strategy to expand to low carbon markets and help our customers toward net zero may increase our regulatory obligations in maintaining our cyber security posture, requiring enhanced Governance and external regulator oversight

#### RISK CLIMATE

**DETERIORATED**

## OPERATIONAL ASSET INTEGRITY

### Overview

#### Risk Category — Operational

Risk that impaired structural or asset integrity, resulting from any of a failure in design, failure in appropriate maintenance and inspection, operating outside of design conditions and/or human error, leads to a major accident (such as loss of containment of flammable/hazardous materials or structural collapse) that could result in multiple fatalities and/or major damage to the environment

- Failure to invest in the inspection, maintenance and development of our assets could result in significant safety issues, such as personal or environmental harm, or asset underperformance through unplanned outages
- Failure to capture adequate return on our nuclear investment due to operational issues or early station closures suppressing earnings and cash flows

#### Mitigations

- The Group Annual Plan includes contingencies to cover events such as unexpected outages from assets
- Group-wide minimum operational and safety standards are applied to all assets, whether operated or non-operated, and adherence against them is monitored and reported
- Maintenance activity and improvement programmes are conducted across the asset base to optimise effectiveness and maximise production levels
- We use our presence on the Board of EDF Energy Nuclear Generation Group Limited to monitor the performance of the nuclear fleet
- Continued investment in training to ensure maintenance of safe operating practices
- HSE Management Systems are established to include policies, standards and procedures to protect employees, third parties and our environment
- Continuous engagement with regulatory agencies such as the Environment Agency, North Sea Transition Authority and UK Health and Safety Executive
- Assurance over our HSE processes and controls provided by our in-house HSE teams supported by external subject matter experts, where needed

#### Developments

- The Whitegate Plant operated with strong availability and reliability in 2023. As the plant ages and we move to more flexible generation, plant reliability and safety risks will need to be carefully managed as the impact of any outages can be significant. A close focus on long-term asset integrity is required through proactive management, maintenance and investment
- Rough gas storage facility reopened in October 2022, with increased levels of inspection and ongoing maintenance. The Group Insurance team continues to discuss the cost and benefits of business interruption cover with relevant BUs
- The HSE Function works with the business to ensure effective HSE resources and competency operate consistently and effectively across the business
- Spirit Energy continues to focus on safely delivering production from existing assets; meeting and de-risking decommissioning obligations and pursuing strategic energy transition opportunities from existing assets
- The Nuclear fleet has performed well in 2023 with strong reliability metrics, although outage downside risks are binary and potentially significant. In March 2023, a two-year lifetime extension was announced in respect of Heysham 1/ Hartlepool. Our nuclear business has also announced an ambition to further extend the lives of the four generating Advanced Gas-cooled Reactor stations (Heysham 1&2, Hartlepool, Torness), subject to inspections and regulatory approvals. There is a strategic intention to extend our Pressurised Water Reactor station Sizewell by 20 years to 2055. The nuclear business continues to monitor performance and station lifetimes very carefully

#### RISK CLIMATE

**STABLE**

# ASSESSMENT OF VIABILITY

## REQUIREMENT

In accordance with provision 31 of the UK Corporate Governance Code the Directors have assessed the prospects and viability of the Group considering the business model (as set out in the Strategic Report on pages 2 to 3), current position in the context of liquidity and credit metrics of the Group, and Principal Risks.

## ASSESSMENT OF PROSPECTS

The assessment considers the current position of the Group, the Group's strategy, longer-term market trends and customer needs, and the Group's Principal Risks as well as forecast cash generation against long-term obligations to repay debt and fund the defined benefit pension schemes.

Our business model is designed to allow us to focus on meeting the changing energy supply, services and solutions needs of our customers, helping them transition to a lower carbon future while positioning ourselves to deliver returns for shareholders and meet our broader obligations to society over the long term.

Key factors in assessing the long-term prospects of the Group include the following:

### 1. The Group's competitive position today

Centrica has strong brands with large customer bases as the number one supplier in many of the markets in which it operates. In its core markets: British Gas Energy and British Gas Services & Solution are the largest residential energy supplier and home services provider in the UK; Bord Gáis Energy is the second largest residential energy supplier in Ireland; and the Centrica Energy business is a leading route to market services provider across Europe. Centrica also has the largest heating engineer workforce in the country who are highly trusted by our customers and well positioned to continue to support new fuels and technologies.

In assessing our prospects beyond the strategic planning period, the Board considers how these strengths position the Company to grow long term shareholder value.

### 2. Market trends affecting future prospects

- Commodity price volatility and its impact on the UK energy supply market;
- Cost of living crisis and its impact on our customers;
- Increasing progress and Government support for net zero, corporates committing to clear net zero targets;
- Competition remains intense with margins under pressure within our retail business, and we expect that may remain the case as the market emerges from the current crisis;
- Falling costs for battery, solar and wind, electric vehicles deployment accelerates, growing need for flexibility;
- Increasing LNG demand; and
- Role of data analytics, artificial intelligence, and automation increasingly important.

We continuously monitor emerging trends to proactively identify potential risks and strategically shape our investment approach where we could leverage a competitive advantage.

### 3. Customer needs

- Hassle-free, empathetic, personalised, and safe service. Offering solutions, not just products;
- Responsible options (including green tariffs) and expert guidance to help them achieve their net zero goals;
- Trusted and credible counterparty; and
- Lower costs and greater efficiency.

We put customers needs at the centre of everything we do and this is the core part of our strategy, as set out in the People and Planet and Strategic Report sections of this Annual Report and Accounts on pages 41 and 10 respectively.

### 4. The Group's strategic objectives

The Group's strategic purpose is to energise a greener, fairer future – because we believe in energy that works for colleagues, customers and communities, today and tomorrow, as set out on page 2 of this Annual Report and Accounts. This supports the assessment of the Group's prospects.

### 5. The Principal Risks facing the Group, as set are out on pages 28 to 34

The risks we consider to be of greatest significance in assessing our prospects include:

- Political or regulatory intervention, including increased focus on ESG interventions and responding to climate change;
- External risks associated with weather, commodity price movements and the cost of living crisis;
- Risk of financial loss due to counterparty default or a credit event limiting the availability of financial facilities or unsecured credit lines;
- Compromised asset production and health and safety impacts of process loss of containment; and
- Operational risks associated with the effectiveness of our internal control environment in relation to cyber risk, data protection and customer conduct.

Climate change is one of the most important drivers guiding Centrica's prospects today and is a core part of our Purpose as reflected by the actions we have taken, which include:

- We've outlined our plans for how we intend to decarbonise power, heat and transport through our Climate Transition Plan;
- We will continue to build out our green supply and solutions offerings for customers;
- We're training the next generation of apprentices to deliver low carbon technologies like heat pumps and electric vehicle chargers while exploring the future of hydrogen; and
- We're committed to capital investment of £600–800m per year until 2028, of which we are aiming for at least 50% into green taxonomy eligible projects as set out on pages 47 to 56.

Good progress has been made on managing the prospects of the Group during 2023. We continue to simplify our management structure and increase the proportion of our colleagues who interact directly with customers, enabling us to put customers at the heart of everything we do. In addition, our balance sheet is now much stronger than in previous years, with an improved adjusted net cash position as at 31 December 2023.

The Board has confidence in the long-term prospects of the business. The Board believes that the strategic steps taken in 2023 aligned with the Group's revised strategy as outlined in the July 2023 strategy update will set the Group up to be successful and generate sustainable profits in the long term while investing in renewable generation, security of supply and our customers.

## ASSESSMENT OF VIABILITY

The assessment is based on the Group Annual Plan for 2024 and the longer-term strategic forecasts which are approved annually by the Board. The Board continues to believe that a three-year time horizon is the appropriate timeframe to assess viability and is also consistent with the Group's planning cycle and the period of reasonable visibility in the energy markets. The Group's focus on the energy supply and services businesses means the most significant risks continue to be shorter-term in nature including, commodity prices, trading performance, margin cash requirements, weather, and asset performance.



Important context to the Viability Assessment is the management of the Group's financing profile through accessing a diverse source of term funding and maintaining access to carefully assessed levels of liquidity which support the Group's planned financial commitments. During 2023, Centrica successfully refinanced the core credit facilities with strong support from the relationship bank group. As at 31 December 2023, the Group had total committed credit facilities of £5.3bn, of which £0.2bn expire in 2024, £1.0bn expire in late 2026 and £4.1bn expire in 2028. Of the £5.3bn of committed credit facilities, a total of £3.8bn remained undrawn as at 31 December 2023.

While commodity prices have shown a notable decrease in volatility throughout 2023, and the Group anticipates a relatively stable trend in 2024, 2025, and 2026, it is crucial to acknowledge that in a setting characterised by erratic commodity prices, the Group's portfolio presents greater potential for value capture and outperformance. However, it comes with a considerably broader range of risk outcomes.

In such an environment, the pressure on liquidity intensifies, making it imperative for entities to focus on ensuring access to a reliable and diverse portfolio of financial resources.

In addition, the cost of living crisis continues. Although inflation has started to fall in 2023 it could remain elevated due to underlying pressures. As a result, the Group is exposed to elevated levels of bad debt as customers struggle to pay their bills.

To reflect the current volatility of risk factors, the Company has used judgement to determine severe but plausible scenarios and has modelled three versions of the Viability Assessment to give a high, base and low-price scenario. These scenarios reflect a range of reasonably possible increases or decreases in commodity prices due to market conditions. The price curves used for the high and low scenario are summarised right:

LOW PRICE ENVIRONMENT	2024	2025	2026
NBP (p/th)	69	68	68
Baseload Power (£/Mwh)	54	56	52
HIGH PRICE ENVIRONMENT	2024	2025	2026
NBP (p/th)	319	210	162
Baseload Power (£/Mwh)	245	189	134

Viability was initially assessed based on August 2023 prices. We have continued to monitor these price changes to ensure that our base, high and low curves remain appropriate and specifically whether our base assumptions remain within the high to low range. As a result of this exercise, the high and base price scenarios were not adjusted (as the base scenario remained within the high to low range).

Commodity prices for NBP have fallen sharply in January 2024 and consequently we have also completed a separate assessment based on an updated low curve to confirm that the Group remains viable in the event that both NBP and baseload power fell further.

REVISED LOW PRICE ENVIRONMENT	2024	2025	2026
NBP (p/th)	46	50	52
Baseload Power (£/Mwh)	47	44	44

The four scenarios share the same risks but, where relevant, the risks were flexed to reflect the Group's exposure in each scenario. We have modelled groups of risks within 'clusters'. It is not plausible that all risks would occur at the same time, and therefore each of the clusters is considered as a plausible combination of risks. The table below details the risk clustering and linkage to Principal Risks. Each of the clusters includes common risks throughout in addition to the risks associated with the cluster. The risks relating to commodity price, margin cash, bad debt, credit risk, cyber risk and letters of credit were selected as constant events in all four clusters.

RISK CLUSTER	RISK DESCRIPTION	LINKS TO PRINCIPAL RISKS	RISK >5% OF OPENING HEADROOM?*
Common risks	Commodity price impacts on earnings of asset-based businesses	Financial Markets – Market Risk	Yes / No
	Increased margin cash requirements arising from adverse market conditions	Financial Markets – Credit & Liquidity Risk Financial Markets – Market Risk	Yes / No
	Higher bad debt due to cost of living crisis	Financial Markets – Market Risk Financial Markets – Credit & Liquidity Risk	Yes / No
	Cyber-attack – risk of failure to prevent denial of service	Cyber	Yes / No
	Credit Risk: risk of financial loss due to counterparty default	Financial Markets – Credit & Liquidity Risk	Yes / No
	Removal of 25% of drawn uncommitted Letters of Credit	Financial Markets – Credit & Liquidity Risk	Yes / No
Cluster 1: Industrial & Regulatory	Regulatory risks in relation to loss of sensitive data	Political, Legal, Regulatory or Ethical Intervention/ Compliance	Yes / No
	Operational impact of sustained employee industrial action	People Customer	Yes / No
Cluster 2: Asset Performance	Significant disruption to the asset-based businesses leading to loss of production and earnings	Operational Asset Integrity Safety	Yes / No
Cluster 3: Adverse Retail Market	Significant adverse weather event and commodity price volatility	Financial Markets – Weather Risk	Yes / No
Cluster 4: Trading Business Under-performance	Underperformance of trading business	Financial Markets – Market Risk	Yes / No
See note below**	Increased collateral requirements arising from a single-notch credit rating downgrade	Financial Markets – Credit & Liquidity Risk	Yes / No

\* Headroom is calculated as undrawn committed facilities plus total liquid resources.

\*\* A credit rating downgrade risk has only been applied to scenarios where the stressed credit metrics indicate Centrica would be at significant risk of downgrade by the credit agencies.

Group-wide assumptions include:

- No material acquisitions or disposals of Group business areas; and
- An updated investments profile in line with the July 2023 strategy update;
- Centrica have a long-standing relationship bank group and successfully refinanced the committed credit facilities in 2023. As such, the Directors are confident in the ability of Centrica to refinance appropriate credit facilities; and
- Access to Commercial Paper and Debt Capital Markets as sources of liquidity.

## LIQUIDITY REQUIREMENTS

Centrica has established enhanced processes to manage and monitor liquidity requirements across the entire organisation with a focus on trading entities and possible increased cash margin requirements. These processes include:

- Monitoring reasonably possible scenarios for increased liquidity requirements because of changes in commodity prices and market conditions; and
- Ensuring Centrica maintains ample headroom to address reasonably anticipated liquidity needs throughout the Viability Assessment period. This entails ensuring flexibility in accessing debt capital markets and a range of additional resources as needed, including committed credit facilities, uncommitted letters of credit, commercial paper, and various other short-term funding options.

Centrica has also established enhanced governance measures to review liquidity forecasts under various scenarios and implement mitigating actions where appropriate.

Centrica uses sophisticated modelling and analysis of the volatile market conditions over the last two years, and market forward data to determine severe but plausible scenarios of the liquidity requirements of the whole Group. These include high and low-price scenarios which are reflected in the Viability Assessment. While these scenarios include assessing to stressed market conditions that may arise in the future, they will not necessarily predict future conditions given markets are volatile. Therefore, Centrica maintains and monitors the liquidity requirements across the business to ensure sufficient headroom is retained.

Regular assessments are performed of the credit worthiness of counterparties that Centrica trades with and pay and receive cash margin calls from. These include assessing the level of exposure to counterparties, monitoring and dynamically managing credit limits and arranging credit enhancements such as requiring letters of credit from financial institutions.

## OUTCOME OF VIABILITY ASSESSMENT

The viability scenarios have been assessed to confirm whether the Group would have sufficient liquidity available to meet its future planned financial commitments, and that the credit metrics calculated would not imply a sustained fall to below investment grade credit ratings (S&P BB+ and Moody's Ba1).

To reach a conclusion as to the Group's viability, the Directors have considered the following:

- The Directors considered whether any of the scenarios and clusters of risks noted above breached the available headroom in the three-year period and concluded that sufficient headroom was available in all scenarios; and
- The Directors considered whether any of the scenarios indicated a deterioration in the credit rating metrics which would lead to a two-notch downgrade, to sub-investment grade. They concluded that the Group has a reasonable expectation that its net debt ratios would continue to sustainably support investment grade ratings (at least BBB- for S&P, and at least Baa3 for Moody's) for all scenarios.

While mitigations were not required in any of the above scenarios to ensure the Group was viable, additional mitigations could be deployed to increase headroom and reduce the risk of a credit downgrade, including reductions in operational and capital expenditure.

Reverse Stress Testing identified that there are some extreme risks that could theoretically result in Centrica entering a position whereby its financial resources were insufficient to meet its liabilities as they fall due. However, given the current financial strength of the Company, the combination of events required to achieve this scenario is extremely unlikely to occur. We therefore believe that these risks do not represent a 'severe but plausible' threat to the viability of the Company.

## CONCLUSION

The Directors have considered all the above factors in their assessment of viability, including the availability of mitigating actions within their control if one of the scenarios above materialises. We have performed sensitivity analysis that enables the Directors to confirm that they have a reasonable expectation of the Group's ability to continue to operate and meet its liabilities, as they fall due, over a period of at least three years.

## GROUP CHIEF PEOPLE OFFICER'S REPORT



**Jill Shedden MBE** | Group Chief People Officer

2023 has been another extraordinary year for Centrica. I am really proud of what all our colleagues have achieved together to adapt to changing business needs and to support our customers and each other throughout the year. We believe our culture is a unique one, with our 'caring' and 'delivery' values standing out.

Amongst our many successes we've donated and fundraised £4 million to make a big difference to charitable causes we all care passionately about across our local communities. We are helping colleagues and customers as much as possible with ongoing energy and cost of living issues. We continued with our returns to shareholders which will also benefit the majority of our colleagues who are or will become shareholders due to our Global Profit Share award.

### COLLEAGUE ENGAGEMENT

I am delighted that colleague engagement has continued to improve quarter on quarter improving by 0.3 points to 7.7 by the end of the year, which is just below top quartile performance for our sector. Our engaged workforce is also working alongside other business initiatives to continue improvements in our customer satisfaction journey, and we can see confidence in our products and services rising.

Our People function has made a huge contribution to Centrica as we have partnered change in the business, and our positive colleague engagement scores illustrate our colleagues' appreciation for the strong and supportive culture within Centrica.

### LISTENING TO OUR PEOPLE

The Shadow Board is a Centrica Leadership Team sponsored initiative introduced in 2021. The Shadow Board comprises ten colleagues, each with different knowledge and experience, and all from different business units and functions and at different levels across the Group. The Shadow Board provides an opportunity for the views of colleagues to positively challenge assumptions and influence decisions by offering a colleague perspective on a range of topics, including those of a strategic nature. The Shadow Board is not expected to deliver outcomes independently.

One key outcome that led from feedback from this process between the CLT and the Shadow Board is the closer relationship that has been actively developed between our networks and our British Gas Field colleagues.

### DEVELOPING NEW CAPABILITIES

During 2023 we also made some leadership appointments which will support the growth of our businesses and achieve a cleaner, greener future. The new business of 'New Business and Net Zero' will continue to build our in-home net zero offering to residential customers and ensure that all of us at Centrica continue to play a leading role in the energy transition. Our new Chief Customer Officer role will strengthen the voice of our customers, continuously pushing the team to create a customer experience that promotes loyalty and retention for new and existing customers. In the wider workforce, we continued to grow our professional capability during 2023 with over 1,000 professional colleagues joining our Group. Our award winning Graduate & Summer Placement Programme and our Ex-Forces Pathway programme supports our People Strategy and our Workforce for the Future aspirations and demands.

Career mobility and developing our internal talent is critical and we have a consistent, future-focused Talent Framework and Talent Review approach in place which enables all people managers to better understand team strengths of today and development for tomorrow.

We continue to secure our net zero commitments by investing in our customer facing teams and our training academies. This includes building skills for today and the future in purpose-built locations and driving new apprenticeship pathways, giving us the opportunity to serve our customers with up to date skills and technologies.

## COLLEAGUE NETWORKS

I am incredibly proud that we have a number of active colleague-led networks that operate across Centrica. Our networks cover areas such as gender, sexual orientation, family, community, disability, health and wellbeing and ethnicity.

We have over ten employee-led networks and we are proud of what our employee networks are achieving. They play a key role in partnering with the organisation to drive change and make our workplace a more inclusive place for our people to thrive in and be themselves.

**Centrica Forces Network** is a group of colleagues across all areas of Centrica who have either served in, or are serving reservists in the Armed Forces, or have an interest in being part of a community that supports these groups of colleagues. The objective is to create a diverse community that supports veterans and reservists within Centrica ensuring that we become an employer of choice for these groups. The network has had some great success with its Armed Forces pathway which brings talented veterans, serving reservists, those about to leave the armed forces, military spouses, and partners into our Group. We are delighted that our Forces network has recently been shortlisted for Employee Network of the Year at the British Diversity Awards.

**Our Carers Network** is a support group where colleagues are able to connect with others (who may or may not be carers) who can share ideas and information about any aspect of caring. Centrica has a long and proud history of supporting colleagues who are juggling work and care and 2024 will be the Carers Network's 20th anniversary. We were the first company to earn Carers UK's 'Carer Confident Ambassador' accreditation and we have maintained this high standard since with an industry-leading Carers Leave Policy. I am proud that Centrica's values for caring shine through in all that we do.

## LOOKING AFTER COLLEAGUES AND THEIR LOVED ONES

Health, safety and wellbeing are part of everything we do. We believe providing education, tools, resources, and benefits to support these key priorities, can lead to a healthier, happier workforce and a more prosperous workplace.

Centrica is focused on our colleagues being able to speak openly about the issues affecting their personal lives, as we know that not only is the support important to their mental and physical wellbeing, but that it is beneficial to retention and productivity. Looking after wellbeing is not about making drastic changes but rather implementing healthy habits that can help colleagues

manage everyday stressors better. We do our utmost to create an environment and culture where looking after wellbeing comes naturally and is integrated into the way we operate.

Our healthcare plan which is available to all colleagues includes many wellbeing benefits, such as nutritional advice, physical health, emotional wellbeing, menopause support, giving peace of mind to colleagues and their families.

## PROACTIVE HEALTH

We have a proactive wellbeing programme with the aim to raise awareness of difficult and taboo subjects. We have run multiple events on menopause, men's mental health, suicide and mental wellbeing with colleagues, experts and GP's attending and sharing experiences and recommending practical actions to support, which have been attended by thousands of colleagues. We have ongoing reporting across many health metrics which allows us to see any trends, concerns and improvements. These insights drive our action planning for the future.

## LOOKING AFTER OUR COLLEAGUES THROUGH THE RISING COST OF LIVING

During 2023 our colleagues have continued to face the cost of living crisis, it is important that we support our colleagues during this time. We have increased our colleague energy allowance to pay a proportion of the energy price cap. Furthermore, with inflation hitting all aspects of life, we introduced a new charitable trust 'The Colleague Support Foundation'.

This gives access to funds in time of financial need. Since our launch in July 2023, we have supported over 100 colleagues and paid out c.£100k. The payments range from supporting colleagues with the funeral cost of a loved one or covering food costs to feed their families. Colleagues do not have to pay the money back.

## SHARE IN THE COMPANY'S SUCCESS

In 2023 we granted a further Global Profit Share award to all colleagues, relating to our profits in 2022. The award was made in shares so our colleagues share in our success as we continue to grow our business. We will be making another profit share award in shares in 2024, relating to our 2023 profit.

# 100+

Colleagues supported by  
The Colleague Support Foundation

# 20,044

Colleagues who received a profit share  
payment in 2023.

## OUR PATHWAY TO PARENTHOOD & PROACTIVE HEALTH

In June 2023 we launched our biggest support package yet to help our colleagues who are struggling with fertility. Our 'Pathway to Parenthood' package, which is available to all our UK employees as part of their healthcare plan, offers comprehensive financial support towards fertility treatment. This can be used for IUI, IVF, and egg or sperm donation and storage. It can also be used to cover costs for adoption or surrogacy. Additionally, we offer colleagues five days paid leave for their fertility treatment, adoption, or surrogacy appointments per year. We are already seeing the positive impact that the package is making, helping our employees feel supported whilst they go through huge changes in their personal lives.

We have a suite of health and wellbeing resources and benefits, including our 120+ strong Mental Health First Aider Network, Wellbeing app, 24-hour access to a GP and a 24-hour emotional support line. We provide Mental Health Training for Leaders and have added two wellbeing vans to our wellbeing portfolio this year allowing us to get out and visit our remote workers to provide health and wellbeing consultations where they conduct 'Know your numbers' tests, functional movement screening and emotional signposting.



## WHAT OUR COLLEAGUES SAY ABOUT HEALTH AND WELLBEING AT CENTRICA

“ Thank you for arranging the webinar, it was truly appreciated. I felt privileged to work at Centrica and came away from the call feeling so engaged and motivated. I felt I learned strategies to help myself and others which is fantastic.”



“ I found this very interesting from various perspectives. I am a manager, a parent to a daughter who struggles with anxiety and having never suffered with anxiety myself the menopause has started to produce anxiety symptoms. It is great how much support Centrica offer around mental health.”

“ I am very grateful to Centrica for providing such an informative session on menopause and embracing the subject. This is a subject that gets brushed under the carpet in so many organisations so thank you Centrica.”



“ Really pleased to have these sessions to continue the conversations on women’s health and menopause. It helps reduce the stigma in workplace and helps to know, that as a woman, you have a support network.”



“ This topic is very close to me both professionally and personally. I found the training very useful and opened my eyes on a few aspects of life that I will be more considerate on.”




## PEOPLE AND PLANET

Creating a more inclusive and sustainable future that supports communities, our planet and each other.

Our People & Planet Plan consists of five Group-wide goals that accelerate action on issues that matter deeply to our business and society, and where we're well-placed to make a world of difference – from achieving net zero and creating the diverse and inclusive team we need to get there, to contributing to the communities we're all part of.

In 2023, we made really positive progress toward the majority of our goals but we're behind on others (see pages 42 to 44). This is partly because transformation takes time, and partly because we re-focused efforts to help customers and communities through the energy crisis which has been a top priority. Consequently since 2022, we've donated £140 million to support people with their energy bills.

With the plans we have in place, we're confident we'll get back on track to meet our goals in the years ahead. Central to this will be continuing to work closely with key stakeholders like colleagues, communities and governments, to help progress our goals and manage wider activities responsibly. In doing so, we can deliver on our Purpose of energising a greener, fairer future, whilst contributing positively to the United Nations Sustainable Development Goals (SDGs).

 **READ MORE ABOUT OUR PEOPLE & PLANET PLAN, CLIMATE TRANSITION PLAN, SDGs AND MORE AT [CENTRICA.COM/PEOPLEANDPLANET](https://centrica.com/peopleandplanet)**

 **READ MORE ABOUT OUR NON-FINANCIAL KPIS ON PAGES 249 TO 251**

**“I’m really proud of what we’ve achieved through our People & Planet Plan and beyond – whether that’s doing more than any other energy supplier to help consumers with their energy bills, or creating a pipeline of flexible and low carbon assets that provide the energy we need today and through the energy transition. The road ahead won’t be easy but I’m excited to be energising a greener, fairer future.”**

**Chris O’Shea** | Group Chief Executive

### OUR PEOPLE & PLANET PLAN

*Supporting communities, our planet and each other*



#### PEOPLE

Supporting every colleague to be themselves to better serve our customers and communities.

##### WE WANT TO:

- Create an engaged team that reflects the full diversity of the communities we serve by 2030<sup>(1)</sup>
- Recruit 3,500 apprentices and provide career development opportunities for under-represented groups by 2030 (2,000 apprentices by the end of 2025)

- Inspire colleagues to give 100,000 days to build inclusive communities by 2030 (35,000 days by the end of 2025)



#### PLANET

Supporting every customer to live more sustainably.

##### WE WANT TO:

- Help our customers be net zero by 2050 (28% greenhouse gas intensity reduction by the end of 2030)
- Be a net zero business by 2045 (40% greenhouse gas reduction by the end of 2034)

#### DOING BUSINESS RESPONSIBLY

Underpinned by strong foundations to ensure we act fairly and ethically – from customer service to human rights

(1) All company and senior leaders to reflect latest 2021 Census data for working populations. This means 48% women, 18% ethnically diverse, 20% disability, 3% LGBTQ+ and 4% ex-service by 2030 (40% women, 16% ethnically diverse, 10% disability, 3% LGBTQ+ and 3% ex-service by the end of 2025).



## PEOPLE

Supporting every colleague to be themselves to better serve our customers and communities.

## GOAL 1

### By 2030, we want to:

Create an engaged team that reflects the full diversity of the communities we serve – this means all company and senior leaders to be 48% women, 18% ethnically diverse, 20% disability, 3% LGBTQ+ and 4% ex-service<sup>(1)</sup>

### 2023 PROGRESS

Progress against goals: ● On track ● Behind

	ALL COMPANY <sup>(2)</sup>	SENIOR LEADERS <sup>(2)</sup>
Women	30% ●	32% ●
– Excluding Field engineers	41% ●	32% ●
Ethnically diverse	15% ●	9% ●
Disability	3% ●	2% ●
LGBTQ+	3% ●	2% ●
Ex-service	2% ●	2% ●

(1) Updated at the start of 2023 to align with newly released 2021 Census data for working populations. We aim to be 40% women, 16% ethnically diverse, 10% disability, 3% LGBTQ+ and 3% ex-service by the end of 2025.

(2) Beyond gender, data is based on voluntary disclosure of 74% ethnic diversity, 45% disability, 51% LGBTQ+ and 3% ex-service. All company relates to everyone who works for Centrica. Senior leaders include colleagues above general management and spans senior leaders, the Centrica Leadership Team and the Board.

To build a more sustainable future, we need the best team – a diverse mix of people and skills, where different thoughts and ideas can grow, and where everyone feels welcome and able to succeed.

Towards this in 2021, our leadership team shared an open letter with colleagues that set out our plan for attracting, promoting and retaining more diverse talent. Since then, we've seen strong progress as better recruitment and retention practices provided an initial boost to the majority of our diversity goals which improved by up to 4%.

Our performance in 2023 has, however, remained relatively static and indicates that it may take time to deliver systemic change across our business and society. In particular, diversifying senior levels and growing disability representation are areas for us to work on. Attracting more women into engineering is also challenging given our large Field engineering team reflects the existing male-dominated market, which impacts our overall Group performance that would otherwise be on track. We're taking action which includes:

- further embedding tailored Diversity, Equity and Inclusion (DE&I) Action Plans and dashboards for each business, with progress reviewed quarterly to drive improvement and accountability;
- expanding talent development programmes to over 150 colleagues from under-represented groups whilst embedding succession planning and diverse shortlisting to strengthen our senior leadership team;

- inspiring more women into engineering through apprenticeships (see goal 2) as we grow diversity among our wider team;
- rolling-out Courageous Conversations about Race training to educate colleagues and make them feel confident to challenge unacceptable behaviour;
- creating a Great Minds programme for launch in 2024 that will help normalise and better support neurodiverse colleagues, whilst encouraging more colleagues to disclose if they have a disability; and
- helping carers better balance work with caring. We extended our industry-leading Carers Leave Policy to colleagues in Ireland which provides up to six week's paid leave when matched with annual leave. And thanks to joint campaigning with Carers UK, all working carers in the UK will now receive statutory carers leave following Royal Assent of the bill.

Through these activities and more (see pages 38 to 40), we've received external recognition for our efforts including earning a place in The Times Top 50 Employers for Gender Equality.

In 2024, we'll continue to embed our DE&I Action Plans, with a particular focus on improving the representation of colleagues who are women, ethnically diverse or have a disability. We'll also encourage colleagues to share who they are via our ongoing #ThisIsMe campaign, which will enable us to target action and track progress more effectively.

“I enjoyed six years in the military but I was ready for a new adventure. So having embarked on an apprenticeship with British Gas two years ago, I'm pleased to now be a fully qualified engineer. During this transition, the wrap-around support has been invaluable and it's enabled me to be at my best when helping customers with their energy.”

**Amy Gray** | British Gas  
Smart Energy Engineer

### WIDER GENDER BREAKDOWN<sup>(3)</sup>

	2023		2022	
	Women	Men	Women	Men
Board	5 (42%)	7 (58%)	4 (44%)	5 (56%)
Senior executives and direct reports	27 (34%)	52 (66%)	24 (33%)	49 (67%)
Senior leaders	136 (32%)	287 (68%)	117 (33%)	243 (67%)
All company	6,221 (30%)	14,398 (70%)	5,938 (30%)	14,190 (70%)

(3) Relates to everyone who works for Centrica. Total headcount differs from elsewhere in the report as Spirit Energy are not included above. See page 81 for more on Board diversity.

## GOAL 2

### By 2030, we want to:

Recruit 3,500 apprentices and provide career development opportunities for under-represented groups (2,000 apprentices by the end of 2025)<sup>(1)</sup>

#### 2023 PROGRESS

Progress against goals: ● On track ● Behind

Apprentices **1,198** ●

(1) Base year 2021.

To provide the best service for customers and get to net zero, we need to create thousands of high-quality jobs. To fill these roles, there's a huge opportunity to tap into the talent of under-represented groups to deliver a greener and fairer future. So we've committed to hire an apprentice every day over the next decade.

Since 2021, we've recruited 1,198 apprentices and helped over 750 trainees professionally qualify in areas like gas and whitegoods. This is slightly behind where we wanted to be as we slowed recruitment in 2023 to focus on operational stability across our customer-facing business. As a result, we welcomed 165 apprentices to our team last year. Less hiring opportunity also impacted our Ex-Forces Pathway programme which got off to a flying start in 2022 but meant that by the end of 2023, 227 people had been hired against our rolling ambition to recruit 500 veterans, reservists, spouses and partners, so it will continue into 2024-25.

Meanwhile, progress against our ambition for women to make up 50% of our Smart Energy Apprentices, dipped from 20% to 14% but remains much higher than the national gas engineer average of 0.2% women. In 2024, we'll continue to breakdown stereotypes and inspire more diversity in engineering through recruitment, marketing and volunteering campaigns as we work to diversify our wider team too. This includes ramping up our apprenticeship intake which we hope will get us back on track in the years ahead.

We're also encouraging more young people to choose a career in energy. For example, we're supporting Tech She Can's educational programme, Tech We Can, which has directly reached over 60,000 students.

## GOAL 3

### By 2030, we want to:

Give 100,000 days to build inclusive communities (35,000 days by the end of 2025)<sup>(2)</sup>

#### 2023 PROGRESS

Progress against goals: ● On track ● Behind

Days **20,383** ●

(2) Base year 2019.

We're harnessing the passion of our people to build inclusive communities because strong communities are central to a more sustainable future. It's also a great way to help colleagues develop skills and improve engagement.

Although COVID-19 and the energy crisis impacted volunteering in recent years, volunteering has grown from strength-to-strength and is now on track having reached 20,383 days since 2019. As part of this, colleagues gave 7,228 days in 2023. This far exceeded our annual plan of 4,000 days which had been based on doubling our 2022 performance.

Substantive gains were largely made possible by fully embedding team targets at the start of the year to help drive and plan volunteering activity, whilst expanding volunteering opportunities via 'The Big Difference', which is inspiring colleagues to get involved in local causes they care passionately about.

To maintain momentum, we'll continue to expand volunteering opportunities in 2024 including via our Get Set for Positive Energy schools partnership with Team GB and ParalympicsGB. This will stand us in good stead for the annual step-up required in the years ahead, which will see us move from 1 in 4 colleagues volunteering in 2023 to 1 in 3 by 2030.

Alongside volunteering, we support our communities with donations and fundraising focused in three key areas – helping people with their energy today, building a more sustainable energy future for tomorrow, and making a big difference in our local communities everyday. Towards these causes, we invested over £500 million in total community contributions during 2023<sup>(3)</sup>.

(3) Comprises £409.44 million in mandatory and £88.08 million in voluntary contributions to support vulnerable customers and colleagues which includes the Warm Home Discount and Energy Company Obligation amongst others, alongside £4.05 million in charitable donations.

## SOME OF THE WAYS WE MADE A DIFFERENCE IN 2023



# 10

New community organisations helped on the journey to net zero through our Energy for Tomorrow social impact fund, which has an annual budget of up to £600,000 and has supported 36 initiatives to date

# >800

Good causes supported through The Big Difference in 2023 – our £2 million local community fund that supports organisations like The Baby Bank in Windsor and the Children's Hospices Across Scotland

# £140m

Cumulatively donated in energy bill support since 2022 to help customers through the energy crisis, which in 2023 included an additional £84 million being committed in the UK for distribution mainly via British Gas and the British Gas Energy Trust

In Ireland during 2023, we donated €3 million in energy bill support managed by Bord Gáis Energy and charity partners like Focus Ireland, and we absorbed higher energy costs over the first half of the year

# €432k

Donated and fundraised during the year to help prevent family homelessness via our €4.4 million partnership with Focus Ireland, which has helped nearly 8,400 family cases since 2015





## PLANET

Supporting every customer to live more sustainably.

### GOAL 4

#### By 2050, we want to:

Help our customers be net zero (28% GHG intensity reduction by the end of 2030)<sup>(1)</sup>

#### 2023 PROGRESS

Progress against goals: ● On track ● Behind

Reduction **10%** ●

(1) Net zero goal measures the greenhouse gas (GHG) intensity of our customers' energy use including electricity and gas with a 2019 base year of 183gCO<sub>2</sub>e/kWh, normalised to reflect acquisitions and divestments in line with changes in Group customer base. Target aligned to the Paris Agreement and based on science to limit global warming, corresponding to a well below 2°C pathway initially and 1.5°C by mid-century.

The biggest thing we can do to tackle climate change, is to help our customers use energy more sustainably. This is because around 90% of our total GHG emissions (scope 1, 2 and 3), come from the gas and electricity provided to customers (scope 3). In 2023, we provided energy, services and solutions that cut the GHG intensity of the energy our customers use by 10% against the 2019 base year – equivalent to the annual emissions of more than 860,000 homes. Savings were predominantly driven by our renewable and low carbon energy tariffs alongside energy efficiency and optimisation solutions like air source heat pumps and Hive Active Heating. This was up from the 6% reduction achieved in 2022 and was largely due to a rise in the zero-carbon content of our reported electricity fuel mix, which improved by 5% to 80% compared to the UK national average of 55%.

In 2023, we helped our customers progress their journey to net zero by supporting them with measures to decarbonise power, heat and transport by:

- introducing market-leading incentives that encourage the adoption of low carbon technologies – whether that's offering heat pump price and performance guarantees, or providing free electric vehicle (EV) charging for a year with the purchase of a Hive charger;
- delivering around 3,000 heat pumps for the able to pay market and via the Energy Company Obligation (ECO);
- cumulatively installing over 34,000 EV charging points since 2013; and

- launching PeakSave Sundays which has encouraged over 500,000 customers to shift their energy use away from peak demand to reduce pressure on the grid, with the reward of cutting costs as well as emissions.

## 13.0GW

Route-to-market for renewables under our management – enough to power around 12 million homes

Whilst we currently purchase energy certificates such as Renewable Energy Guarantees of Origin and Nuclear Declarations to back both our green and standard tariffs, we'll review whether that's the right thing for our customers and our business in 2024. We're acutely aware that the debate around the value of these certificates is evolving, with recent research studies and broader expert opinion, identifying a number of issues such as the risk that certificates do not incentivise the building of additional renewable or zero carbon power generation. We'll engage a range of stakeholders on our approach and provide an update in due course.

In the meantime as set out in our Climate Transition Plan (see pages 52 and 54), we'll continue to help customers reduce their emissions by focusing on energy efficiency and optimisation services alongside low carbon technologies and cleaner energy.

### GOAL 5

#### By 2045, we want to:

Be a net zero business (40% GHG reduction by the end of 2034)<sup>(2)</sup>

#### 2023 PROGRESS

Progress against goals: ● On track ● Behind

Reduction **21%** ●

(2) Net zero goal measures scope 1 (direct) and 2 (indirect) GHG emissions based on operator boundary. Comprises emissions from all operated assets and activities including the shipping of Liquefied Natural Gas (LNG) alongside the retained Spirit Energy assets in the UK and Netherlands. Non-operated nuclear emissions are excluded. Target is normalised to reflect acquisitions and divestments in line with changes in Group structure against a 2019 base year of 2,132,680mtCO<sub>2</sub>e. It's also aligned to the Paris Agreement and based on science to limit global warming, corresponding to a well below 2°C pathway initially and 1.5°C by mid-century.

Meaningful progress has been made against our net zero target in 2023, with our total GHG emissions reducing by 21% against the 2019 base year. This was up from the 5% reduction delivered in 2022 and was largely driven by reduced emissions from our Whitegate power station as well as our gas production operations. Sustainable savings were also secured via the gradual roll-out of our EV road fleet and across our property portfolio with lower occupancy being driven by FlexFirst, which lets colleagues choose when they want to work from home or come into the office.

Although we're currently ahead of the glidepath for our net zero target, like many energy companies, our journey to net zero won't be a linear one. This is because we operate in a challenging geopolitical environment where security of supply is a real risk for consumers and as a leading supplier of energy in the UK and Ireland, we have a responsibility to ensure they have the energy they need. Towards this, we increased LNG activity and began work on two new 100MW flexible peaking gas-fired power plants in Ireland which will come online in 2024. Whilst these investments will play an important role in securing a more affordable supply of energy as well as providing flexible power to back-up intermittent renewables, they are predicted to cause our emissions to rise from 2024 before they come back down again around 2027. With general consensus being that gas will be essential during the energy transition until at least the mid-2030s, our action is in line with what's needed, although it does make our pathway to net zero more challenging in the short term. All of our gas peaking plants will, however, be capable of running on hydrogen when hydrogen is available which will help us meet our goal in the medium to long term, which we expect to do.

Alongside these activities, we'll continue to drive wider emissions out of our business and identify opportunities wherever possible to support the adoption of lower carbon energy for customers via our Climate Transition Plan – from securing up to 800MW of low carbon and transition assets by 2025 which includes solar, battery storage and flexible generation, to exploring the conversion of our Rough gas storage facility to store hydrogen and more (see pages 52 and 54).

## 70%

Our GHG emission reduction over the last decade<sup>(3)</sup>

(3) Represents our gross reductions. This differs from our net zero goal which is normalised for acquisitions and divestments against the base year.



## OUR FOUNDATIONS

Our People & Planet Plan is underpinned by strong foundations that ensure we act fairly and ethically.

### CUSTOMERS

We've taken decisive steps to secure a stronger service for customers. For example, in 2023, we invested in engineer training and customer service systems, whilst recruiting 700 additional customer contact roles in the UK as part of our aim to move all call centre resource onshore. Compared to 2022, these operational improvements have contributed to our British Gas Services Engineer Net Promoter Score (NPS) rising by seven points to +71 and our British Gas Energy Touchpoint NPS gaining four points to +17, alongside a reduction in complaints. In Bord Gáis Energy complaints similarly reduced over the course of the year but against a backdrop of challenging conditions, our Journey NPS declined by one point to +18 despite a five point improvement in the second half of 2023. Meanwhile, at Centrica Business Solutions, customer concern for high energy bills and complexity relating to government support schemes led to an increase in complaints. Despite this, customer service delivery remained strong with energy supply Touchpoint NPS improving by one point to +32. See pages 23 to 24 for more.

In recognition that energy bills remain a worry, we continued to help customers through the energy crisis. In 2023, we more than doubled our energy support fund to total £140 million, which is the largest voluntary support package provided by an energy supplier in the UK and Ireland. Since 2022, this has enabled meaningful advice and grants to be provided to customers struggling with their energy bills whilst providing help at the heart of communities (see pages 16 and 43).

### COLLEAGUES

It's important that colleagues feel safe, engaged and rewarded. Although we had no colleague fatalities in 2023, a member of the public tragically lost their life in a road traffic accident involving one of our Dyno Franchisees. We also had one Tier 1 process safety gas release at a Spirit Energy asset, resulting in our process safety incident frequency rate increasing from zero to 0.09 per 200,000 hours worked. Our total

recordable injury frequency rate did, however, improve by 25% to 0.84 per 200,000 hours worked (see page 27). We continue to focus on keeping safety front-of-mind by reinforcing a strong safety culture, which in 2023 included improving new starter, safety and role-specific training.

Alongside physical health, we're always mindful of wider wellbeing. So we ran campaigns that talked about the importance of being open about mental health whilst encouraging use of our comprehensive suite of support which includes a company-funded benefit healthcare plan for all, a wellbeing app, and our 100-strong network of mental health first aiders. In recognition of the cost of living crisis, we also introduced a Colleague Support Foundation to provide dedicated money advice and grants (see page 39). The CCLA continued to rank us a leader for our approach and disclosure on mental health.

We maintained focus on fair reward practices – from paying at least the Real Living Wage in the UK and upholding equal pay, to working to reduce pay gaps. Our gender pay gap continued to be largely driven by more men working in higher paid jobs like engineering, coupled with more women working in valued but lower paid jobs such as customer service. In 2023, our median gender pay gap improved by 9% to 14%. Our ethnicity pay gap, which we publish voluntarily, is due to similar factors as the gender pay gap, and increased by 1% to 11% median. We're fully committed to reducing our pay gaps over time as we help transform our business, sector and society (see pages 42 to 43).

Action like this is important to colleague engagement. In 2023, our engagement score improved by 0.3 points to 7.7, with gains driven by the value we place on recognition and growing our colleagues, as well as a stronger belief in our purpose and strategy. This was on track with our annual goal and is approaching top quartile performance for our sector. With engagement being fundamental to our productivity and our success, we'll target top quartile performance in 2024 by striving to provide a more inclusive and fulfilling place to work.

### COMMUNITIES AND ETHICS

Our Code and Our Values set out the standards we expect for anyone who works for us or with us. This ensures we operate with integrity and in a way that benefits our communities.

At the heart of Our Code is our commitment to uphold and protect human rights. We therefore take action to ensure colleagues and workers in our supply chain are safeguarded from abuses through activities like risk-based training and ongoing due diligence, alongside monitoring of supplier selection and renewal. If suppliers receive a high-risk rating relating to the country where they operate or the products/services provided, we consider appropriate action which may involve

conducting a third-party audit to better understand the level of risk. Where concerns are identified, we work with suppliers to raise standards, and if they can't or won't improve, we may end the relationship and report any abuse.

In 2023, we ramped up our audit programme by conducting 20 on-the-ground site inspections and over 6,500 remote worker surveys. These spanned workwear and manufacturing as well as solar panels, battery systems, smart meters and wider electrical products across Bangladesh, Cambodia, China, Hong Kong, India, Pakistan, the Netherlands and the UK. Whilst we've not identified any specific instances of modern slavery, we agreed 142 improvement opportunities with suppliers to help raise standards across labour as well as health and safety practices. The majority of actions have now been completed and the rest are planned to finalise in 2024. As part of our due diligence and monitoring across supplier selection and contract renewals, we also ensured compliance with sanctions on Russia.

Our Code additionally provides clear guidance on bribery and corruption. We prohibit any improper payments, including facilitation payments regardless of value or jurisdiction, and exchange gifts and hospitality responsibly, declaring them on a register. Anti-bribery training is also provided for higher risk roles and our Financial Crime team run third-party risk management screening. A register is used to record and manage potential or actual conflicts of interest.

During 2023, 96% of colleagues completed refresher training on Our Code and confirmed they'd uphold its principles. If anyone suspects Our Code is being contravened, we provide a confidential 24/7 Speak Up helpline. In 2023, we had 1.4 reports of concern per 100 colleagues which broadly aligns with the external benchmark of 1.5, demonstrating that colleagues feel safe to speak up. Reports mainly related to perceived unfair treatment and fraud. All reports were investigated by the Ethics and Compliance team, with quarterly monitoring via the Safety, Environment and Sustainability Committee as well as the Audit and Risk Committee, with matters as appropriate, brought to the attention of the Board.

 **READ MORE IN OUR MODERN SLAVERY STATEMENT AT [CENTRICA.COM/MODERNSLAVERY](https://centrica.com/modernslavery)**

### ENVIRONMENT

Monitoring and managing our wider environmental impact is crucial. Our water consumption remained relatively steady during 2022-23, increasing by 6% to 335,512m<sup>3</sup>. Waste decreased by 19% to 15,161 tonnes due to a reduction in decommissioning works and process enhancements in 2023 compared to 2022.

# NON-FINANCIAL AND SUSTAINABILITY INFORMATION STATEMENT

In line with the Non-Financial Reporting Directive and Companies Act 2006, we have set out where the relevant information we need to report against can be located.

This includes an explanation of the relevant Group policies which relate to the stated matters below, together with an overall summary of their effectiveness, including specific examples of how the policies are implemented alongside due diligence processes conducted and associated outcomes.

Reporting requirement	Section
<b>Business model</b>	Our Strategy & Business Model – Pages 9-11
<b>Reporting requirement and policy position</b> Our Code sets out our position on key issues by providing a high-level summary of key policies that form the foundation for how we do business.  <a href="https://centrica.com/ourcode">READ MORE AT CENTRICA.COM/OURCODE</a>	<b>Due diligence and outcome</b>
<b>Colleagues</b> Our policy states that we work collaboratively to create a workplace that has a respectful and inclusive culture whilst offering fair reward and recognition. We're also committed to working safely and provide proactive support to ensure colleagues' health and wellbeing.	<ul style="list-style-type: none"> <li>o Group Chief Executive's Statement – Page 8</li> <li>o Stakeholder Engagement – Pages 15 and 17</li> <li>o Principal Risks and Uncertainties: People, Safety and Operational Asset Integrity – Pages 33 to 34</li> <li>o Group Chief People Officer's Report – Pages 38 to 40</li> <li>o People and Planet – Pages 42 to 43 and 45</li> <li>o Key Performance Indicators (KPIs) – Pages 27, 39, 42 to 43, 45 and 249 to 250</li> </ul>
<b>Environmental matters</b> This policy sets out that we endeavour to understand, manage and reduce our environmental impact. Towards this, we will play our part in the transition to net zero.	<ul style="list-style-type: none"> <li>o Chair's Statement – Page 5</li> <li>o Group Chief Executive's Statement – Page 8</li> <li>o Business Model and Market Trends – Pages 10 to 13</li> <li>o Stakeholder Engagement – Pages 15 to 17</li> <li>o Business Review – Pages 24 to 25</li> <li>o Principal Risks and Uncertainties: Energy Market, Government and regulatory intervention, Weather, Political, Legal, Regulatory or Ethical Intervention/Compliance, Operational Asset Integrity and Climate Change – Pages 29, 31 to 32 and 34</li> <li>o People and Planet including TCFD – Pages 44 to 45 and 47 to 55</li> <li>o KPIs – Pages 24 to 26, 44 to 45, 53 to 54, 249 and 251</li> </ul>
<b>Social matters</b> Our policy states that we will treat all of our customers fairly. As part of this, we strive to provide services and solutions that meet their needs as well as care for customers who need extra support. We also want to make a big difference by helping to create more inclusive and sustainable communities. We partner with community and charity organisations on key issues and inspire colleagues to volunteer and fundraise.	<ul style="list-style-type: none"> <li>o Chair's Statement – Pages 4 to 5</li> <li>o Group Chief Executive's Statement – Pages 6 to 7</li> <li>o Stakeholder Engagement – Pages 15 to 17</li> <li>o Business Review – Pages 23 to 24</li> <li>o Principal Risks and Uncertainties: Inflation and cost of living, Technology, Customer, Political, Legal, Regulatory or Ethical Intervention/Compliance, Cyber and Safety – Pages 29, 31 to 32 and 34</li> <li>o People and Planet – Pages 43 to 45 and 52</li> <li>o KPIs – Pages 23 to 24, 27, 43, 45 and 250 to 251</li> </ul>
<b>Human rights</b> This policy commits that wherever we work in the world, we respect and uphold the fundamental human rights and freedoms of everyone who works for us or with us.	<ul style="list-style-type: none"> <li>o Stakeholder Engagement – Page 15 to 16</li> <li>o Principal Risks and Uncertainties: Political, Legal, Regulatory or Ethical Intervention/Compliance and Safety – Pages 31 and 33</li> <li>o People and Planet – Page 45</li> <li>o KPIs – Pages 45 and 251</li> </ul>
<b>Anti-bribery and corruption</b> Our policy commits us to working with integrity, within the laws and regulations of all the countries in which we operate and in accordance with recognised international standards. This includes not offering or accepting bribes or other corrupt practices. We will not tolerate any form of bribery or corruption from suppliers or others.	<ul style="list-style-type: none"> <li>o People and Planet – Page 45</li> <li>o Principal Risks and Uncertainties: Political, Legal, Regulatory or Ethical Intervention/Compliance – Page 31</li> <li>o Based on materiality, KPIs specific to anti-bribery and corruption are not reported externally.</li> </ul>

## TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

Climate change requires urgent action. As an energy, services and solutions company, we have an essential role in helping our customers, communities and our business get to net zero.

It's important that we analyse and report what we're doing to effectively manage the impact of climate-related risks and opportunities across our business (see our Business Model on pages 10 to 11). That's why since 2020, we've chosen to structure our reporting around the Task Force on Climate-related Financial Disclosures (TCFD) recommendations (see page 55), to drive greater transparency and action on climate-related matters. Whilst we've achieved full compliance for the third year running in our 2023 reporting, we'll endeavour to continuously improve across all TCFD disclosure requirements to ensure we stay abreast of evolving best practice and stakeholder feedback.

### GOVERNANCE

As tackling climate change is at the heart of our purpose and strategy, climate change is a key issue for the Board. Governance is therefore embedded across the full breadth of our business, with the Board supported in its duty to oversee climate-related matters via a series of Board-level and executive-level committees (see governance diagram overleaf). In 2023, climate matters were reviewed by the Board and its Committees in a number of meetings including at all three meetings of the Safety, Environment and Sustainability Committee as well as via the annual Board strategy review. This was complemented by further embedding net zero criteria in our Group investment framework and into strategic planning processes (see page 50).

To aid the Board in overseeing climate change matters and in managing regular engagement on the issue with stakeholders like investors, government and regulators, it's vital the Board have the collective skills required. Consequently, the Board continuously seeks to strengthen capabilities on climate change across energy, regulation, geopolitics and technology, to reduce risk and maximise opportunities. To assess capability, the Board has 'climate change and sustainability' as one of the 11 criteria used in the Skills Matrix, spanning climate science, climate risk and mitigation, alongside evolving stakeholder expectations. In 2023, 60% of the Board were identified as having these competencies which enables us to effectively govern climate matters and we aim to strengthen this even further in the future. To support and grow capability in 2023, the Board underwent deep-dive sessions run by internal and external experts on greenwashing, evolving Environment, Social and Governance (ESG) regulations and responsible sourcing.

Effectiveness in tackling climate change is incorporated in our remuneration scheme for Executive Directors via the 'Restricted Share Plan' (RSP). Vesting is subject to an underpin determined by the Remuneration Committee, whereby the Committee assesses performance across a range of financial and non-financial KPIs, including our Climate Transition Dashboard alongside any material risk of regulatory failures (see pages 85 to 87). The RSP vests every three years with the first vesting period due at the end of 2024.

Our approach to governance and disclosure is strongly influenced by the materiality of ESG matters which includes climate-related issues. To understand what's important and what's not, we assess the impact of these issues on our stakeholders as well as on our business. To do this, we undertake research and conduct direct engagement with stakeholders (see page 15) whilst applying our TCFD financial materiality thresholds. Through identification of our material issues together with associated laws and regulations, management teams can then ensure the necessary processes are in place to effectively measure, manage, mitigate and disclose. We recognise that stakeholder needs and the regulatory landscape are continuously evolving, so we remain agile and adjust our approach in line with expectations.

### LISTING RULE COMPLIANCE

We've complied with the requirements of LR 9.8.6R, by including climate-related financial disclosures that are consistent with the four TCFD pillars and the 11 recommended disclosures that are set out on page 55.

**TCFD** | TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

Our climate-related financial disclosures additionally comply with the requirements of the Companies Act 2006, as amended by the Companies (Strategic Report) (Climate-related Financial Disclosure) Regulations 2022.

## A DIAGRAM OF OUR CLIMATE GOVERNANCE

### The Board

Has ultimate responsibility for climate change and delegates authority to its Committees

- Sets strategy for People and Planet matters including climate change
- Reviews strategic and financial planning to ensure integration of climate considerations as we transition to net zero
- Oversees progress against climate targets and ambitions, whilst ensuring related risks and opportunities are managed effectively
- Approves People and Planet annual reporting
- Chaired by Scott Wheway with attendance including the Group Chief Executive, who has overall accountability for climate change and regularly attends Committee meetings as well as chairs the CLT

[READ MORE ON PAGES 57 TO 71](#)

Challenge

Report

### Our Committees

Provides challenge and reviews updates from senior leaders, with outputs shared with the Board

#### Safety, Environment and Sustainability Committee (SESC)

- Meets three times a year and is primarily responsible for supporting the Board in overseeing climate change
- Assesses and approves proposals relating to net zero targets and the Climate Transition Plan, whilst monitoring progress alongside risks and opportunities
- Reviews annual reporting and associated requirements like TCFD
- Monitors stakeholder views on matters such as climate change
- Chaired by Heidi Mottram, Independent Non-Executive Director

[READ MORE ON PAGES 82 TO 83](#)

#### Audit and Risk Committee (ARC)

- Meets quarterly
- Reviews mitigations related to Principal Risks, including those related to climate change
- Oversees and informs Group audits, financial statements and non-financial disclosures
- Chaired by Nathan Bostock, Independent Non-Executive Director

[READ MORE ON PAGES 72 TO 78](#)

#### Remuneration Committee

- Meets four times a year
- Ensures Executive Directors are appropriately rewarded - they consider lots of non-financial reporting items as part of this, including progress against our Climate Transition Plan
- Chaired by Carol Arrowsmith, Independent Non-Executive Director

[READ MORE ON PAGES 84 TO 102](#)

Challenge

Report

### Centrica Leadership Team (CLT)

Ensures ongoing oversight and challenge on climate strategy

**CLT** – As frequently as needed at the eight meetings held per year and chaired by the Group Chief Executive, the CLT monitors, assesses and informs progress and plans relating to net zero targets and ambitions as well as

Principal Risks and opportunities. At meetings of the Centrica Investment Committee, a sub-committee of the CLT, investment opportunities are reviewed with regard to how we can deliver net zero.

Challenge

Report

### Sub-groups

Supports leadership on integrating climate change into strategy

**TCFD working group** – Ongoing engagement led by Group Environment alongside Strategy, Risk, Finance and Reward, to fulfil mandated reporting requirements and embed climate strategy Group-wide<sup>(1)</sup>

**Group Risk and Controls Review** – Chaired by the Group Chief Financial Officer with business unit Managing Directors and Chief Financial Officers in attendance, they review Principal Risks and opportunities alongside controls quarterly (see page 28)

Challenge

Report

### Business units

Follows and provides feedback on climate strategy

**Managers and teams** – Operationalises climate change considerations in line with Group strategy

**Risk owners** – Identifies, assesses and mitigates climate risks and opportunities

(1) Group Head of Environment develops and socialises climate change strategy and progress, whilst co-ordinating and influencing related activities. Director of Group Strategy embeds climate change into our strategic planning and investment frameworks. Group Head of Enterprise Risk and Controls integrates climate risk and opportunities into the Enterprise Risk Management (ERM) Framework. Head of Accounting Reporting and Tax supports the business to understand the financial impacts of net zero. Group Head of Reward integrates ESG targets into remuneration frameworks.



## STRATEGY

2023 saw no material changes to the shape of our business, so we decided not to re-run our scenario analysis as the 2022 analysis remains fit for purpose. In 2023 we did, however, focus efforts on wider related improvements such as expanding the scope of our analysis to include additional sites like our new solar farm in Codford, whilst increasing stakeholder engagement across the value chain.

Our scenario analysis conducted in 2022 to test our strategic resilience to climate change, was run using ten independent climate scenarios that are most relevant to national climate targets as well as our business and the key markets in which we operate across the UK and Ireland. As a next step, we used our in-house scenario analysis model, to assess the various plausible pathways relating to global warming ranging between 1.5°C to 4°C<sup>(1)</sup>, and the potential positive and negative impact of each on our businesses' key services, solutions and assets.

Our in-house model projects our key lines of business based on the relevant external scenario, whilst maintaining our market share and unit margin at a consistent level. This allows us to calculate the potential growth or shrinkage of gross margin (GM) across each business in isolation or in aggregate, out to 2050. In 2023, we updated our short, medium and long-term time horizon intervals from 2025, 2035 and 2050 to 2028, 2038 and 2050, which acknowledges the passage of time since our first publication and better aligns with our latest strategic business plan. We consider this time horizon appropriate as it also aligns with our net zero targets and Climate Transition Plan, as well as encompassing the expected lifetime of the vast majority of our assets alongside the materialisation of key potential transitional risks and opportunities.

As we continue to shift our reported timeframes further out whilst keeping our base-year static, our analysis naturally shows a greater impact as the scenarios accelerate towards net zero. We do, however, recognise that scenarios extending this far out into the future are subject to significant uncertainties and carry material dependencies, which need to be taken into consideration when reviewing insights.

Other critical assumptions on matters such as policy and technology pathways are as per the independent scenarios utilised in the analysis.

(1) Climate scenario global warming measured out to 2100.

### Scenarios used:

- Transitional impacts are assessed using four different scenarios from the National Grid Future Energy Scenarios, where assumptions on energy demand, production and use cases are adjusted out to 2050. This enables more detailed modelling of potential impacts in the UK and Ireland at the individual product and commodity level, based on the level of demand for different types of fuel like hydrogen adoption or the scale up of different types of technologies like EVs. We adapt the scenarios for the Irish context to reflect key differences, such as off-grid consumers making up a bigger proportion of customers.
- Physical impacts are assessed using three different scenarios based on the Intergovernmental Panel on Climate Change Representative Concentration Pathways. The scenarios allow physical climate attributes to be modelled such as temperature and sea level rise as well as flooding and extreme weather, across differing average temperature rises resulting from varying radiative forces.
- Asset impairment is assessed using the International Energy Agency Net Zero Emissions scenario and Aurora Net Zero Mixed & High Renewable Energy Share scenarios, which model 1.5°C pathways to net zero for the energy sector. This allows us to model the potential impact on global and regional demand for different energy sources in response to different drivers like carbon pricing. In turn, this affects commodity prices and the potential implications for the valuation of gas and power assets.

# Net financial benefit

Our modelling suggests an overall net financial benefit for the Group across all climate scenarios

Our scenario analysis findings (see page 51), show that based on our strategic plans and capabilities, we're well-placed to mitigate the risks and seize the opportunities presented by climate change as we journey to net zero. Indeed, our modelling suggests an overall net financial benefit for the Group across all scenarios assessed.

This is because as a uniquely integrated energy company with market-leading positions across the energy value chain, our business model has been designed to be resilient and evolve in line with the needs of the energy transition, to ensure that we deliver on our Purpose of energising a greener, fairer future. That said, in any given scenario, we fully recognise that the potential for risks to manifest is subject to uncertainty, as are the opportunities and our ability to pivot effectively to realise them. We therefore always consider this uncertainty when assessing our strategic resilience to decarbonisation.

Looking at our findings, we see parts of our business exposed to potential transitional risks and opportunities, such as those relating to policy and regulatory changes which range from 'low' to 'high' in significance over the longer term. For example, the key risk for British Gas and Bord Gáis Energy, mainly relates to the gradual phase-out of natural gas in heating which although an essential transition fuel in the mid-term, may require a shift in the range of services and solutions offered to customers. We believe we're well positioned to pursue the opportunities created by this shift, given our brands have all the necessary systems and capabilities to adjust from the trading and sale of gas and electricity, to a system that's more heavily dependent on electricity and hydrogen.

For instance:

- our market-leading engineering workforce primarily installs gas heating solutions today, but can be gradually upskilled to deliver new solutions via our centre of excellence training campuses that are located around the UK; and
- we're continuing to enhance our strategic resilience by structurally altering our business model to establish positions in low carbon solutions like heat pumps and hydrogen, which are expected to drive the energy transition forward. This includes launching an internal business unit, New Business and Net Zero, which is dedicated to delivering low carbon solutions to residential customers, alongside Centrica Business Solutions which provides some fossil fuel-based solutions but specialises in helping large scale energy users with the creation of bespoke net zero action plans and the adoption of low carbon energy solutions.

Moreover, most of the modelled opportunities exist in areas where we've a strong market presence and are associated with relatively mature technologies like EVs, electric heat pumps, solar and battery storage. Clean hydrogen for heating is the only high-impact opportunity we've identified that's reliant on more emerging technology, which may therefore be harder to harness. Consequently, we've been proactive in hydrogen research and development opportunities – whether that's the trial of hydrogen production at our Brigg power station with HiiROC, or the exploration of hydrogen fuel switching at our Easington Terminal.

Alongside transitional risks and opportunities, sit our physical risks. During the scenario analysis, we took into account acute physical risks relating to extreme weather such as the risk of increased wave height as well as chronic physical risks which include those associated with longer term shifts in climate patterns that lead to sea level rise or sustained heat waves. Across both, our focus was on our energy assets in Centrica Energy Storage+, Centrica Business Solutions and Spirit Energy, which are typically more vulnerable to these kinds of risks due to the nature of activity undertaken. In 2023, we built on our 2022 assessment by running scenario analysis on new sites. This included our new solar farm in Codford and our distribution centre in Leicester. The analysis re-confirmed that we're generally exposed to physical acute risks that are 'low' in significance in the near and longer term. Our only potential 'medium' risk arose from a physical chronic risk, whereby a rise in mean temperature with an extreme >4°C warming future by 2050, reduces energy demand for heating. This risk, however, would be partially offset by an increase in cooling demand and counters many of the transitional risks, to provide a natural hedge for the Group.

The risk of asset impairment was additionally refreshed in 2023 based on price forecasts aligned with a 1.5°C scenario. This showed that our most exposed assets were our gas production fields alongside our investment in nuclear. We found that the impact on the value of our gas assets was relatively 'low' due to both existing impairment headroom and the fact that the majority of fields are expected to have produced most of their reserves within the next five years. Our investment in nuclear would be further impaired by around £15 million, as baseload power price scenarios are slightly over net zero price forecasts (see note 7 to the financial statements). Further details on how the Directors' have considered the impact of climate risk and opportunities on the wider financial reporting judgements and estimates, are provided in note 3 to the financial statements.

In 2023, we shifted our approach to engage suppliers on the potential impact of climate change to their operations, and their subsequent supply of goods and services to us. Through our updated Responsible Procurement Framework, we targeted all 'strategic' and 'critical' suppliers as well as some 'core' suppliers to participate in our assessment<sup>(1)</sup>.

We had a strong supplier response rate of 30%, with around 80% assessing their exposure to risk, 60% using sophisticated scenario analysis and 100% having resilience plans in place – this included the one company who reported a risk of disruption supplying us due to climate-risk. Overall, we concluded that our supply chain risk remained 'low' in significance over the near and longer term. We believe that risk across our supply chain can be effectively managed through our ongoing deepening of dialogue with suppliers, alongside defined hedging strategies and collaboration with counterparties. As with all risks identified, we'll continue to monitor our supply chain risk, so that we can act if the level of potential impact rises.

As the energy transition deepens, all modelled scenarios involve significant disruption to our markets. So we'll need to adapt accordingly. Our assessment of the capital expenditure required to manage potential risks and opportunities, remains in line with our current plans and balance sheet. We've also identified numerous opportunities for capital investment into new and existing assets and technologies through the process. For example, through our green-focused investment strategy, we'll build investment levels to £600-£800 million per year through to 2028, with at least 50% of capital expenditure due to go into green taxonomy eligible projects compared to 5% only two years ago. This will help us meet our targets to achieve net zero and our climate transition ambitions, including our commitment to invest up to £100 million in low carbon and transition assets<sup>(2)</sup> annually

from 2020 to 2025, whilst exploring longer term optionality at assets for hydrogen storage and carbon capture and storage.

Our assessment of how climate-related issues might affect our business, is integrated into our annual strategic and financial planning process at a business unit level as well as a Group level. This includes growth plans for key opportunities identified, with metrics and targets to determine whether performance is on track. All investment proposals are additionally assessed on their anticipated GHG emissions, EU taxonomy eligibility and their role in delivering net zero, the outcome of which informs the final investment decision. This process importantly underpins how we are pivoting our organisation towards a lower carbon future and helps shape our decisions on energy, services and solutions.

 **READ MORE ABOUT OUR FINANCIAL PLANNING PROCESS IN OUR CDP DISCLOSURE AT [CENTRICA.COM/CDP23](https://centrica.com/cdp23)**

**Progressing opportunities for a greener future in 2023:**

## 65MW

Battery storage plant planned in Perthshire to store offshore wind energy – our largest battery storage project to date that'll be capable of powering 130,000 homes and is due to be up and running by 2028

## 18MW

Solar farm built and opened at Codford which can power 5,000 homes – our first Centrica-owned solar farm

(1) Strategic and critical suppliers are long-term providers of essential products and services which can affect our ability to operate. Core suppliers are suppliers who aren't essential but play an important role in the products and services provided and were selected by our Procurement team from a broader group.

(2) A mixed portfolio of solar, battery and gas-fired peaking assets, all enabling the grid to decarbonise.

SUMMARY OF OUR MOST MATERIAL RISKS AND OPPORTUNITIES<sup>(1)</sup>

							Impact on gross margin (GM)		
							0-5% (low)	5-10% (medium)	>10% (high)
TCFD category	Climate related trend	Potential financial impact	Potential materiality			Strategic response and resilience			
			2028 (short term)	2038 (medium term)	2050 (long term)				
Transition: Policy, Markets and Technology	Transition away from fossil fuelled heating	<b>Risk:</b> Reduced GM from the sale and servicing of natural gas residential boilers and commercial Combined, Heat and Power (CHP) units at British Gas Services & Solutions (BG S&S), Centrica Business Solutions (CBS) and Bord Gáis Energy (Bord Gáis)	>2° C	<div></div>	<div></div>	<div></div>	<ul style="list-style-type: none"><li>Strategic aim to remain the market leader in heating solutions in the UK and Ireland (UK&amp;I), whilst growing market share in heating installs</li><li>Installation of hydrogen-ready boilers and CHP units</li></ul>		
			1.5° C	<div></div>	<div></div>	<div></div>			
Transition: Policy, Markets and Technology	Growth in low carbon heating market	<b>Opportunity:</b> Increased sales and servicing of electric and hydrogen fuelled heating systems, and associated opportunities in energy efficiency at BG S&S, CBS and Bord Gáis	>2° C	<div></div>	<div></div>	<div></div>	<ul style="list-style-type: none"><li>Heat pump business launched with material growth plans, aiming for 20,000 installs a year by 2025 with plans to build from there</li><li>Partnering to grow capability and adoption with hydrogen use trials alongside research and development into low carbon CHP</li></ul>		
			1.5° C	<div></div>	<div></div>	<div></div>			
Transition: Policy, Markets and Technology	Transition away from natural gas	<b>Risk:</b> Reduced GM from the sale of natural gas from fuel switching and energy efficiency at British Gas Energy (BGE), CBS and Bord Gáis	>2° C	<div></div>	<div></div>	<div></div>	<ul style="list-style-type: none"><li>Strategic aim to grow customer numbers in UK&amp;I energy supply</li></ul>		
			1.5° C	<div></div>	<div></div>	<div></div>			
Transition: Policy, Markets and Technology	Growth in low carbon heating market	<b>Opportunity:</b> Increased sales of electricity and green/low carbon hydrogen at BGE, CBS and Bord Gáis	>2° C	<div></div>	<div></div>	<div></div>	<ul style="list-style-type: none"><li>Systems and capabilities in place to pivot towards trading and selling hydrogen</li><li>Partnering in hydrogen production and use trials to grow capability and adoption</li></ul>		
			1.5° C	<div></div>	<div></div>	<div></div>			
Transition: Markets	Growth of EV transport market	<b>Opportunity:</b> Access to new and growing value pools related to EV charging installs, operation and maintenance (O&M), and energy supply at BG S&S and Bord Gáis	>2° C	<div></div>	<div></div>	<div></div>	<ul style="list-style-type: none"><li>Internal business unit, New Business and Net Zero, launched with the aim of becoming a leader in EV charging infrastructure installs and O&amp;M</li><li>Ambition to install up to 100,000 EV charging points per annum by 2025</li></ul>		
			1.5° C	<div></div>	<div></div>	<div></div>			
Transition: Energy Source	Growth in demand for renewable energy	<b>Opportunity:</b> Strong growth in solar and battery markets driven by decarbonisation at CBS, Bord Gáis and BG S&S	>2° C	<div></div>	<div></div>	<div></div>	<ul style="list-style-type: none"><li>Strategy to invest up to £100 million each year by 2025 to build a low carbon and transition asset portfolio of more than 800MW</li><li>Value derived from install, O&amp;M and asset ownership</li></ul>		
			1.5° C	<div></div>	<div></div>	<div></div>			
Physical Chronic	Rising mean temperatures	<b>Risk:</b> Reduced sales of natural gas and electricity for heat at BGE, CBS and Bord Gáis	>2° C	<div></div>	<div></div>	<div></div>	<ul style="list-style-type: none"><li>Strategic aim to grow customer numbers in UK&amp;I energy supply</li><li>Heat pump business launched with material growth plans, which is also capable of providing cooling</li></ul>		
			1.5° C	<div></div>	<div></div>	<div></div>			
Net impact for the Group			>2° C	<div></div>	<div></div>	<div></div>	<ul style="list-style-type: none"><li>Analysis suggests an overall net financial benefit for the Group across all scenarios, based on our strategic plans, portfolios and capabilities</li></ul>		
			1.5° C	<div></div>	<div></div>	<div></div>			

(1) Our financial scenario analysis is conducted every three years unless there is a material change to the business or external scenarios. Materiality above is therefore based on 2021 Group GM due to our last scenario analysis taking place in 2022 (see page 49). A well-below and well-above 2°C scenario for global warming has been used to best demonstrate the spectrum of proactive and inactive progress on climate change in our key markets, and the impact this may have on our business. In the analysis which spans over 95% of the Group, this table includes our most material risks and opportunities together with the inclusion of our most material physical risk because whilst less material than all other key risks in the long term, we believe it's important to transparently show the net impact of physical risk on GM. All listed 'opportunities' result in a positive impact on GM whilst all listed 'risks' correlate to a negative impact on GM. The table concludes by showing an overall positive net financial benefit for the Group across all climate scenarios and time periods assessed.

## OUR CLIMATE TRANSITION PLAN SET OUT IN 2021

*Our Plan helps us effectively manage our risks and opportunities to ensure we deliver our net zero targets, whilst enabling a fair and affordable transition for all. Within our Plan, we've set a number of ambitions that are aspirational but are fully baked into business unit growth plans, to advance the energy transition.*

Our ambitions to help our customers be net zero by 2050 are to:

- double the number of Hive customers to 2.5 million by 2025;
- deliver 6 million additional smart meters by 2025;
- achieve annual installs of up to 100,000 EV charging points and 20,000 heat pumps by 2025; and
- invest up to £100 million in low carbon and transition assets each year from 2020 to 2025<sup>(1)</sup>.

Our ambitions to be a net zero business by 2045 are to:

- build a zero-emission road fleet in the UK by 2025<sup>(2)</sup>;
- cut our UK property emissions by a further 50% by 2030;
- progress our strategic transformation to exit remaining activities in oil and gas exploration and production with the intention to run-off remaining fields and meet decommissioning obligations substantively by the early 2030s, whilst stopping any further investment in new oil and gas fields;
- redirect investment into assets that drive the transition forward – from securing up to 800MW of low carbon and transition assets by 2025<sup>(1)</sup>, to exploring the conversion of our Rough gas storage facility to store hydrogen by 2035, and decarbonising the Humber industrial cluster by 2040; and
- grow the portion of our capital allocated to green-eligible activities from 5% to at least 50% by 2025<sup>(2)</sup>.

We can't achieve these ambitions on our own, so we'll need to maintain an open dialogue with customers, government and others, to ensure they play their part as we play ours. For the transition to be a success, we must also ensure that we don't leave anyone behind. We'll therefore champion the needs of our customers and ensure support for those who struggle with their energy bills, create thousands of high quality inclusive green jobs, back sustainable initiatives in communities and work towards a low carbon supply chain.

Every three years, we'll provide an update on our Climate Transition Plan, with the next iteration due in 2024 followed by a shareholder advisory vote at the AGM in 2025. At the AGM in 2022, our existing Plan achieved a 79.96% shareholder advisory approval rate.

[📄 READ MORE ABOUT PROGRESS AGAINST OUR AMBITIONS ON PAGE 54](#)

[📄 READ MORE AT CENTRICA.COM/CLIMATETRANSITION](#)

[📄 READ MORE ABOUT CLIMATE ENGAGEMENT WITH TRADE ASSOCIATIONS AT CENTRICA.COM/TRADEASSOCIATIONS](#)

(1) A mixed portfolio of solar, battery and gas-fired peaking assets, all enabling the grid to decarbonise.

(2) From 2024, our ambition for a zero-emission van fleet will be extended out to 2030 (see page 53). Our capital allocated to green investment will also run out to 2028 (see page 11).

## RISK MANAGEMENT

Transition and physical climate risks alongside all wider risks, continued to be predominantly managed via our ERM Framework to ensure consistency in identification and controls management. The Framework uses a time horizon of 0–3 years to assess Principal Risks, coupled with a longer timeframe of 3–20 years to assess Emerging Risks. Following this process, climate change was made a Principal Risk in 2021 through to 2023.

The process starts with our wider strategic planning process, whereby Group Strategy and Environment, run the climate scenario analysis to identify and assess risks and opportunities across a range of plausible future scenarios. They then work closely with Group Enterprise Risk and Control, to ensure

full consideration of potential financial impacts across time horizons, alongside integration within the ERM Framework, the Group Principal Risks table and business unit risk registers. Climate change risks alongside other business unit risks are then considered at the Group Risk and Controls Review. The most material Principal Risks which include Climate change alongside other risks that may impact our ability to deliver on our Climate Transition Plan such as Weather and Operational Asset Integrity, are subsequently reported to the CLT and then to the Board's ARC (see page 28). This is supported by more detailed reports on climate change strategy, progress, risk and opportunities, presented to the SESC. The Board Annual Planning Conference then examines the external landscape and strategic plans, which includes risk relating to market, competition, technology and policy, that are all influenced by climate change. With this context, the Board is able to review the robustness of the business's strategic proposals and transition plans.

[📄 READ MORE ABOUT RISK ON PAGES 28 TO 37](#)

## METRICS AND TARGETS

We've a strong track record in adopting best practice reporting of GHG emissions as well as in setting and achieving climate-related targets. Having fully considered the TCFD recommendations on metrics and targets, we report those that are most relevant and material to our business and stakeholders. As part of this, we robustly manage and mitigate our impact through our metrics, targets, ambitions.

These include:

- **metrics** for energy consumption and global GHG scope 1, 2 and 3 emissions (see emissions table overleaf). The majority of these metrics have undergone limited external assurance every year since 2012. In 2022-23, our emissions declined, mainly as a result of reductions at our Whitegate power station as well as our gas production operations.



- o targets in our People & Planet Plan focus on being a net zero business by 2045 and helping our customers be net zero by 2050. They therefore actively contribute to the UK's target to get to net zero by 2050. The targets are also aligned to the Paris Agreement and based on science, corresponding to a well below 2°C pathway initially and 1.5°C by mid-century. We are, however, currently unable to progress our validation by the Science Based Target initiative (SBTi) due to the continued delayed Oil and Gas guidance, which the SBTi believe will apply to us. In alignment with best practice, our targets will predominantly be delivered through carbon abatement rather than offsetting. Although we expect to have hard-to-remove residual emissions in the 2040s, we'll use our in-house carbon trading team to engage high-quality carbon removal projects like tree planting, to achieve net zero in a credible way. Our targets receive limited external assurance on a rotational basis every three years. In 2023 we were on track with both our customer and business targets (see page 44); and
- o climate transition ambitions. Our ambitions were introduced in our Climate Transition Plan to help respond to key risks and opportunities, and drive progress toward our People & Planet Plan net zero targets. Through incorporation into budgets, business plans and accounting assumptions, good progress is being delivered against our ambitions although we're behind on some of them. For example, our EV van fleet roll-out has been slowed due to deployment issues which includes not all engineers being able to charge their vehicles easily and efficiently due to the majority not having private driveways in which to charge their EV, especially as the wider charging infrastructure is growing at a slower rate than anticipated. This means we will not meet our 2025 ambition. Delivering for our customers will remain our top priority, so we have re-set our ambition for a zero-

emission van fleet to 2030, which still remains five years ahead of the re-stated UK ban of new petrol and diesel vans. Likewise, demand for installing EV charging points and heat pumps has grown over the years but at a slower pace than expected. So we'll need to remain focused on developing capability and market-leading offers that excite customers into taking up and harnessing the value these technologies create (see page 44). We will review our ambitions in full as we develop our updated Climate Transition Plan due for publication in 2024. See more about our progress in our Climate Transition Dashboard overleaf, the performance of which is embedded into remuneration arrangements for Executive Directors.

To ensure we reduce our emissions and progress toward our climate transition targets and ambitions, we use an internal carbon price which helps guide commercial decisions in line with our Climate Transition Plan. In 2023 our internal carbon price ranged between £92/tCO<sub>2</sub>e and £119/tCO<sub>2</sub>e. The carbon price is time-sensitive and rises over time to incentivise future decisions and better predict long-term impact of regulation on our business. For example in 2023, our internal carbon price was utilised for hedging to support the decarbonisation of our fuel mix as well as to determine the price point for bidding in the energy market auction for potential future generation assets, alongside power purchase agreements.

Whilst the metrics and targets set out below and on pages 44 and 54 relate to our most material climate-related risks and opportunities, we measure and track a number of wider less material environmental metrics including water and waste (see pages 45 and 251). Our metrics, targets and ambitions will likely evolve in line with best practice and the changing world around us.

## OUR ENERGY USE AND GHG EMISSIONS

	2023	2022
Total GHG emissions (scope 1 and 2) <sup>(1)</sup>	1,681,475tCO <sub>2</sub> e <sup>†(2)</sup>	2,009,885tCO <sub>2</sub> e <sup>(3)(4)</sup>
Scope 1 GHG emissions	1,674,829tCO <sub>2</sub> e <sup>†(5)</sup>	2,004,693tCO <sub>2</sub> e <sup>(4)(6)</sup>
Scope 2 GHG emissions	6,647tCO <sub>2</sub> e <sup>†(7)</sup>	5,193tCO <sub>2</sub> e <sup>(4)(8)</sup>
Scope 3 GHG emissions <sup>(9)</sup>	21,180,922tCO <sub>2</sub> e	24,330,208tCO <sub>2</sub> e
Total GHG intensity by revenue <sup>(10)</sup>	64tCO <sub>2</sub> e/£m <sup>(11)</sup>	85tCO <sub>2</sub> e/£m <sup>(12)</sup>
Total energy use	7,437,652,380kWh <sup>†(13)</sup>	9,047,097,047kWh <sup>(14)</sup>

Reporting practices for environmental metrics are drawn from the WRI/WBCSD Greenhouse Gas Protocol and Defra's Environmental Reporting Guidelines. Reporting is additionally based on operator boundary which is the more commonly used approach for reporting environmental matters, and includes all emissions from our shipping activities relating to LNG alongside the retained Spirit Energy assets in the UK and Netherlands. Non-operated nuclear emissions are excluded.

† Included in DNV's independent limited assurance report. See page 249 or [centrica.com/assurance](https://centrica.com/assurance) for more.

(1) Comprises scope 1 and scope 2 emissions as defined by the Greenhouse Gas Protocol.

(2) Comprises UK 547,542tCO<sub>2</sub>e and non-UK 1,133,933tCO<sub>2</sub>e.

(3) Comprises UK 726,891tCO<sub>2</sub>e and non-UK 1,282,994tCO<sub>2</sub>e.

(4) Restated due to availability of improved data.

(5) Comprises UK 542,244tCO<sub>2</sub>e and non-UK 1,132,585tCO<sub>2</sub>e.

(6) Comprises UK 722,810tCO<sub>2</sub>e and non-UK 1,281,883tCO<sub>2</sub>e.

(7) Market-based, comprises UK 5,299tCO<sub>2</sub>e and non-UK 1,348tCO<sub>2</sub>e. Location-based is 17,041tCO<sub>2</sub>e.

(8) Market-based, comprises UK 4,082tCO<sub>2</sub>e and non-UK 1,111tCO<sub>2</sub>e. Location-based is 16,275tCO<sub>2</sub>e.

(9) Includes emissions from the following scope 3 categories defined by the Greenhouse Gas Protocol: purchased goods and services, capital goods, fuel and energy-related activities, waste generated in operations, business travel, employee commuting, upstream and downstream transportation and distribution, use of sold product and investments. All emissions are calculated in line with the methodologies set out by the Greenhouse Gas Protocol's technical guidance, apart from working from home emissions which are based on methodology set out in EcoAct's homeworking emissions whitepaper. Other categories spanning upstream leased assets, processing of sold products, end-of-life treatment of sold product, downstream leased assets and franchises, are not included because they are not relevant to our business.

(10) Carbon intensity of revenue is employed as our intensity measure because it is the most meaningful intensity measure for our diverse business and is the most widely used and understood measure for climate-related stakeholders such as CDP. Based on statutory revenue.

(11) Comprises UK 25tCO<sub>2</sub>e/£m and non-UK 267tCO<sub>2</sub>e/£m.

(12) Comprises UK 42tCO<sub>2</sub>e/£m and non-UK 203tCO<sub>2</sub>e/£m.

(13) Comprises UK & Offshore 1,654,616,311kWh and non-UK energy use 5,783,036,069kWh.

(14) Comprises UK & Offshore 2,394,832,533kWh and non-UK energy use 6,652,264,514kWh.

## OUR CLIMATE TRANSITION DASHBOARD – PROGRESS AGAINST OUR CLIMATE TRANSITION PLAN 2021<sup>(1)</sup>

Includes our net zero targets, supported by our climate transition ambitions

Progress against targets and ambitions: ● On track ● Behind

TARGETS & AMBITIONS	2023 Progress	2022 Progress
<b>Customer GHG emissions – 28% intensity reduction by 2030 and net zero by 2050 (from 2019)</b>	<b>10% reduction ●</b>	<b>6% reduction ●</b>
Hive Active Heating – 2.5 million customers by 2025 (units to date)	2.4m ●	2.0m ●
Smart meters – 6 million additional installed by 2025 (from 2020)	3.0m ●	2.3m ●
EV charging points – 100,000 in year by 2025 (annual units)	7.0k ●	7.4k ●
Heat pumps – 20,000 in year by 2025 (annual units)	3.0k ●	1.0k <sup>(2)</sup> ●
<b>Centrica GHG emissions – 40% reduction by 2034 and net zero by 2045 (from 2019)</b>	<b>21% reduction ●</b>	<b>5% reduction<sup>(3)</sup> ●</b>
Low carbon and transition assets – 800MW installed by 2025 (from 2020) <sup>(4)</sup>	132MW ●	101MW ●
Fleet by 2025 (total to date) <sup>(5)</sup>		
– 100% EV van roll-out	29% ●	23% ●
– 100% EV car roll-out	74% ●	43% ●
Property – 50% reduction in UK emissions by 2030 (from 2019)	65% ●	63% ●
Capex – grow capital allocated to green activities from 5% to at least 50% by 2025 (from 2019) <sup>(5)</sup>	31% ●	9% ●

(1) Glidepath trajectory for climate transition ambitions is not linear. Demand is expected to increasingly grow, resulting in accelerated delivery against the target as we approach the target date.

(2) Restated to additionally include installations via ECO.

(3) Restated due to availability of improved data.

(4) A mixed portfolio of solar, battery and gas-fired peaking assets, all enabling the grid to decarbonise.

(5) From 2024, our ambition for a zero-emission van fleet will be extended out to 2030 (see page 53). Our capital allocated to green investment will also run out to 2028 (see page 11).

 [READ MORE ABOUT OUR WIDER DATA AND TRENDS IN OUR DATA CENTRE AT CENTRICA.COM/DATACENTRE](https://centrica.com/datacentre)

## TASK FORCE ON CLIMATE RELATED FINANCIAL DISCLOSURES

The table below sets out the 11 TCFD recommendations and where the related information can be found.

Recommendation	Recommended disclosure	Pages
<b>Governance</b>	<ul style="list-style-type: none"> <li>a) Describe the Board's oversight of climate-related risks and opportunities</li> <li>b) Describe management's role in assessing and managing climate-related risks and opportunities</li> </ul>	<ul style="list-style-type: none"> <li>○ Pages 47 to 48 and 57 to 71</li> <li>○ Pages 47 to 48, 52, 72 to 78 and 82 to 83</li> </ul>
<b>Strategy</b>	<ul style="list-style-type: none"> <li>a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term</li> <li>b) Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning</li> <li>c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario</li> </ul>	<ul style="list-style-type: none"> <li>○ Pages 49 to 52, 138 to 142 and 152 to 156</li> <li>○ Pages 49 to 52, 138 to 142 and 152 to 156</li> <li>○ CDP 2023 submission <a href="https://centrica.com/CDP23">centrica.com/CDP23</a></li> <li>○ Pages 49 to 52</li> </ul>
<b>Risk management</b>	<ul style="list-style-type: none"> <li>a) Describe the organisation's processes for identifying and assessing climate-related risks</li> <li>b) Describe the organisation's processes for managing climate-related risks</li> <li>c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management</li> </ul>	<ul style="list-style-type: none"> <li>○ Pages 28 to 29, 48 and 52</li> <li>○ Pages 28 to 29, 31 to 32, 34, 48 and 52</li> <li>○ Pages 28 to 29, 48 and 52</li> </ul>
<b>Metrics and targets</b>	<ul style="list-style-type: none"> <li>a) Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process</li> <li>b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks</li> <li>c) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets</li> </ul>	<ul style="list-style-type: none"> <li>○ Pages 52 to 54</li> <li>○ Data centre at <a href="https://centrica.com/datacentre">centrica.com/datacentre</a></li> <li>○ Pages 49 to 53</li> <li>○ Pages 44 and 52 to 54</li> <li>○ Climate Transition Plan at <a href="https://centrica.com/climatetransition">centrica.com/climatetransition</a></li> </ul>

The Strategic Report has been approved by the Board and signed on its behalf by:

**Raj Roy**  
Group General Counsel  
& Company Secretary  
14 February 2024



# Governance

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# DIRECTORS' AND CORPORATE GOVERNANCE REPORT

## DEAR SHAREHOLDER

I am pleased to present the 2023 Directors' and Corporate Governance Report. The Board recognises that good governance is essential for the effective delivery of our strategy and the ongoing development and sustainability of the Group, and in this report, we will update you on Centrica's corporate governance, what the Board did in 2023 and the Board's focus areas for the year ahead.

Having successfully revitalised the business by materially simplifying our portfolio and strengthening our balance sheet, alongside a relentless focus on operational performance, the Board has spent time seeking to build on this success and, as a result, significant efforts have been dedicated to crafting a green-focused investment strategy. This strategy is designed to ensure Centrica's long-term sustainability and enhance stakeholder value. More information about this can be found on pages 14 and 15.

The Board is dedicated to delivering sustainable value to both shareholders and other stakeholders. In 2023, the Company declared and paid a total of 4.0p per share in dividends to shareholders (up 33% on the total dividend of 3.0p per share paid in 2022). As of 31 December 2023, we returned £613 million to our shareholders through our share buyback programme, with a further £2 million committed not yet settled, being a total of £615 million, as part of our commitment to distribute surplus capital. We expect to invest around £600-£800 million a year until 2028, primarily in customer technology, renewable generation and flexible power assets, enhancing the security of energy supply in the UK, while creating value for our shareholders. We have also maintained a strong focus on advancing the Company's energy transition journey as outlined in our Climate Transition Plan (CTP). The CTP, and details of our progress to date, can be found at [centrica.com/sustainability](https://centrica.com/sustainability) and in earlier sections of this Annual Report and Accounts.

## ORGANISATIONAL CULTURE

Centrica is grounded in values of Care, Delivery, Agility, Courage and Collaboration, which form the core of our organisational culture. Our values are supported by Our Code that sets out our fundamental standards for engagement and collaboration. Our Code guides our decision-making, reflects our commitment to integrity and can be accessed at [centrica.com/ourcode](https://centrica.com/ourcode).

The Group Chief Executive regularly updates the Board on issues related to employee engagement, with the quarterly 'Our Voice' survey offering the Board crucial insights into the Company's culture. This is supplemented with feedback from a variety of other sources, including dedicated colleague engagement meetings. I and my fellow Directors find these meetings to be most informative and we appreciate the opportunity to engage directly with colleagues in this way. You can find more information on the survey and other workforce engagement practices on pages 38 and 39. The Board maintains a focus on cultivating the Company's culture, emphasising colleague development and digital enablement for Centrica's future readiness.

## DIVERSITY, EQUITY AND INCLUSION

Diversity, equity and inclusion continue to be key priorities for the Board. As at 31 December 2023, we complied with the diversity targets outlined in the FTSE Women Leaders Review and the Parker Review to have over 40% female representation on the Board and at least one Director from a minority ethnic background. We also complied with the Board and senior executive gender and ethnicity targets in the Listing Rules, save for the target that at least one senior position (Chair, Senior Independent Director, Group Chief Executive and Group Chief Financial Officer) be held by a woman. This situation arose when Kate Ringrose stepped down as Group Chief Financial Officer last year and Russell O'Brien was appointed following a thorough and robust recruitment process involving both a diverse candidate pool and interview panel. However, as explained in further detail in the Nominations Committee Report, the Board is fully committed to meeting the diversity target in relation to the above-mentioned senior Board roles. The Board will therefore, as part of its ongoing succession planning arrangements, ensure that this requirement is taken into account in a way that enables the Company to meet the diversity target at the earliest possible opportunity. Overall the Board's range and depth of experience and skills has expanded over the past year with new appointments to the Board in a way that will assist the Company in the delivery of its strategy.

The Board has recently updated its diversity policy to comply with Disclosure Guidance and Transparency Rule 7.2.8A, the FTSE Women Leaders Review, and the Parker Review. This update also extends the policy to the Board's Committees. For more detailed information on the Board's diversity policy, please visit [centrica.com](https://centrica.com) or refer to the Nominations Committee Report on page 80.

Centrica is dedicated to fostering an inclusive environment where all individuals, regardless of their background, can succeed. We are actively working to ensure that our workforce, including senior leadership, mirrors the diversity of the communities we serve. Our Company has implemented policies aimed at enhancing diversity, equity and inclusion at every level. We have made progress in recruiting, promoting, and developing employees from diverse backgrounds, and we are committed to continuing these efforts.

## BOARD COMPOSITION

On 1 March 2023, Russell O'Brien became Group Chief Financial Officer. During the year, after a detailed assessment of the Board's needs and the strategic path of the Group by the Nominations Committee, three new independent Non-Executive Directors were appointed; Philippe Boisseau, Jo Harlow and Sue Whalley, each of whom brings a wealth of diverse experience to the Board. You can find more information on these Directors and their appointments in the biographies and the Nominations Committee Report on pages 59 to 62 and 79 to 80 respectively.

## BOARD, COMMITTEE AND DIRECTOR EVALUATIONS AND EFFECTIVENESS

In September 2023, the Board conducted a self-evaluation supported by Lintstock, a corporate advisory firm specialising in Board performance evaluations. The evaluation focused on a broad range of topics, which are discussed in more detail on page 66. Lintstock generated a tailored report, drawing on input from all the Directors. The output from this evaluation was reviewed at the Nominations Committee meeting in November 2023, in which all Directors participated.

The Directors concluded that, overall, the Board was performing effectively and the Committees were effective in supporting the Board to deliver against its objectives. The evaluation also identified areas which could benefit from increased focus and these topics (see page 69) will be amongst the key priorities for the Board in the year ahead, in addition to the strategic and operational priorities already discussed in other sections of this Annual Report and Accounts.

## ENGAGEMENT WITH OUR STAKEHOLDERS

Stakeholder views are gathered through an extensive network of strategic engagements to help grow the business and deliver improvements for our customers, colleagues and society over the long term. During 2023, representatives from the Board met with major shareholders from time to time in order to obtain their perspectives on a range of matters, including the Company's performance, strategy and ESG matters.

The Board maintains collective responsibility for engaging with employees regularly throughout the year, recognising the insights and benefits gained by all Board members from regular interactions with a diverse range of colleagues.

Throughout the year, Non-Executive Directors have visited a number of sites to immerse themselves in the operational aspects and communicate directly with employees about their work experiences and other significant issues. For instance, in 2023 the Board visited numerous sites Group wide, including the Brigg power station, the Hesse office, the Centrica Energy Storage gas terminal at Easington and the British Gas contact centre in Stockport. This engagement strategy is reviewed periodically to ensure its effectiveness.

Further details of how the Board has discharged its duties under Section 172 of the Companies Act 2006 can be found in our Section 172 statement and Stakeholder Engagement section on pages 16 to 17.

## LOOKING FORWARD

Overall, I am pleased with the strong progress that was made in terms of the governance of the Company in 2023. The Board naturally remains focused on delivering against strategy, succession planning and ultimately creating long term sustainable value for all our stakeholders.

Thank you for your continued support and I look forward to updating you again during the year at our Annual General Meeting in June.

**Scott Wheway, Chair**

14 February 2024

## BOARD OF DIRECTORS\*



**Scott Wheway** | Chair



Scott joined the Board on 1 May 2016 and became Chair of the Board on 17 March 2020.

### Relevant skills and experience

Scott has a wealth of experience as a senior customer-facing business leader with a mix of deep retail and consumer expertise. He has considerable knowledge gained in both the retail and insurance sectors, together with a strong understanding of operating within highly regulated businesses.

### Previous experience

Scott worked in retail for 27 years both in the UK and internationally. His prior roles include chair of AXA UK plc from December 2017 until June 2022, seven years on the board of Santander UK plc, where he was the senior independent director, and non-executive director of Aviva plc between 2007 and 2016. He is the former chief executive officer of Best Buy Europe (retail services), director of The Boots Company plc, managing director and retail director of Boots the Chemist at Alliance Boots plc and a director of the British Retail Consortium. He formerly held a number of senior executive positions at Tesco plc (retail services), including chief executive of Tesco in Japan.

### External appointments

Non-executive director of Lloyds Banking Group plc and chair of Scottish Widows Group.



**Chris O'Shea** | Group Chief Executive



Chris joined Centrica in 2018 as Group Chief Financial Officer and was appointed as Group Chief Executive in 2020. Chris is also Chair of the Disclosure Committee and Chair of Spirit Energy (joint venture).

### Relevant skills and experience

Chris has wide-ranging experience across the entire energy value chain together with recognised experience in transforming business and financial performance. He has considerable knowledge of working in highly regulated industries and in complex, multi-national organisations, not only in the energy sector but also in technology-led engineering and services industries.

### Previous experience

Chris was appointed Group Chief Executive in early 2020 having previously been Group Chief Financial Officer. Prior to joining Centrica, Chris was group chief financial officer of UK listed Smiths Group plc and Vesuvius plc, and a non-executive director of Indian listed Foseco India Ltd. From 2006 to 2012 Chris held various senior finance roles with BG Group plc, including chief financial officer of Africa Middle East & Asia and Europe & Central Asia, prior to which he held a number of senior roles with Shell, (living and working in the UK, the US and Nigeria), and with Ernst & Young.

Chris studied Accounting and Finance at the University of Glasgow, is a Chartered Accountant, and holds an MBA from the Fuqua School of Business at Duke University.

### External appointments

None.



**Russell O'Brien** | Group Chief Financial Officer



Russell joined the Centrica plc Board on 1 March 2023 and is also on the Board of the majority-controlled subsidiary, Spirit Energy.

### Relevant skills and experience

Russell has broad experience from across the energy value chain having spent more than 25 years with Shell plc. He developed his financial management experience through work in various business models from Retail through to upstream development. Russell has extensive knowledge of controlling, capital markets, commercial finance and mergers and acquisitions activities.

### Previous experience

Prior to joining Centrica, Russell worked for Shell plc from 1995 to 2021. From 2006 to 2009 Russell was financial controller for Shell's upstream operations in the Americas. Russell was then CFO for Shell's global retail business from 2009 to 2013. Following this, he was CFO for Shell's Integrated Gas division. In 2015 he was appointed group treasurer. During his time as treasurer Russell was also a board member of Shell Trading and chairman of Shell Asset Management Co. Russell has lived and worked in the USA, Singapore, the Netherlands and the UK. He was a board and advisory council member of the FICC Market Standards Board from 2015 to 2021. Russell is a Fellow of the Chartered Institute of Management Accountants and the Association of Corporate Treasurers. Russell studied Economics and Management and graduated from St. Andrews University in 1995.

### External appointments

None.



**Carol Arrowsmith** | Independent Non-Executive Director



Carol joined the Board on 11 June 2020 and is Chair of the Remuneration Committee.

#### Relevant skills and experience

Carol brings extensive advisory experience, especially of advising boards on executive remuneration across a range of sectors, and is a Fellow of the Chartered Institute of Personnel and Development.

#### Previous experience

Carol is a former deputy chair and senior partner of Deloitte LLP. She was a member of the Advisory Group for Spencer Stuart, Global Partner of Arthur Andersen, managing director of New Bridge Street Consultants and non-executive director of Compass Group PLC and Vivo Energy plc.

#### External appointments

Director and trustee of Northern Ballet Limited.



**Philippe Boisseau** | Independent Non-Executive Director



Philippe joined the Board on 1 September 2023.

#### Relevant skills and experience

Philippe brings broad experience of the energy industry, particularly of energy assets, energy infrastructure, energy trading and the renewable energy transition.

#### Previous experience

Philippe was the chief executive officer of CEPSA (Compañía Española de Petróleos SA), the Spanish multinational oil and gas, chemicals, and renewable energy business, from 2019 to 2021. Before joining CEPSA, he worked at TotalEnergies SA for over two decades. During his tenure there, Philippe held president and senior executive roles across various business divisions and was instrumental in establishing and leading Total's New Energies division from 2007 to 2016. Philippe was a senior advisor to Carlyle International Energy Partners between 2017 and 2019 and was a board member at I-Pulse Inc. from 2017 to 2021.

Philippe graduated from Ecole Polytechnique and has an MSc in Theoretical Physics.

#### External appointments

Senior advisor to OMERS Infrastructure, Ondra Partners and Sibanye-Stillwater Limited.



**Nathan Bostock** | Independent Non-Executive Director



Nathan joined the Board on 9 May 2022 and is Chair of the Audit and Risk Committee.

#### Relevant skills and experience

Nathan has worked in financial services since the mid-1980s and brings a wealth of financial, commercial, risk and compliance expertise, particularly in large-scale customer-facing businesses. Nathan possesses current and pertinent experience in financial matters.

#### Previous experience

Nathan was chief executive officer of Santander UK from 2014 until early 2022, as well as global head of investment platforms of Banco Santander before leaving in late 2023. He joined Santander from the Royal Bank of Scotland plc (RBS), where he was an executive director and group finance director. He previously held the post of group chief risk officer and head of restructuring having joined RBS in 2009. Nathan served on the board of Abbey National plc (now Santander UK) as an executive director and chief financial officer from 2005 until 2009. Prior to this he held a number of senior positions with Abbey National, 2001 to 2004, RBS, 1992 to 2001 and Chase Manhattan Bank, 1985 to 1992.

Nathan is a chartered accountant and holds a BSc (Hons) in Mathematics.

#### External appointments

None.





**Chanderepreet (CP) Duggal** | Independent Non-Executive Director



CP joined the Board on 16 December 2022.

#### Relevant skills and experience

CP brings valuable expertise of digital technology and the use of data and analytics in large customer-facing businesses.

#### Previous experience

CP worked for 20 years at American Express in various senior roles, the last of which was leading the company-wide digital and analytics organisation to enable growth, efficiency, and innovation globally. His experience includes managing digital/mobile channels and technology platforms across the customer lifecycle, applications of AI and Data Science across wide-ranging business applications, operational excellence and managing fraud risk.

In his most recent executive role, CP was the chief digital and analytics officer for Burberry plc and a member of its executive committee. He was responsible for transforming e-commerce and omni-channel strategy globally, accelerating customer relationship management focus and leveraging analytics across the company.

#### External appointments

None.



**Jo Harlow** | Independent Non-Executive Director



Jo joined the Board on 1 December 2023.

#### Relevant skills and experience

Jo has more than 25 years' experience working in various senior roles, predominantly in the branded and technology sectors.

#### Previous experience

Prior to her non-executive career, Jo held the position of corporate vice president of the phones business unit at Microsoft. She previously spent 11 years at Nokia Corporation in a number of senior management roles, including executive vice president of smart devices. Jo was also non-executive director at InterContinental Hotels Group PLC from 2014 to 2023 (including as remuneration committee chair from 2017 to 2023) and was a non-executive director of Ceconomy-AG from 2017 to 2021.

Jo attended Duke University in North Carolina and has a BSc in Psychology.

#### External appointments

Non-executive director and chair of remuneration committee at J Sainsbury plc. Senior independent director and remuneration committee chair at Halma plc, and non-executive director at Chapter Zero Ltd.



**Heidi Mottram** | Independent Non-Executive Director



Heidi joined the Board on 1 January 2020 and is Chair of the Safety, Environment and Sustainability Committee.

#### Relevant skills and experience

Heidi brings considerable relevant strategic and operational experience acquired in her current and previous roles. Her deep understanding of the importance of customer service, delivered in complex, multi-stakeholder environments with a high public profile, is particularly pertinent to the Group at this time, as it focuses on the delivery of its customer-centric strategy.

#### Previous experience

Heidi began her career with British Rail in the mid-1980s. She held a number of roles in GNER, before joining Midland Mainline in 1999 as operations director. She was managing director of Northern Rail from 2004, and before that she was commercial director of Arriva Trains Northern and operations director of Midland Mainline Limited from 1999 to 2003. Additionally, Heidi was vice-chair of the North East Local Enterprise Partnership and Newcastle University Council.

#### External appointments

Chief executive director of Northumbrian Water Limited and Northumbrian Water Group Limited, and a member of the board of The Great British Railways Transition Team.



**Kevin O'Byrne** | Senior Independent Director



Kevin joined the Board on 13 May 2019. He became Senior Independent Director on 1 June 2022.

#### Relevant skills and experience

Kevin brings extensive retail and finance experience to the Board, having occupied senior roles in a number of leading UK and international retailers. Kevin possesses current and pertinent experience in financial matters. The Board considers that Kevin has recent and relevant financial experience.

#### Previous experience

Kevin was chief financial officer of J Sainsbury plc from January 2017 to March 2023. Prior to that, he was chief executive officer of Poundland Group plc, and previously held executive roles at Kingfisher plc, including divisional director UK, China and Turkey, chief executive officer of B&Q UK & Ireland and group finance director. Prior to that he was finance director of Dixons Retail plc. From 2008 to 2017 he was a non-executive director and chairman of the audit committee of Land Securities Group PLC where he was also senior independent director from 2012 to 2016. Kevin was chair of Centrica plc's Audit and Risk Committee from 2019 to 2023.

#### External appointments

Non-executive director of International Flavors & Fragrances Inc. (NYSE listed)



**Rt Hon. Amber Rudd** | Independent Non-Executive Director



Amber joined the Board on 10 January 2022.

#### Relevant skills and experience

Amber brings a wealth of real-world experience in energy, policy and business.

#### Previous experience

After around 20 years working in business, Amber served as a Member of Parliament between 2010 and 2019. In addition to holding the roles of Home Secretary, Secretary of State for Work and Pensions and Minister for Women and Equalities, Amber served as Secretary of State for Energy and Climate Change from 2015 to 2016, having been Parliamentary Under Secretary of State at the Department of Energy and Climate Change from July 2014 until May 2015. Amber led the UK team to the successful completion of the Paris Climate Change Agreement. This UN sponsored 2015 Conference of the Parties (COP21) achieved a landmark global commitment to reduce national carbon emissions.

#### External appointments

Non-executive director of Pinwheel, advisor to businesses including Energy 1, Equinor, FGS, Centerview Partners and Phoenix Group, and a trustee of The Climate Group, RUSI.



**Sue Whalley** | Independent Non-Executive Director



Sue joined the Board on 1 December 2023.

#### Relevant skills and experience

Sue brings a blend of experience in people and cultural transformation, and strategic, technological, and operational evolution in large, complex organisations, championing the use of innovation to improve customer service.

#### Previous experience

Prior to joining Associated British Foods plc in 2019, Sue spent 12 years at Royal Mail where she held several executive roles. She was chief executive officer of the UK post and parcels business where she led complex organisation and digital transformation to support e-commerce growth in the logistics and delivery business. Sue has extensive experience working with complex stakeholder landscapes including unions and regulators. Sue spent nearly 18 years in management consultancy working in a range of industries including retail and utilities.

Sue is a graduate of the University of Cambridge and holds an MBA from Harvard Business School.

#### External appointments

Chief people and performance officer at Associated British Foods plc.



**Raj Roy** | Group General Counsel & Company Secretary



Raj was appointed Group General Counsel & Company Secretary on 1 October 2020.

#### Relevant skills and experience

Raj has overall responsibility for legal, regulatory, compliance and secretariat activities across the Group, the effective operating of Centrica plc's Board and advising on key issues of corporate governance and compliance. Raj joined Centrica in 2014 as the Legal Director for Residential Energy, before becoming General Counsel for the UK and Ireland region in 2017. He has led legal, regulatory and compliance teams at Centrica in various formations across the UK and Ireland region and the Consumer division.

#### Previous experience

Prior to joining Centrica, Raj spent nine years at Vodafone, holding a number of senior in-house legal roles in the Group and UK legal functions. Raj started his career in private practice, qualifying as a solicitor at Slaughter and May in London and subsequently working for Freshfields in Brussels.

#### External appointments

Member of the Board of Energy UK (representing Centrica) and the Board of General Counsel for Diversity and Inclusion (GCD&I).

#### Committee membership key

-  Denotes Committee Chair
-  Chairman of the Board
-  Audit and Risk Committee
-  Disclosure Committee
-  Nominations Committee
-  Remuneration Committee
-  Safety, Environment and Sustainability Committee

#### Skills and experience key

-  Consumer Services
-  Energy Sector
-  Engineering/Safety
-  Finance/M&A
-  Financial Services
-  Government/Regulatory
-  Technology

\*as at 14 February 2024

**The Board considers that each of the Directors continues to contribute effectively to the work and deliberations of the Board.**

Reasons for the (re-)election of each of our Directors at the forthcoming AGM can be found within the Centrica plc Notice of Annual General Meeting 2024 which will be made available on our website [centrica.com/agm24](https://centrica.com/agm24).

Full biographies can be found at [centrica.com/board](https://centrica.com/board)

# CORPORATE GOVERNANCE STATEMENT

The Board is committed to high standards of corporate governance and is pleased to confirm that throughout the year ended 31 December 2023, the Company complied with all relevant provisions of the UK Corporate Governance Code (UK Code) apart from Provisions 40 and 41. An explanation of the non-compliance can be found in the Remuneration Committee Report on page 108. Our application of the UK Code is set out below.

An explanation of non-compliance with Listing Rule 9.8.6(9) whereby the Company does not have at least one senior position held by a woman can be found on page 80. The UK Code and associated guidance are available on the Financial Reporting Council's website at [frc.org.uk](https://www.frc.org.uk). The index on page 110 sets out where to find each of the required disclosures in respect of Listing Rule 9.8.4 and Disclosure Guidance and Transparency Rules 4.1.5 R and 7.2.1.

## Section 1 | Board Leadership and Company Purpose

<b>Principles A, B, C, D, E</b>	<p>The Corporate Governance statement (CG Statement) on pages 64 to 71 gives information on the Group's compliance with the principles relating to the Board's Leadership and Company Purpose. More detailed information on:</p> <ul style="list-style-type: none"> <li>the Group's statement of purpose can be found on page 9;</li> <li>the Group's strategy, resources and the indicators it uses to measure performance can be found on pages 10 to 11 and 26 to 27 respectively;</li> <li>the Group's engagement with stakeholders and the Group's Section 172(1) Statement is set out on pages 14 to 17; and</li> <li>the Group's approach to workforce matters can be found in the Chief People Officer's report and in 'Our people' within our People and Planet section on pages 38 to 43.</li> </ul> <p>Details of AGM voting results can be found on page 70, the Group's framework of controls is contained in the Audit and Risk Committee report on pages 73 to 74 of the CG Statement and in the Principal Risk and Viability Disclosure section on pages 28 to 37.</p>
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## Section 2 | Division of Responsibilities

<b>Principles F, G, H, I</b>	<p>The CG Statement describes the structure and operation of the Board. In the CG statement, we describe on page 66 the process the Company conducts to evaluate the Board, to ensure that it continues to operate effectively, that individual Director's contributions are appropriate and that the oversight of the Chair promotes a culture of openness and constructive yet challenging debate. The policies and processes which support the Board to function effectively and efficiently can be found on our website at <a href="https://centrica.com/board">centrica.com/board</a>.</p>
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## Section 3 | Composition, Succession and Evaluation

<b>Principles J, K, L</b>	<p>Details of the skills, experience and knowledge of the existing Board directors can be found in the Board biographies on pages 59 to 63. Information on the Board's appointment process and approach to succession planning is contained in the Nominations Committee report on pages 79 to 80. Information on the Board evaluation process can be found on page 66.</p>
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## Section 4 | Audit, Risk and Internal Control

<b>Principles M, N, O</b>	<p>Information on the policies and procedures the Group has in place to monitor the effectiveness of the Group's Internal and External Audit functions, and the integrity of the Group's financial statements, is contained in the Audit and Risk Committee report on pages 72 to 74 of the CG Statement, along with an overview of the procedures in place to manage risk and oversee the internal control framework. Further information on the Group's approach to risk management is contained in the Principal Risk and Viability Disclosure section of the Strategic Review on pages 28 to 37. The Board believes the 2023 Annual Report to be a fair, balanced and understandable assessment of the Company's position and prospects. A description of the Audit and Risk Committee's work in enabling the Board to reach this conclusion is contained in the Audit and Risk Committee report on page 73.</p>
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## Section 5 | Remuneration

<b>Principles P, Q, R</b>	<p>The Directors' Remuneration Report section of the CG Statement describes the Group's approach to Directors' remuneration, including the procedure for developing policy and the Remuneration Committee's discretion for authorising remuneration outcomes. Details of linkage of the Directors' Remuneration Policy with long-term strategy are contained on page 102.</p>
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The Board and its committees continue to monitor developments in governance, and welcome the important revisions to the UK Corporate Governance Code (the Code) published by the Financial Reporting Council (FRC) on 22 January 2024.



## GOVERNANCE FRAMEWORK

The Board is responsible for leading the Group in an efficient manner, establishing the Group's purpose, values and strategy, to which the Group's culture is aligned. It focuses primarily on strategic and policy issues and is responsible for developing long-term sustainable value for stakeholders. It is responsible for ensuring there are effective risk assessment and management processes, setting the Group's strategy, overseeing the allocation of resources and monitoring the performance of the Group. The framework to enable this is set out in a schedule of matters reserved for the Board. In order to allow the Board to focus on its priorities, a number of its oversight responsibilities have been delegated to four principal Committees. These responsibilities are set out in the terms of reference for each Committee. The Board regularly reviews the remit, authority, composition and terms of reference of each Committee. In performance of these duties, the Board has regard to the interests of the Group's key stakeholders and the potential impact of the decisions it makes on wider society.

### Matters reserved exclusively for the Board

There are certain key responsibilities that the Board does not delegate, and which are reserved for its consideration. The Board's responsibilities include: the development of strategy; the acquisition and divestment policy; the approval of major capital expenditure; the Group's capital structure; the approval of financials; and oversight and independent assurance of policies and procedures. The full schedule of matters reserved is available on the governance page of our website at [centrica.com](https://centrica.com).

## OUR BOARD

The Board comprises the Non-Executive Chair (independent on appointment), two Executive Directors (Group Chief Executive and Group Chief Financial Officer), and nine independent Non-Executive Directors. There is a clear division of responsibilities between the Chair and the Group Chief Executive, reflected in the schedule of matters reserved for the Board.

## Board Committees

The Board oversees the Group's operations through a unitary Board and four principal Committees, these being the Audit and Risk Committee, Nominations Committee, Remuneration Committee and the Safety, Environment and Sustainability Committee. The terms of reference for these Committees can be found on our website, [centrica.com](https://centrica.com), and attendance at meetings of each of these Committees in 2023 can be found on page 68. Further information on the work of these Committees can be found in later sections of this Annual Report and Accounts (pages 72, 79, 82 and 84).

In addition to the above-mentioned Committees, the work of the Board is supported by a Disclosure Committee, the terms of reference for which are available on our website. The Disclosure Committee is responsible for overseeing the timely and accurate disclosure of sensitive information and maintaining procedures and controls to enable compliance with legal and regulatory disclosure obligations. Meetings of the Disclosure Committee are convened as and when necessary and membership of the Committee comprises the Group Chief Executive, Group Chief Financial Officer and the Group General Counsel & Company Secretary.

### Centrica Leadership Team (CLT)

The CLT is led by the Group Chief Executive and members include the Group Chief Financial Officer, Group General Counsel & Company Secretary and the Chief People Officer. The CLT is responsible for ensuring the delivery of the Group's strategy, business plans and financial performance.

### Board appointments

The report of the Nominations Committee on pages 79 to 80 describes the work of the Committee in relation to Board appointments. All Directors are subject to annual re-election. The Board sets out in the Notice of Annual General Meeting the specific reasons why each Director's contribution is, and continues to be, valuable to the Company's long-term sustainable success.

### The Board

The Board is responsible for corporate governance, developing strategy and major policies, reviewing management performance, approving financials and providing entrepreneurial leadership to the Company within a framework of prudent and effective controls which enable risk to be assessed and managed. It is also responsible for setting the Company's culture, values and the behaviours it wishes to promote in conducting its business. The Board's role and responsibilities are reviewed against the UK Code to ensure that it is meeting all of its responsibilities.

#### Chair

The Chair is responsible for the leadership and management of the Board. In doing so, he is responsible for promoting high ethical standards, ensuring the effective contribution of all Directors and, with support from the Group General Counsel & Company Secretary, ensuring best practice in corporate governance and the timely distribution of accurate and clear information to Directors.

#### Group Chief Executive

The Group Chief Executive is responsible for the executive leadership and day-to-day management of the Company, to ensure the delivery of the strategy agreed by the Board.

#### Independent Non-Executive Directors

Independent Non-Executive Directors are responsible for contributing sound judgement and objectivity to the Board's deliberations and overall decision-making process, providing constructive challenge, and monitoring the Executive Directors' delivery of the strategy within the Board's risk and governance structure. All of the Non-Executive Directors are considered independent.

#### Senior Independent Director

The Senior Independent Director acts as a sounding board for the Chair and serves as a trusted intermediary for the other Directors, as well as shareholders, as required.

#### Group Chief Financial Officer

The Group Chief Financial Officer is responsible for providing strategic financial leadership to the Company and for the day-to-day management of the finance function.

#### Group General Counsel & Company Secretary

The Group General Counsel & Company Secretary advises the Chair on governance, together with updates on regulatory and compliance matters; supports the Board agenda with clear information flow; and acts as a link between the Board and its Committees, and between Independent Non-Executive Directors and senior management.

### ***Evaluation and effectiveness of the Board, Committees and the Directors***

To ensure that the Board and its Committees continue to operate effectively, a performance evaluation of the Board and its principal Committees is undertaken annually with an externally facilitated evaluation every third year. We used the services of external advisors, Lintstock Limited, to support the 2023 internal evaluation process, which year on year has built on the priorities identified in the previous years.

The 2023 evaluation, overseen by the Group General Counsel & Company Secretary, was conducted by way of a questionnaire which covered a broad range of topics, including:

- Board composition;
- Board dynamics;
- Stakeholder oversight;
- Strategic oversight;
- Management and focus of meetings;
- Risk management and internal controls;
- Succession planning and people oversight;
- Board support; and
- priorities.

The outcome of this year's evaluation demonstrated that the Board and its Committees continue to operate effectively.

The evaluation highlighted certain topics and actions for focus in the year ahead, including additional training on technological threats and opportunities, with a focus on green technologies and artificial intelligence, enhancing insights into global supply chain considerations and competitor strategies and performance. The Board and the Nominations Committee will also continue to focus on succession planning, both at Board and senior executive level. Creating further opportunities for engagement with senior leadership and management was also identified.

Feedback from the 2022 evaluation related to succession planning, Board training and increasing the Board's exposure to and understanding of certain stakeholders. During the course of 2023, meetings dedicated to talent and succession planning, including assessment of Board skills and composition, were held. The Board reviewed its training requirements and the 2023 and 2024 work programmes were updated to include training sessions on a broad range of topics. Stakeholder related information provided to the Board was enhanced, including site visits, meetings with colleagues and increased content on supply chain and customers as part of business unit deep-dive sessions.

Independent Board Evaluation will be appointed to provide the triennial, in-depth, externally facilitated evaluation of the Board's effectiveness in 2024. Further information on the process and feedback from this evaluation will be reported in the 2024 Annual Report and Accounts.

### ***Training and development for Directors***

It is important to ensure that Directors' skills and knowledge are refreshed and updated regularly, given the dynamic business and regulatory environment in which the Company operates. The Chair, supported by the Group General Counsel & Company Secretary and Secretariat, and informed by the Nominations Committee, is responsible for the ongoing development of all Directors. The Chair discusses with each Director any individual training and development needs, such as formal and informal briefings, meetings with management and visits to the Group's operations. During 2023, the Directors received deep dives including British Gas Energy, Centrica Energy and Centrica Energy Storage+, and training on various matters including, directors' duties and hydrogen and carbon capture storage models (including economic regulation frameworks). In addition, the Directors have full access to the advice and services of the Group General Counsel & Company Secretary, who is responsible for advising the Board, on corporate governance matters. Should it prove necessary, Directors are also able to seek independent professional advice at the Company's expense in respect of their duties.

### ***Directors' independence and conflicts***

All our Non-Executive Directors are considered to be independent against the criteria in the UK Code, and free from any business interest which could materially interfere with the exercise of their independent judgement. In addition, the Board is satisfied that each Non-Executive Director is able to dedicate the necessary amount of time to the Company's affairs.

The Non-Executive Directors' Letters of Appointment state that they must inform the Group General Counsel & Company Secretary of any other businesses, directorships, appointments, advisory roles, or other relevant commitments (including any relevant changes, and a broad indication of the time involved). Directors also confirm that they will inform the Board of any subsequent changes to their circumstances which may affect the time they can commit to their duties. The agreement of the Chair must be obtained before accepting additional commitments that might affect the time Non-Executive Directors are able to devote to their appointment.

In accordance with the Companies Act 2006 and the Company's Articles of Association, Directors are required to report actual or potential conflicts of interest to the Board for consideration and, if required, authorisation. If such conflicts exist, Directors recuse themselves from consideration of the relevant subject matter. The Company maintains a schedule of authorised conflicts of interest which is regularly reviewed by the Board.

The Company's Articles of Association provide how Directors are appointed, retired and replaced. These can be found on our website.

### ***Directors' induction***

The Board has in place processes for the Directors' induction and ongoing training. The Directors' induction programme is led by the Chair and supported by the Group General Counsel & Company Secretary and Secretariat. It is tailored to meet the individual's needs, providing all the information and support required in a structured way to allow them to be effective in their role. Directors are asked to provide input on how their induction should be tailored, in relation to both content and delivery, with the opportunity for periodic subsequent review with the Chair. For example, CP Duggal met with each of the business Managing Directors and their teams during the year, including a visit to the Stockport Call Centre and Bord Gáis Energy in Dublin, together with deep dive sessions with the Centrica Energy and British Gas Energy businesses, and some external training and mentoring sessions.

#### **DIRECTOR INDUCTION 2023 – CP DUGGAL, RUSSELL O'BRIEN, PHILIPPE BOISSEAU, JO HARLOW AND SUE WHALLEY**

Following appointment, all Directors receive a comprehensive and tailored induction programme. This is designed through discussion with the Chair and the Group General Counsel & Company Secretary and considers existing expertise and any prospective Board Committee roles.

The induction plans for CP Duggal and Russell O'Brien comprised a combination of in-person and virtual sessions with both internal functions and external advisors over an initial period of six months. This was structured to ensure that information material to their roles was delivered in the early stages of the programme.

These briefings provided an initial opportunity to meet senior leaders and were supported by site visits to provide on-the-ground understanding of business units and working environments.

The induction for Philippe Boisseau, who joined the Board on 1 September 2023, and for Jo Harlow and Sue Whalley, who joined the Board on 1 December 2023, has begun. An update on their respective inductions will be provided in the 2024 Annual Report & Accounts.

Areas covered during induction	Sessions covered by
Centrica's purpose, strategic priorities and business unit operations	Group Chief Executive and Managing Directors of each Business Unit, Group Head of Strategy
Financial position, performance, investment and funding, including credit ratings	Group Chief Financial Officer, Group Financial Controller and the Company's brokers
Pensions, Treasury & Insurance	Group Head of Treasury, Pensions, & Insurance
External assurance	External auditors
Remuneration Committee advisors	PwC
Rewards & Benefits	Group Chief People Officer, Director of Rewards & Benefits
People & Culture	Group Chief People Officer
Energy sector and trends, energy markets	Group Strategy Director, Group Regulatory Affairs Director, Group Head of M&A, Group Head of Investor Relations
Net zero, sustainability	Group Strategy Director, Group Head of Environment
Stakeholder communication and engagement	Group General Counsel & Company Secretary and Group Corporate Affairs Director
Corporate governance and Board operations	Chair of the Board and Group General Counsel & Company Secretary
Shareholder and investment perspectives	Group Head of Investor Relations and the Company's brokers
Legal and regulatory landscape	Group General Counsel & Company Secretary, Director of Regulatory Affairs and Policy
Centrica's risk profile	Chief Risk Officer
Safety, health and environment, people and culture	Group General Counsel & Company Secretary, Group Chief People Officer
Digital technology / Cyber security	Chief Information Officer, VP – Cyber Security

### Board meetings

The Board is committed to upholding high standards of corporate governance and compliance, recognising their importance for the Company's enduring performance and value generation. These standards underpin the Company's strategic objectives and critical decision-making, crucial for reinforcing its financial foundation and navigating challenging market conditions.

The Board held eight formal meetings in 2023, which primarily occurred face-to-face. In addition, supplementary meetings were called for specific approvals. The table showing the attendance of Directors at Board meetings in 2023 can be found on page 68. If Directors are unable to attend a meeting, they have the opportunity beforehand to discuss any agenda items with the Chair. The agendas for Board meetings are agreed in advance by the Chair, Group Chief Executive and Group General Counsel & Company Secretary. The agenda typically consists of regular standing items, such as reports on financial performance, and in-depth examination or analysis of a topic.

During the year, the independent Non-Executive Directors, including the Chair, met twice without management present.

### Site visits

The Directors recognise the importance of, and benefits gained by, visiting the Group's operations and endeavour to visit Centrica sites each year. The site visits that the Board undertook in 2023 and the interactions at those visits are described in the Chair's letter on page 58.

## Number of Board and Committee meetings attended during 2023<sup>(1)</sup>:

Name	Role	Joined the Board	Tenure <sup>(2)</sup>	Board	AC	NC	RC	SC
<b>Scott Wheway</b>	Chair	01/05/2016	7 years, 8 months	8/8	N/A	3/3	N/A	3/3
<b>Chris O'Shea</b>	Group Chief Executive	01/11/2018	5 years, 2 months	8/8	N/A	N/A	N/A	N/A
<b>Kate Ringrose<sup>(3)</sup></b>	Group Chief Financial Officer	18/01/2021	2 years, 1 month	2/2	N/A	N/A	N/A	N/A
<b>Russell O'Brien<sup>(3)</sup></b>	Group Chief Financial Officer	01/03/2023	0 years, 10 months	6/6	N/A	N/A	N/A	N/A
<b>Carol Arrowsmith</b>	Independent Non-Executive Director	11/06/2020	3 years, 6 months	8/8	4/4	3/3	5/5	N/A
<b>Philippe Boisseau</b>	Independent Non-Executive Director	01/09/2023	0 years, 4 months	3/3	1/1	1/1	N/A	1/1
<b>Nathan Bostock</b>	Independent Non-Executive Director	09/05/2022	1 year, 7 months	8/8	4/4	3/3	N/A	3/3
<b>CP Duggal</b>	Independent Non-Executive Director	16/12/2022	1 year, 1 month	8/8	4/4	3/3	5/5	N/A
<b>Jo Harlow</b>	Independent Non-Executive Director	01/12/2023	0 years, 1 month	1/1	N/A	N/A	N/A	N/A
<b>Heidi Mottram</b>	Independent Non-Executive Director	01/01/2020	4 years, 0 months	8/8	N/A	3/3	5/5	3/3
<b>Kevin O'Byrne</b>	Senior Independent Non-Executive Director	13/05/2019	4 years, 7 months	8/8	4/4	3/3	N/A	N/A
<b>Amber Rudd</b>	Independent Non-Executive Director	10/01/2022	1 year, 11 months	8/8	N/A	3/3	5/5	3/3
<b>Sue Whalley</b>	Independent Non-Executive Director	01/12/2023	0 years, 1 month	1/1	N/A	N/A	N/A	N/A

(1) Any Director who is unable to attend a Board meeting provides feedback to the Chair on the matters to be discussed in advance of the meeting.

(2) Data as at 31 December 2023.

(3) Kate Ringrose stepped down as Group Chief Financial Officer and an Executive Director on 28 February 2023 and Russell O'Brien joined as Group Chief Financial Officer and an Executive Director on 1 March 2023.

### Board activity including Section 172(1) considerations

The Board, as custodian of the Company, acknowledges the importance of understanding stakeholder needs and expectations to secure the Company's long-term viability and to deliver value to all stakeholders and society at large.

Throughout the year, the Board's activities have included evaluating regular operational and financial reports, strategising, and approving various governance matters. Read more about Board discussions held on page 69. Moreover, they have conducted deep dives on special topics. The Directors ensure that their decisions are informed by the considerations set out in Section 172 of the Companies Act 2006.

Feedback from key stakeholder engagements is routinely considered by the Board, and this report, alongside our website, contains additional examples and evidence of the Directors' adherence to their duties as outlined in Section 172. Read more about the Section 172 statement and the principal decision taken by the Board described on page 17.

### Section 172

### Evidence

The likely consequences of any decision in the long term	Please see page 9 to 11, 14 to 17, 41 to 55 and 67 to 69
The interests of our colleagues	Please see page 14 to 17, 38 to 40, 42 to 43, and 67 to 71
The need to foster relationships with suppliers, customers and others	Please see page 14 to 17, 70 and 82 to 83
The impact of the Company's operations on the community and the environment	Please see pages 41 to 55 and 82 to 83
The desirability of the Company maintaining a reputation for high standards of business conduct	Please see pages 45, 70 to 71, and 82 to 83 and visit our website <a href="https://www.centrica.com">centrica.com</a>
The need to act fairly between members of the Company	Please see pages 15 to 17 and 69



## BOARD DISCUSSIONS HELD DURING THE YEAR INCLUDED

### Stakeholders key:



Customers



Colleagues



Investors

Government  
and Regulators

Suppliers

Communities  
and NGOs

### Strategy and business plan

The Board set the delivery of the strategic direction of the Group and oversaw the delivery of that strategy for the benefit of relevant stakeholders. In particular, the Board also considered the following matters:

- Group Annual Plans for 2023 and 2024
- The Group's new strategic & investment framework
- The Energy Supply Market – future investment strategy
- The Climate Transition Plan
- Return of surplus capital to shareholders
- Energy transition investment opportunities
- Responsible sourcing strategy
- Stress testing under range of scenarios

#### Stakeholders considered:



### Culture and stakeholders

The Board recognises that understanding the views and interests of the Company's diverse community of stakeholders, including customers, is important.

The views and interests of stakeholders are considered in the development, delivery and oversight of the Group's business model, strategy and culture. During the year, the Board considered the following matters:

- Cost of living crisis and the impact on customers and colleagues
- Colleague engagement
- Pensions
- Company culture
- Investor updates and feedback
- Senior leadership development and succession planning
- Diversity, Equity & Inclusion strategy

#### Stakeholders considered:



### Political and regulatory environment

During the year, the Board considered a range of political and regulatory matters relevant to the Group's activities and strategy, including in particular:

- Macro/geopolitical developments
- Reform of energy markets
- Modern Slavery Act developments
- TCFD disclosure
- Government intervention initiatives
- UK and Ireland energy security
- FCA Consumer Duty

#### Stakeholders considered:



### Performance and risk

Financial performance and risks, as well as risk controls and processes are regularly reported to the Board and to the Audit and Risk Committee. Risks are also brought to the attention of the Board through reports from the Group Chief Executive, Group Chief Financial Officer, heads of business and functional subject matter experts. These reports covered a wide range of topics, including:

- Health and safety performance and process safety risk
- Group Performance Reports
- 2022 preliminary results statement and 2023 interim results statement
- Group credit exposure and liquidity
- Business reviews, including operational performance
- Periodic results
- Cyber security risk management
- Commodity price movements
- Climate Transition Plan performance
- People & Planet Plan performance
- Going concern and viability statements
- Audit fees
- Internal Audit review
- Internal controls
- Tax
- Treasury risk management
- Insurance
- Ensek migration
- 2022 final dividend
- 2023 interim dividend
- Technology systems roadmap

#### Stakeholders considered:



### Governance

The Board receives regular reports from the Group General Counsel & Company Secretary on governance and regulatory matters, as well as regular updates and insights on market trends from the Investor Relations function. During the year, the Board took time to consider or oversee the following key governance activities/matters:

- 2022 Annual Report and Accounts
- Independent Non-Executive Director recruitment
- Board effectiveness evaluation
- Succession planning for the Board
- Committee composition
- Reports from Committee Chairs
- Conflicts of interest reviews
- Terms of reference reviews
- Director skillset and Director training requirements
- Director independence
- Workforce engagement
- All-Employee Share Plan
- Dividend policy
- Company's investigation results on warrant-based prepayment meter installations

#### Stakeholders considered:



## RELATIONS WITH OUR STAKEHOLDERS

### *Shareholder engagement*

The Board is committed to maintaining open channels of communication with all of the Company's stakeholders. An important part of this is providing a clear explanation of the Company's strategy and objectives, and ensuring feedback is acknowledged, considered and, where appropriate, acted upon.

### *Meetings, roadshows and conferences*

The Company reports its financial results to shareholders twice a year, with the publication of its annual and half-year results. The Group Chief Executive and Group Chief Financial Officer typically meet with our major institutional shareholders twice a year, following the Company's preliminary and interim results, which provides an opportunity for a review of the Company's strategy and performance. The results presentations, webcast and announcement from the 2022 preliminary results and 2023 interim results are available on our website, [centrica.com](https://centrica.com).

In addition, management and/or Investor Relations attend a number of investor conferences throughout the year, giving shareholders further opportunity to meet and receive updates directly from Company representatives. Senior management, the Chair, Senior Independent Director and Remuneration Committee Chair are also available to meet on an ad-hoc basis with major shareholders if requested.

### **Engagement themes with our institutional shareholders**

During the year, engagement themes included:

- Centrica's strategic refresh;
- Full year and interim results;
- the Rough storage facility;
- UK energy security;
- Dividends and shareholder returns;
- The regulatory and political environment for UK energy;
- Impact of rising commodity prices;
- Energy transition investment opportunities;
- Board succession;
- Liquidity and result of stress tests; and
- ESG matters.

## GENERAL MEETINGS

The Board is committed to communicating with shareholders and other stakeholders in a clear and open manner and seeks to ensure effective engagement through the Company's regular communications, the AGM and other investor relations activities. During 2023, the Company undertook an ongoing programme of meetings with investors (in person and virtually). The majority of these meetings were led by the Group Chief Executive and Group Chief Financial Officer.

The Company holds an Annual General Meeting (AGM) each year and holds General Meetings as required. At the AGM, the Chair gives his thoughts on governance aspects of the preceding year and the Group Chief Executive reviews the performance of the Group over the last year. In advance of each AGM, we write to our largest shareholders inviting discussion on any questions they might like to raise and making the Chairs of the Board, the Audit and Risk Committee and the Remuneration Committee available to meet shareholders should they so wish. In addition, the Company engaged with its largest shareholders and key governance agencies in early 2023, on resolutions concerning the Directors' Remuneration Policy and our Climate Transition Plan. Feedback was received from major shareholders and governance agencies and dialogue entered into with a number of shareholders regarding the proposals.

The 2023 AGM was held as a hybrid meeting, giving shareholders the opportunity to participate (including asking questions and voting) in person or virtually via an online platform (Lumi). Shareholders were encouraged to exercise their votes by submitting their proxy forms either electronically or by post. We also invited shareholders to submit their questions in advance of the AGM via a dedicated question facility on our website and, where appropriate, the answers were published on our website.

Our 2023 AGM was well supported with voting in favour of the resolutions ranging from 92% to 99% and with 65% of issued share capital voted.

Information about the 2024 AGM will be provided in the Notice of Meeting and will be available in due course at [centrica.com/agm24](https://centrica.com/agm24). Voting on the resolutions will generally be conducted by a poll and the voting results will be announced through the Regulatory News Service of the London Stock Exchange and also made available on the Company's website.

### *Centrica.com*

Our website, [centrica.com](https://centrica.com), contains up-to-date information for shareholders and other interested parties including Annual Report and Accounts, shareholder circulars, share price information, news releases, presentations to the investment community and information on shareholder services.

## WORKFORCE

### *Workforce engagement*

Responsibility for workforce engagement is shared amongst the Directors of the Board, which is a well-recognised approach adopted by companies. Through engaging with colleagues and understanding what they think and feel, the Board is able to make more informed decisions which enable better outcomes for colleagues as well as the Company.

During the year, the Chair and Non-Executive Directors engaged with members of the workforce in various ways. This included site visits to Brigg, Hessle, Easington Terminal, and Park House where they met with colleagues to better understand the businesses.

Quarterly engagement surveys, feedback from the Shadow Board, town halls, meetings with members of the Centrica Leadership Team, both individually and together, leader-led listening sessions and colleague-led network sessions provided additional mechanisms to better understand the views of the workforce and to foster a more collegial culture.

Ongoing and holistic engagements like these contributed to the decision-making of the Centrica Leadership Team and the Board throughout the course of 2023. Further information on some of the decision-making of the Board can be found on page 17.

### *Equal opportunities*

The Group has, and is committed to, an active equal opportunities policy which includes, but is not limited to, recruitment and selection, training, career development, performance reviews, promotion and through to retirement. Our culture is to create an inclusive and safe environment free from discrimination, harassment and victimisation. Our policies are in place to ensure everyone receives equal treatment regardless of gender, identity, race, ethnic or national origin, disability, age, marital status, sexual orientation or religion or any other characteristic protected by applicable laws.

We have created channels for colleagues to voice concerns confidentially, through a Speak Up helpline that is operated by a third party.

Action like this helps to ensure that decisions relating to employment practices are objective and based upon work criteria and individual merit. See pages 45 for more information.

### ***Colleagues with disabilities***

It is our policy that current and prospective colleagues with a disability have the same right to access and develop their careers as anyone else, which is why we are actively targeting to grow disability representation as part of our People & Planet Plan to ensure we reflect the full diversity of our communities (see page 42). Colleagues with a disability receive full and fair consideration when applying for all vacancies and we interview those who meet the minimum criteria required, whilst making all reasonable adjustments during recruitment or during their employment with us. To help everyone reach their full potential, we provide training, career development and promotion opportunities that are open to anyone who works for us alongside tailored programmes that specifically support colleagues with disabilities to achieve the next steps in their career. We also endeavour to retain colleagues in the workforce if they become disabled during employment.

To support this approach, in 2017 we launched Diverse-ability, a network that celebrates physiological and neurological diversity among colleagues. Over the years, the network has grown from strength-to-strength to become a family of networks including the neurodiversity network and The Fertility Sanctuary. They are a vital source of support and education for colleagues, whilst providing us with essential feedback to help us evolve our business in a more inclusive way. As part of our ambition to be a more inclusive business, we support The Valuable 500 initiative to champion disability inclusion across the business and beyond. We are also members of their Generation Valuable mentoring programme to help identify and build a community of disabled talent to develop their skills and share their experiences upwards, informing the C-suite about how to make businesses more inclusive. In addition to this, we are a Level 2 Disability Confident Employer, partner with Scope and are members of the Business Disability Forum, which offers support, toolkits and advice to businesses around disability matters. In 2024, we plan to launch our Great Minds programme to help normalise and better support neurodiversity amongst other activities.

### ***Human rights***

We are fully committed to upholding the fundamental human rights and freedoms of everyone who works for us, with us, or lives in the communities where we operate. We uphold the UN Guiding Principles on Business and Human Rights and are signatories of the United Nations Global Compact. As set out in Our Code, we take steps to ensure that we never knowingly cause or contribute to human rights abuses through activities like employment checks and supplier due diligence. We also aim to contribute positively to global efforts to ensure human rights are understood and observed. Further information about our efforts can be found in our People & Planet Plan on page 46, as well as in our Modern Slavery Statement and Our Code available on our website [centrica.com](https://centrica.com).

# AUDIT AND RISK COMMITTEE

## MEMBERSHIP, MEETING ATTENDANCE AND KEY FOCUS

### *Committee members*

- Nathan Bostock (Chair) (with effect from 1 March 2023)
- Kevin O'Byrne (Chair until 28 February 2023)
- Carol Arrowsmith
- Philippe Boisseau (with effect from 1 September 2023)
- CP Duggal

All Committee members are independent Non-Executive Directors. Nathan Bostock and Kevin O'Byrne have recent and relevant financial experience and the Committee has sector relevant competence, as disclosed on pages 59 to 63.

Carol Arrowsmith is connected to Deloitte LLP ('Deloitte') as, historically, she was a partner there. However, she had left Deloitte prior to their appointment as the Group's external auditors. In addition to this, Deloitte provides her with services in a personal capacity. The Committee deems that this does not affect the independence and judgement of Deloitte, nor the Committee's oversight of Deloitte's performance.

### *Meeting attendees by invitation*

All other Non-Executive Directors, Group Chief Executive, Group Chief Financial Officer, Group General Counsel & Company Secretary, General Counsel, Secretariat & Corporate Services, Group Financial Controller, Group Head of Accounting, Reporting and Tax, Group Head of Treasury, Pensions and Insurance, Group Chief Risk Officer and Group Head of Internal Audit, and the External auditors.

### *Focus areas in 2023*

- The Group's published financial information.
- The effectiveness of the Group's risk management and internal controls framework.
- The Enterprise Risk and Control Framework including risks managed by the other Board committees.
- The management of cyber risks.
- Ethical, legal and regulatory matters.
- Deep dives on Centrica Energy.
- Finance Systems Review and Finance health check.

## DEAR SHAREHOLDER

The Audit and Risk Committee is pleased to present its report for the year ended 31 December 2023, which summarises the Committee's work to ensure the accuracy of the Group's published financial information and the effectiveness of the Group's risk management and internal controls framework.

This report should be read in conjunction with the following sections in the Annual Report and Accounts:

- **Principal Risks and Uncertainties, pages 28 to 34**
- **Viability Statement, pages 35 to 37**
- **UK Corporate Governance Code application, page 64**

## COMMITTEE OVERVIEW

The Committee has a yearly agenda which is linked to the Company's financial calendar. The agenda is flexible, enabling in-depth reviews of topics of particular importance to the Committee.

The core responsibilities of the Committee are to:

- monitor and review the adequacy and effectiveness of the governance and oversight of the Company's financial processing and reporting, internal controls and risk management, including key judgments and estimates;
- provide advice and assurance to the Board on whether it has discharged its duties and whether the Annual Report and Accounts, when taken as a whole, is fair, balanced and understandable and provides all the necessary information for shareholders and other stakeholders to assess the Company's position, performance, business model and strategy;
- monitor and review the operation and effectiveness of the Group's Internal Audit function, including its independence, strategic focus, activities, plans and resources;
- supervise the appointments of the Group Chief Risk Officer and Group Head of Internal Audit;
- manage the relationship with the Group's external auditors on behalf of the Board (including appointment, independence, effectiveness and remuneration);
- conduct a tender for the external audit contract at least every 10 years and make appointment recommendations to the Board;
- review the Company's arrangements for its workforce/stakeholders to raise concerns in confidence about possible improprieties in financial reporting or other matters; and
- consider and review material legal and regulatory policy compliance issues or risks, and maintain oversight of the arrangements in place for the management of statutory and regulatory compliance in areas such as financial crime.



### Main activities during 2023

During the year, the Committee met four times and considered a broad range of topics. Our key highlights are disclosed below:

- Accounting judgments, especially those related to Spirit Energy and Centrica Energy Storage, the reversal of the onerous supply contract provision, the impairment of the Nuclear asset, the Electricity Generator Levy and the assessment of the downstream supply bad debt provision.
- Viability and Going Concern assessments and related disclosures.
- Review of the 2022 financial results, the Annual Report and Accounts, and the 2023 interim financial results, including any relevant communications from Deloitte.
- Evaluation of the effectiveness of the external audit process and the Internal Audit function.
- Continued oversight of the control environment and finance systems maintenance and development, particularly regarding the migration of British Gas Energy customers' migration to a new technology platform.
- Assessment of credit risk exposure amidst volatile commodity prices and the broader impacts of high commodity price environments.
- Review of the Group's pension schemes, including the forthcoming triennial review and the impact of changes in gilt yields (see note 22).
- Monitoring of sanctions compliance, information systems, cyber security and data security risk management, especially considering geopolitical developments and updating the Board accordingly.
- Updates on legal, regulatory, and ethical compliance, with a focus on energy trading and the sale and delivery of FCA-regulated products and services, including the operation of Our Code and the Speak Up helpline.
- Preparation for upcoming legal and regulatory changes, such as reforms to the UK corporate governance regime.
- Regular reports and recommendations from Internal Audit and the external auditors on risk, assurance, and controls.
- Regulatory compliance considerations regarding British Gas Energy, including in relation to the installation of prepayment meters.
- Bad debt provisioning in the context of the cost of living crisis and suspension of prepayment meter installations.
- In-depth reviews of the risks and controls environment across various divisions of the Group, including British Gas Energy, British Gas Services & Solutions, Centrica Business Solutions, Bord Gáis Energy, and Centrica Energy, as well as the Group-wide financial risk and definitions of capital employed.
- Report on the changes to the Government support schemes for suppliers.
- Evaluated risks and opportunities related to climate change alongside the Safety, Environment and Sustainability Committee, to ensure that the Annual Report and Accounts comprehensively outlines the actions taken to effectively address major climate-related concerns.

## RISK MANAGEMENT AND INTERNAL CONTROLS

### Internal Audit

The Committee oversees the Group's Internal Audit function, ensuring its efficiency, independence, and alignment with strategic objectives. This includes regular reviews and approval of the annual Internal Audit plan, which is developed in response to the Group's evolving Principal Risks (details on pages 28 to 34). The Group Head of Internal Audit maintains direct communication with the Board Chair and Committee Chair and is accountable to the Committee. Throughout the year, the Committee is updated on Internal Audit's findings. It also monitors the implementation of follow-up actions by business units.

The independence, objectivity and effectiveness of the Internal Audit function was reviewed by reference to the output from a combination of self-assessment, independent assessment conducted by survey involving the CLT and a broader group of senior managers, as well as assessment by the Committee. The review concluded that the Internal Audit function operated in accordance with the Institute of Internal Auditors' International Professional Practices and continued to be independent, objective, and effective.

### Review of the system of risk management and internal controls

Our risk management and internal controls are assessed through a self-certification process, a Group Entity Level Controls assessment program, and internal reviews by Internal Audit and the Committee. The Committee oversees the work of Internal Audit, the functional support teams, and the management teams, receiving regular updates on Group Principal Risks and other Group frameworks. At every meeting, the Committee receives an update on the Group's Enterprise Risk and Controls from the Chief Risk Officer and Group Head of Accounting, Reporting & Tax. This details the key risks the Group faces, the change in risk climate since the last meeting and any new emerging risks. The update also highlights the control environment, any changes in that environment as the control framework keeps pace with business change, and any areas of weakness identified, together with proposed mitigations. The Committee has confidence in its ability to identify issues and the business units' ability to remediate control gaps. The risk management process and internal controls have been in place throughout the year and remain effective, with ongoing review and improvement.

The Committee has received regular reports throughout the year on the status of the Group's transition to the new billing system, Ensek. The Committee was made aware of the evolving nature of the control activities performed in relation to this in-development Software as a Service (SaaS) environment. Given the controls were still developing, the external auditors did not plan to place reliance on controls in this area and, as expected, their control design and implementation work led to certain control findings and observations. Notwithstanding these findings, management and the Committee are satisfied with the manual review controls that have been put in place, which include a significant number of validations, checks, and other broad assurance activities, providing financial integrity and ensuring we remain comfortable with the financial results. The business is committed to evolving further the manual and IT controls in place and the extent of automation, as the platform continues its development. Alongside Ensek, the Committee also noted external audit findings across some of the Group's systems around user access and oversight of service organisations, leading to more substantive audit testing. The Committee discussed these challenges with management and the mitigations and improvements in these areas expected in 2024.

The Committee also noted that, in line with the culture of continuous improvement in the business, there is an ongoing review being undertaken on the Group Enterprise Risk Management framework.

### Fair, balanced and understandable

In line with the UK Code, the Committee, on behalf of the Board, reviews the Annual Report and Accounts to ensure it is compliant with applicable laws and regulations and provides shareholders and stakeholders with the necessary information to assess the Company's position, performance, culture, business model, and strategy. The Committee also considers the processes and controls involved in the production of the Annual Report and Accounts, the governance framework for review and the responsibilities of the Directors.

There is a robust governance framework around the production of the Annual Report and Accounts to ensure they have been critically reviewed and verified by the key teams in the relevant businesses and functions. This includes review and agreement by the Fair, Balanced and Understandable Committee (comprising Heads of Function from Finance, Corporate Communications, Investor Relations, Internal Audit, People Function, Strategy and Corporate Legal & Secretariat) together with review and input from other content owners and their managers.

## EXTERNAL AUDITORS

### *External auditors and Effectiveness of the external audit process*

The Committee manages the relationship with the Group's external auditors on behalf of the Board. The Committee considers annually the scope, fee, audit plan, performance, objectivity and independence of the external auditors. To maintain objectivity, principal members of the external audit team are rotated off the Company's audit. Additionally, to protect the independence of the external auditors and the integrity of the audit process, the Company prohibits hiring senior staff from its auditors for at least two years after they stop providing services to the Company. Jane Boardman was appointed as the lead audit partner after the completion of the 2021 audit and has been serving in this role for two years.

To assess the effectiveness of the external audit process and independence and objectivity of the external auditors, the Committee carried out an assessment, as in prior years, primarily looking at the key areas of:

- robustness of the audit process
- quality of people and service
- quality of delivery
- independence and objectivity
- value added advice

This assessment included an internal questionnaire, which was completed by the Chair of the Board, Committee members and senior members of management on their views of Deloitte's performance. The questionnaire covered a review of the audit partner and team, the audit scope and approach, audit plan execution, auditor independence and objectivity and robustness of challenge of management. Separately, Deloitte also provided an assessment, via an internal management questionnaire, of management's controls, judgements and engagement throughout the audit process. The feedback was reviewed by management and reported to the Committee.

The Committee and the Board confirm that they have taken all the necessary steps to become aware of any relevant audit information and to pass that information onto Deloitte. The Committee was satisfied with the external auditors' commitment to audit quality, the robust and professional working relationship with management and demonstration of strong technical knowledge and professional scepticism. In addition, to ensure the independence of the external auditors, and in accordance with International Standards on Auditing (UK & Ireland) 260 and Ethical Standard 2019 issued by the Accounting Practices Board and as a matter of best practice, Deloitte has confirmed its independence as auditors of the Company. On the basis of Deloitte's confirmation and report on their approach to audit quality and transparency, the Committee concluded that Deloitte possesses the appropriate qualifications and expertise; remains independent of the Group; and, coupled with effective management engagement, that the audit process was effective.

The re-appointment of Deloitte as auditors for the 2023 financial year was approved by shareholders at the AGM in June 2023 and Deloitte has been recommended for re-appointment again in 2024. The Committee confirms that this recommendation is free from influence by any third party and no contractual term of the kind mentioned in Article 16(6) of the Audit Regulation has been imposed on the Company.

Deloitte has been the Company's auditor since 2017. The Committee has considered the timing of a competitive tender and has decided to conduct the tender in early 2025. This will allow sufficient time for audit firms otherwise working with Centrica in any capacity to become independent in advance of taking on the audit in 2027. Deloitte will be invited to participate in the tender.

The Company has complied with the Statutory Audit Services Order 2014 for the financial year under review.

### *Non-audit fees*

To safeguard the objectivity and independence of the external auditors, the Committee is responsible for the policy on the award of non-audit services to the external auditors. A copy of this policy is available on our website [centrica.com](https://www.centrica.com). The Chair of the Committee must approve all

requests to utilise Deloitte for non-audit services. There is an annual cap on non-audit work during the ordinary course of business of £1 million, which is assessed each year for appropriateness in the context of external guidance and regulation.

Overall total non-audit fees incurred in 2023 were £0.7 million (2022: £0.9 million), including £0.5 million for the review of the interim results. All non-audit fees relate to assurance services (e.g. Interim review or local regulatory requirements). In line with the non-audit fees policy, approval for this expenditure was sought and received from the Committee in advance of the work commencing and Deloitte were best placed to provide these services on a timely and cost efficient basis, given their position as the external auditor. The amount incurred in the year is well below the legal cap of 70% of non-audit fees (for services not required by regulation) compared to the three-year average of statutory audit fees, amounting to approximately 9%.

In normal circumstances, all significant non-audit work is put out to tender and Deloitte is only appointed if their experience and knowledge makes them the most appropriate supplier and it is clear another firm could not undertake the work without adversely impacting the businesses. For further information, see note S9 to the accounts on page 220.

### *Corporate Reporting Review*

The Audit and Risk Committee assists the Board in fulfilling its oversight responsibilities by reviewing and monitoring the integrity of the financial information provided to shareholders and other stakeholders. The Committee oversees financial reporting and related risks and internal controls and has a role in overseeing the internal and external auditors, as well as interacting with other members of management and external stakeholders as required.

The FRC's Corporate Reporting Review ('CRR') team carried out a review of the Company's Annual Report and Accounts ('ARA') for the year-ended 31 December 2022. The Committee was pleased to note that the CRR team did not raise any questions or queries with the Company in relation to compliance with reporting requirements. Whilst the CRR team do not benefit from a detailed knowledge of the business or underlying transactions and therefore their review does not provide an assurance that the ARA is correct in all material respects, it is nonetheless a positive outcome.

In advance of the Audit, Reporting and Governance Authority being created, the Committee, during the year, complied with the majority of the FRC's Audit Committees and the External Audit: Minimum Standard.

### *UK Corporate Governance Code preparedness*

The Board regularly receives updates from the Group General Counsel & Company Secretary about important developments and upcoming changes in UK Corporate Governance. During the year, the Committee, aided by the Group General Counsel & Company Secretary, considered the changes to the UK Corporate Governance Code and considered how these changes affect the roles and terms of reference of the Board Committees.

### *Committee effectiveness*

The Committee reviews its terms of reference annually to ensure they remain appropriate in light of legal, regulatory and best practice changes. No material changes were made to the Committee's terms of reference in the year under review (available on [centrica.com](https://www.centrica.com)).

The effectiveness and performance of the Committee was evaluated as part of the overall evaluation of the Board and its Committees. Feedback from that process indicated that the Committee was performing effectively. Read page 66 for further information. Focus areas for the Committee in the year ahead include the review and update of the Group Enterprise Risk Management framework, alongside relevant Controls; the continued scrutiny of cyber risks, the rotational deep dives into material businesses and preparation for the audit tender in 2025.

**Nathan Bostock**  
on behalf of the Audit and Risk Committee  
14 February 2024

## Key judgements and financial reporting matters in 2023

## Audit and Risk Committee reviews and conclusions

**Electricity Generator Levy**

The Electricity Generator Levy (EGL) applies a tax rate of 45% on revenues from sales exceeding a benchmark price of £75/MWh on electricity generated from nuclear sources. It applies from 1 January 2023 to 31 March 2028. Because EGL is a tax on revenue and not profits, it falls under IFRIC 21: Levies and is not in the scope of IAS 12: Income Taxes. This means that EGL is not recognised in the tax line but instead reduces the Group's adjusted operating profit.

EGL is chargeable within the Group's associate accounted 20% nuclear investment for its sale of electricity, as well as on off-take arrangements with significant minority shareholders in such generators.

During the year, the Group's share of its Nuclear associate's EGL payments amounted to £41 million (recorded within the share of profit after tax from associates). The Group has also made payments on account to HMRC of £285 million in relation to its estimated EGL liabilities for its minority shareholder Nuclear offtake arrangements during the year and this expense has been recorded within Cost of Sales.

The EGL legislation is new, and its interpretation and application is unclear in respect of the Group's minority shareholder Nuclear offtake arrangements. As such, the extent of the levy that will ultimately be due in this regard is not yet certain, and a different amount (up to the £285 million paid to date) may ultimately be determined. If this were the case, the Group would be due repayment of excess monies paid to HMRC and at the point at which such repayment became probable, a tax deposit asset would be recorded on the Group's balance sheet, and as a credit within Cost of Sales in the income statement, in accordance with the 2019 IFRIC Agenda decision on Deposits relating to taxes other than income taxes. No tax deposit asset has been recorded because it is not deemed probable, as at the balance sheet date, that this will ultimately be recoverable (or used to settle another tax liability).

**Determination of forecast commodity prices and their use in valuing long-lived assets and derivative contracts**

Commodity price forecasts are a key assumption in the valuation of the Group's long-lived assets and derivative contracts. For short-term commodity prices over the next four years, observable liquid market prices (as at 31 December 2023) are taken as the best view of expected price. For the longer-term period thereafter, the Group uses a 'P50' median price curve, derived from a collection of third-party forecasts. This approach is deemed to align to pricing that a reasonable market participant would use. The Group has used these price curves in its asset impairment testing and contract valuations.

The Group has also obtained commodity price forecasts which are intended to be consistent with net zero by 2050. These are lower than the 'P50' curves the Group has adopted for NBP Gas but broadly similar for baseload power. The Group has shown the impact of such price forecasts on the gas assets and Nuclear assets in note 7 of the financial statements.

The Committee reviewed and discussed the complexity around the interpretation of the Electricity Generator Levy legislation.

It also held discussions with the external auditors to confirm their view and the appropriateness of the accounting treatment adopted.

The Committee concluded that the judgement reached was appropriate and concurred with the accounting approach.

The Committee also noted the disclosures included in the financial statements to highlight the key source of estimation uncertainty in this area.

Further detail is provided in notes 1 and 3 on pages 132 to 133 and 136 to 142.

The Committee noted the fall in short-term commodity prices during the year, with year-end prices well below 2022 levels. It also observed the flattening of summer/winter gas price spreads. The Committee understood that these outputs impact many of the other judgements listed below.

The Committee reconfirmed continued support for the longer-term 'P50' median curve (derived from third parties) approach. It noted that the 'P50' long-term commodity price forecasts were broadly similar year-on-year for all commodities and that these price movements were insignificant compared with the near-term falls.

As a result of the above, the Committee was comfortable the curves were reasonable.

Sensitivities of the asset impairment tests to changes in price forecasts are provided in note 7 on page 152 to 156.

The Committee noted the use of a price curve intended to be consistent with net zero by 2050 in the impairment sensitivities and believed the output provided useful information to readers of the accounts.

The Committee also noted the continued inclusion of a Climate Change accounting considerations section in note 3.

### Energy derivatives – classification and valuation

The Group enters into numerous commodity contracts in its ordinary course of business. This can be to procure load for its downstream business, sell output from its upstream/infrastructure assets, to trade around its other commodity exposures or to make money from proprietary activities. On entering into these contracts, the business assesses each of the individual trades and classifies them as either:

(i) Out of scope of IFRS 9:

For 'own use' contracts (i.e. customer contracts, contracts to take delivery and meet customer demand or sell upstream/infrastructure output) and contracts that cannot be net settled.

(ii) In scope of IFRS 9:

Contracts for commodities which have the ability to be and practice of being net settled.

Energy contracts outside the scope of IFRS 9 are accruals accounted. Those contracts considered to be within the scope of IFRS 9 are treated as derivatives and are marked-to-market (fair valued). If the derivatives are for proprietary energy trading, they are recorded in the business performance column of the Group Income Statement. If they are entered into to protect and optimise the value of underlying assets/contracts or to meet the future downstream demand needs, they are recorded as certain re-measurements.

The fair-value of derivatives are estimated by reference to published liquid price quotations for the relevant commodity. Where the derivative extends into illiquid periods, the valuation typically uses the 'P50' median price curves (see Determination of long-term commodity prices and their use valuing long-lived assets).

Judgement is required in all aspects of both the classifications and valuations.

One of the Group's critical accounting judgements is that its LNG contracts are outside the scope of IFRS 9 because they are entered into for its own purchase and sale requirements ('own use').

### Onerous energy supply contract provision

The Group's residential and business energy supply contracts are accruals accounted. The Group operates and manages a hedging strategy to ensure that the future costs of supplying these customer portfolios are appropriately managed.

These hedges are generally in the scope of IFRS 9 and are measured at fair value (see 'Energy Derivatives – classification and valuation' above). They are recognised as certain re-measurements in the Group income statement until the point at which the related costs to purchase electricity and gas are incurred.

At the end of 2022, business supply hedges were significantly in-the-money, following previous increases in near-term commodity prices. Because of this hedge value recognition, the assessment of whether the business supply contracts were onerous had to be calculated based on the cost of fulfilling these arrangements, including the reversal of previous mark-to-market gains.

Accordingly, the Group determined that at 31 December 2022, the future costs to fulfil business customer contracts including mark-to-market reversals would exceed the charges recovered from customers because the associated hedging gains had already been recognised in the Income Statement. The Group therefore retained an onerous supply contract provision of c.£1 billion at that date.

During 2023, the business supply hedges moved to being out-of-the-money and consequently, the costs to fulfil the customer contracts including mark-to-market reversals no longer exceed the charges expected to be recovered from the customer. Therefore no onerous supply contract provision is required and the previous provision has been unwound.

The movement in the onerous provision has been reflected as a certain re-measurement in the Income Statement because these supply contracts are economically related to the fair value movements on the hedges (note that the certain re-measurement Income Statement movement is £0.8 billion, because a £0.2 billion onerous provision was acquired as part of the Avanti Gas purchase).

The Committee noted that the Group's policy and methodologies in classifying and valuing energy derivatives were unchanged from previous periods.

The Committee also reviewed and understood the breakdown by business of the movement in IFRS 9 energy derivative valuations in the Group Income Statement.

They reflected on the fact the certain re-measurement derivative net gain of £3.6 bn was predominantly as a result of the unwind of prior year out-of-the-money positions. Although commodity prices fell during the year, the timing of each business (e.g. UK supply book, Upstream/infrastructure asset books) entering into new hedge trades was important, such that the net movement on unrealised trades was small in comparison to the unwind.

The Committee noted that following the extremely volatile prices in 2022, all of the books had moved into more normal closing derivative positions, with Supply load books (buy books) being out-of-the-money following a period of falling prices, and Upstream/infrastructure asset and Centrica Energy (sell books) being in-the-money. These closing positions are also at significantly lower values compared with the prior period, with the consequent expectation that the future 2024 certain re-measurement unwind will also be at significantly lower levels than seen in 2022 and 2023.

The Committee noted the link between the derivative certain re-measurements for the UK supply books and the onerous supply contract provision certain re-measurements, as discussed below. Further detail is provided in notes 2 and 7 on pages 134 to 135 and 152 to 156.

The Committee noted and continued to concur with the specific judgement around LNG contract own use classifications.

The Committee reviewed the change in the underlying derivative hedge values of the business books and therefore the movement in the onerous energy supply contract provision.

The Committee noted that this movement is mainly driven by the unwind of the previous hedges.

The Committee observed that an onerous provision could come back in 2024 if derivative hedges moved back into the money but this is dependent on energy prices and the hedged position.

The Committee noted the disclosures included in the financial statements to highlight this area.

The Committee held discussions with the external auditors to re-confirm the appropriateness of the accounting treatment and to confirm their views of the assumptions used.

Further detail is provided in notes 2, 3 and 7 on pages 134 to 142 and 152 to 156.



## Key judgements and financial reporting matters in 2023

## Audit and Risk Committee reviews and conclusions

**Impairment of long-lived assets**

The Group makes judgements and estimates in considering whether the carrying amounts of its assets are recoverable:

**Upstream (Power assets and Gas assets (including gas storage))**

For Upstream/infrastructure assets, discounted cash flows are prepared from projected production profiles of each field or power asset, taking into account forecast future commodity prices, to assess their recoverable amount. When deriving forecast cash flows, market prices are used for the period when a commodity is liquid. For the longer-term illiquid period, the 'P50' median price curve is used (see 'Determination of forecast commodity prices and their use valuing long-lived assets and derivatives', above).

Judgement is also required around production volumes. For Nuclear, individual station information and recent availability data is factored in to the overall asset valuation. The expected operating life of Sizewell has continued to be reflected to 2055 in the modelling, beyond the original design life. During 2023, the expected closure dates for Heysham 1 and Hartlepool stations were extended by two years to March 2026, with a plus or minus one year window either side of this date. For Gas assets, each field has specific reservoir and field characteristics and is modelled independently. For the Rough gas storage asset, in addition to the above process associated with its cushion gas production, an assessment is also made of value to be derived from cycling gas in and out of the reservoir (predominantly from summer/winter gas spreads). This assessment utilises the forward market prices noted above and is also used to calculate the optimum cushion gas production date to maximise the recoverable amount of the asset.

Consistent with previous years, taxes and levies are also included in the discounted cash flow modelling. For Nuclear, the Electricity Generator Levy (see 'Electricity Generator Levy' above) applies a tax rate of 45% on revenues exceeding a benchmark price of £75/MWh and applies from 1 January 2023 to 31 March 2028. For Gas assets, the Energy Profits Levy applies a rate of 35% (bringing the headline rate on Gas asset profits to 75%) and also continues until 31 March 2028.

Predominantly as a result of the year-on-year decrease in forecast commodity prices, an exceptional impairment of £549 million has been booked in relation to the Nuclear investment.

For Gas assets, the Rough gas storage field has booked an exceptional impairment of £82 million as a result of both the fall in forecast gas prices and the flattening of summer/winter gas spreads. All other gas fields retained impairment headroom.

**Credit provisions for trade and other receivables**

The IFRS 9 impairment model requires credit provisions ('bad debt') for trade and other receivables to be based on an expected credit loss model, as opposed to an incurred loss basis. The economic effects of the inflationary pressures on household income, not least energy prices, and the wider cost of living crisis will likely impact the ability of the Group's customers to pay amounts due. Accordingly, there is significant judgement around the levels of forecast bad debt and the provisioning required at the year-end.

The Group's residential and business energy supply customers account for the majority of the Group's credit exposure (with balances associated with our trading business generally received within 30 days). Expected default rates in these areas are calculated initially on a matrix basis by considering recent historical loss experience, the nature of the customer, payment method selected and, where relevant, the sector in which they operate. Management has then also factored in forward-looking economic assumptions, taking into account inflation and affordability forecasts.

In the prior year a high-level macroeconomic provision of £125 million was maintained to cover inflationary concerns. During 2023, the deemed quality and relative ageing of the Group's debt has declined with difficulties in field debt recovery following the suspension of prepayment meters and the fragile economic climate. Given these issues and the economic environment, the high level macroeconomic provisions have been increased by £50 million (to £175 million) to cover these concerns. For UK Downstream energy supply, the bad debt charge as a percentage of revenue increased to 2.7% (2022: 2.1%). The closing bad debt provision moved to 34% (2022: 26%) of UK energy supply gross receivables.

Due to the significant estimation uncertainty in this area, management continues to provide detailed analysis and sensitivities in note 17 to the Financial Statements.

The Committee challenged management and the external auditors on the key inputs to the impairment models including price, outage rates, assumed lives, tax and discount rates, and were comfortable with the conclusions reached.

The Committee reviewed the Nuclear investment impairment and noted that the decrease in near-term commodity prices had more than offset the benefit of life extensions at Heysham and Hartlepool.

It also considered the Rough gas storage field impairment, following price and summer/winter spreads falls and highlighted the difficulty in assessing option value.

The Committee noted that price sensitivity disclosures have been included in the financial statements.

Further detail on impairments and the assumptions used in determining the recoverable amounts is provided in notes 7 and S2 on pages 152 to 156 and 191 to 203.

The Committee reviewed management's groupings of receivables by the key factors affecting recoverability (e.g. payment method, nature of customers) and considered the levels of provisions booked against each grouping, at the year-end.

The Committee discussed the approach with the external auditors.

The Committee was comfortable with the provisions booked, including the increase in the macroeconomic provisions, whilst noting the significant estimation uncertainty in this area.

The Committee noted the continued enhanced disclosure in note 17, setting out the judgemental nature of the provisioning and the sensitivity analysis to allow users of the accounts to model different outcome scenarios.

### Classification and presentation of exceptional items and certain re-measurements

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

The classification of items as exceptional and specific trades as certain re-measurements (see 'Onerous energy supply contract provision' and 'Energy Derivatives – classification and valuation' sections above) are subject to defined Group policies. These policies are reviewed annually by management.

At the year-end, exceptional items included the Nuclear and Rough gas storage asset impairments noted above. Also included is a write-off of £14 million predominantly associated with a battery storage asset and a gas engine in Centrica Business Solutions.

Certain re-measurements totalled an overall c.£4.4 billion gain – being £3,573 million gain from derivatives and £833 million gain from the onerous supply contract provision movement.

### Energy supply revenue recognition

The Group's revenue for energy supply activities includes an estimate of energy supplied to customers between the date of the last meter reading and an estimated year-end position. This is estimated through the billing systems, using historical consumption patterns, on a customer-by-customer basis, taking into account weather patterns, load forecasts and the differences between actual meter readings being returned and system estimates. An assessment is also made of any factors that are likely to materially affect the ultimate economic benefits which will flow to the Group, including bill cancellation and re-bill rates. To the extent that the economic benefits are not expected to flow to the Group, revenue is not recognised.

At the year-end, unread energy income for the continuing supply businesses was £3.0 billion (2022: £2.9 billion).

### Pensions

The assets and liabilities, and the cost associated with providing benefits under defined benefit schemes is determined separately for each of the Group's schemes. Judgement is required in setting the key assumptions used for the actuarial valuation which determines the ultimate cost of providing post-employment benefits, especially given the length of the Group's expected liabilities.

The net Group pension liability position was £117 million (2022: £40 million asset). The UK defined benefit schemes used a nominal discount rate of 4.6% (2022: 4.7%) and inflation of 2.9% (2022: 3.0%).

Following the Liability Driven Investment (LDI) crisis in the pensions arena in late 2022, the Group continues to provide a £400 million interest-bearing loan to the UK Registered Pension Schemes to ensure the schemes can maintain a high level of interest and inflation hedging and meet any collateral requirements.

The Group judged that this should be accounted for as a loan (within Securities) in the books of the Group and as a reduction in scheme assets for the Pension Schemes.

As a consequence of the LDI issues, the pension scheme continue to have a greater proportion of unquoted assets in its asset portfolio. As a result the Group undertakes more detailed reviews of these valuations, whilst acknowledging the inherent uncertainty compared with quoted assets.

### Fair, balanced and understandable

The Board is required to confirm that the Annual Report and Financial Statements are fair, balanced and understandable. To enable the Board to make this declaration, there is a year-end review process to ensure that the Committee and the Board have access to all relevant information, including management's papers on significant issues.

The Committee noted that the policy on certain re-measurements and exceptional items remains unchanged from the prior year.

The Committee had formally reviewed and approved the Group's policy on exceptional items in previous years and, in the current year, it used this policy to help inform the appropriateness of the proposed classifications. It challenged the items classified as exceptional items, considering their size, nature and incidence and in the context of the Group policy. The Committee concluded that separate disclosure of these items as exceptional was appropriate in the Financial Statements.

The Committee ultimately agreed that presenting certain re-measurements and exceptional items separately continues to allow underlying performance to be reflected on a consistent and comparable basis through the use of the adjusted alternative performance measures (e.g. adjusted operating profit).

Further detail is provided in notes 2, 3 and 7 on pages 134 to 142 and 152 to 156.

The Committee has reviewed the level of unread revenue and unbilled accrual made during the year and discussed with management and the external auditors.

The Committee noted that the Ensek platform uses a different process to calculate the unbilled accrual compared with the legacy SAP system. Data from smart meters, industry information and from customers on the SAP system was utilised to finalise the Ensek revenue adjustment and the external auditors had independently reperformed this calculation to within an immaterial difference.

More details on unread energy income are provided in note 3 on pages 136 to 142 and on unbilled energy income in note 17 on pages 168 to 174.

The Committee noted the key pension assumptions and disclosures in the Financial Statements.

It noted that these assumptions were derived on a consistent basis to previous periods.

The Committee recognised the role of the independent actuary, who is consulted on the appropriateness of the assumptions, and discussions were also held with the external auditors.

The Committee also understood the need to continue to provide extra funding to the schemes to ensure they remained appropriately hedged.

It also noted the greater proportion of unquoted assets in the scheme portfolio and welcomed the greater scrutiny on these valuations.

Further details on pensions are set out in note 22 on pages 178 to 182.

The Committee reviewed the key factors considered in determining whether the Annual Report is fair, balanced and understandable. The Committee and all Board members received a draft of the Annual Report and Financial Statements in sufficient time to review and challenge the disclosures therein. In addition, the Committee took into consideration the external auditors' reviews of the consistency between the reporting narrative of the Annual Report and the Financial Statements.

# NOMINATIONS COMMITTEE

## MEMBERSHIP, MEETING ATTENDANCE AND KEY FOCUS

### *Committee members*

- Scott Wheway (Chair)
- Carol Arrowsmith
- Philippe Boisseau (with effect from 1 September 2023)
- Nathan Bostock
- CP Duggal
- Jo Harlow (with effect from 1 December 2023)
- Heidi Mottram
- Kevin O'Byrne
- Amber Rudd
- Sue Whalley (with effect from 1 December 2023).

Biographical details of the Committee Chair and members can be found on pages 59 to 62. Meeting attendance of the Committee members can be found on page 68.

### *Meeting attendees by invitation*

Group Chief Executive, Group General Counsel & Company Secretary, Group Chief People Officer and Group Chief Financial Officer.

### *Focus areas in 2023*

- Board skills.
- Board diversity.
- Independent Non-Executive Director succession planning.
- Executive Director succession planning.
- Board Committee composition.
- Independent Non-Executive Director recruitment.
- Approach to workforce engagement.
- Board training requirements.
- Election and re-election of Directors at the 2023 AGM.
- Approach to, and findings arising from, an annual Board effectiveness evaluation (see page 66).
- Oversight of Directors' external appointments.

## DEAR SHAREHOLDER

**On behalf of the Board, I am pleased to present the Nominations Committee report for 2023 which explains the Committee's focus and activities during the year.**

## COMMITTEE OVERVIEW

The Nominations Committee is responsible for ensuring that the Board and its Committees have the appropriate balance of skills, knowledge, and experience to effectively lead the Company both now and in the future. This is achieved through a formal procedure for the appointment of new Directors to the Board, an effective succession planning process, reviewing Board composition and Board skills, and assessing Board training requirements.

## MAIN ACTIVITIES DURING 2023

### *Board succession planning and Board skills*

The Committee is responsible for leading the succession planning process and making recommendations to the Board. The Committee takes a long-term view to succession planning, regularly reviewing Board tenure, Board diversity (particularly diversity of gender, cultural background and experience) and assessing the skills required by the Board to best support the Company's strategy on a multi-year look ahead as well as in the near term. Details of the wide range of skills, backgrounds and experience possessed by the Board today can be found in the Directors' biographies.

The Committee's work on succession planning directly informed recruitment in 2023. A focus area for the Committee in 2024 will remain ensuring the Company continues to have appropriate succession plans for different time horizons.

### *Independent Non-Executive Director recruitment*

A primary focus area for the Committee in 2023 was independent Non-Executive Director recruitment that would continue to strengthen the Board's existing capabilities in a way that would further support the delivery of the Company's strategy.

Centrica has a thorough and robust search process for the selection of independent Non-Executive Directors involving the engagement of specialist external search firms. In identifying and nominating candidates to fill Board vacancies, the Committee considers candidates from a wide range of backgrounds, assessing them on merit against objective criteria and with due regard for the benefits of diversity on the Board. The Committee therefore takes particular interest in the recruitment process of its independent search firms to ensure that a diverse pool of candidates is considered for any vacancy.

A shortlist of candidates is shared with the Committee, meetings are scheduled with Directors and members of management, and then once the candidates have been identified, and their ability to meet the necessary time commitment is confirmed, a recommendation is made to the Board.

Lygon Group supported the search processes that led to the appointments of Philippe Boisseau in September 2023 and Jo Harlow and Sue Whalley in December 2023. Philippe brings significant experience of the energy sector, particularly energy assets, energy infrastructure and renewable energy transition, all of which is immensely valuable and relevant to Centrica. Jo has extensive knowledge on the use of technology and data to enhance development and drive growth in consumer businesses and Sue brings a blend of experience in people and cultural transformation, as well as strategic, technological and operational evolution in large, complex organisations. The collective experience and contribution from each of these Directors will undoubtedly be of great benefit to Centrica. Further information about Philippe, Jo and Sue can be found in their biographies.

There are no connections between Lygon Group, the Company and its individual Directors.

#### **Executive Director succession**

As disclosed in last year's Annual Report and Accounts, Russell O'Brien was appointed Group Chief Financial Officer and Executive Director with effect from 1 March 2023, bringing broad experience across the energy value chain. Following an orderly transition to Russell, Kate Ringrose stepped down as Chief Financial Officer and Executive Director on 28 February 2023. Further information about Russell can be found in his biography.

#### **Board training**

The Committee reviewed the training received by the Board during 2023 as well as the training requirements for the Board in 2024. In doing so, the Committee sought to ensure the Board remained equipped with the latest knowledge and understanding to support effective decision-making. Board training in 2023 included sessions on directors' duties and models of economic regulation for hydrogen production and storage as well as carbon capture and storage. The Committee also identified further areas of training that will inform the Board's training programme in 2024. Further details of training, development and induction for all new Directors are on page 66.

#### **Oversight of Director external appointments**

To ensure that Directors will continue to have sufficient time to commit to their Centrica responsibilities, any additional external appointments taken up require advance consultation with the Chair and, where appropriate, approval by the full Board.

The Committee considered Kevin O'Byrne's external appointment to International Flavors & Fragrances, Inc. which took effect from 10 March 2023. The Committee was satisfied that following his stepping down from the board of J Sainsbury plc in March 2023 that Kevin would continue to have sufficient time to commit to his Centrica responsibilities.

#### **A focus on diversity, equity and inclusion**

We operate in increasingly diverse communities and this diversity is evident in our workforce and our customers, suppliers, and other stakeholders.

As set out in our Board diversity policy, we know that being inclusive of the diversity we have in our business will give us a competitive advantage.

We updated our Board diversity policy in December 2023 to clarify that it extends to key Board Committees, and to provide for consideration of a wider list of diversity characteristics, including ethnicity, sexual orientation, disability and socio-economic background.

The purpose of the Board diversity policy is to guarantee that both the Board and the Nominations Committee adopt an inclusive approach during the nomination and appointment processes.

The revised Board diversity policy can be found on our website at [centrica.com](https://centrica.com).

The Committee therefore continues to embrace the strategic importance of diversity, equity and inclusion, including as part of the Board's own succession planning. The Committee will report in the 2024 Annual Report and Accounts how the updated Board diversity policy was implemented and the results thereof.

As at 31 December 2023, 41.7% of the Board and 55.6% of independent Non-Executive Directors (excluding the Chair of the Board) were women, and the Board composition met, and continues to meet, the Listing Rules target for ethnic minority representation. As noted in the Governance introduction on page 57, the Board is fully aware that it currently does not meet the expectation that one of the following four roles, Chair, Group Chief Executive, Group Chief Financial Officer and Senior Independent Director is held by a woman. Through steps taken as part of its succession planning arrangements, the Board is fully committed to addressing this situation at the earliest possible opportunity. Further information on compliance with Board diversity targets can be found in the Governance introduction on page 57, and set out in the table on page 81.

As disclosed in the table on page 81, there was a decline in the proportion of ethnically diverse individuals on the Board from 11% in 2022 to 8% in 2023. This decrease is attributed to the Board's expansion from nine members in 2022 to 12 members in 2023, which enhanced the Board's gender diversity whilst the number of individuals from an ethnically diverse background remained unchanged.

Further information on the steps that the Company is taking to create a diverse and inclusive workplace can be found in the Chief People Officer's Report on pages 38 to 40.

#### **Workforce engagement**

The Committee reviewed the Board's approach to workforce engagement pursuant to the expectations of Provision 5 of the UK Corporate Governance Code. The Committee supports the Board's view that workforce engagement is a collective responsibility shared amongst the Directors of the Board and therefore ultimately decided to adopt a collective approach to workforce engagement involving all Directors and leveraging a combination of different types of engagement, including listening sessions with colleagues; meetings with senior leaders and future talent where they discuss opportunities for improving colleague performance and Company growth; and dedicated engagement sessions with the Chairs of the employee-led colleague networks such as the Women's network and the Diverse-Ability network. The Board believes this approach enables it to effectively fulfil its responsibility of staying engaged and informed about the workforce's interest and matters.

#### **Committee effectiveness**

The Committee conducted its annual review of its terms of reference and concluded that no material changes were required. The Committee's terms of reference are available on our website [centrica.com](https://centrica.com).

The effectiveness and performance of the Committee was evaluated as part of the overall evaluation of the Board and its Committees. Feedback from that process indicated that the Committee was performing effectively. Succession planning at Board, executive and senior management levels and developing a talent pipeline continue to be key priorities for the Committee in the year ahead. Read page 66 for further information.

**Scott Wheway**  
on behalf of the Nominations Committee  
14 February 2024



# BOARD AND SENIOR LEADERSHIP DIVERSITY

## SEX/GENDER REPRESENTATION

	Number of Board members	Percentage of the Board	Number of senior positions on the Board*	Percentage of senior positions on the Board*	Number in executive management	Percentage of executive management
Men	7	58%	4	100%	7	70%
Women	5	42%	—	—	3	30%
Other/not Specified	—	—	—	—	—	—
Prefer not to say	—	—	—	—	—	—

\*There are 4 senior positions on the Board (Group Chief Executive, CFO, SID and Chair).

## ETHNICITY REPRESENTATION

	Number of Board members	Percentage of the Board	Number of senior positions on the Board*	Percentage of senior positions on the Board*	Number in executive management	Percentage of executive management
White British or other White	11	92%	4	100%	8	80%
Mixed/Multiple Ethnic Groups	—	—	—	—	—	—
Asian/Asian British	1	8%	—	—	2	20%
Black/African/Caribbean/Black British	—	—	—	—	—	—
Other ethnic group, including Arab	—	—	—	—	—	—
Not specified/prefer not to say	—	—	—	—	—	—

\*There are 4 senior positions on the Board (Group Chief Executive, CFO, SID and Chair).

[READ MORE ABOUT BOARD DIVERSITY ON PAGE 80](#)

### Explanatory notes

- (1) The information above is stated as at 31 December 2023.
- (2) We recognise the importance of driving greater diversity across the full breadth of our business – from the Boardroom to our customer-facing colleagues and we therefore actively track, monitor and work towards our diversity goals to reflect the communities we serve.
- (3) As at 31 December 2023, we met the Parker Review target to have at least one Director from a minority ethnic background. We also made good progress towards the Board diversity targets set out in Listing Rule 9.8.6(9). This included (i) at least 40% female representation on the Board (2023: 42%) and (iii) at least one Director being ethnically diverse (2023: 1 person) which aligns with the Parker Review. However with Kate Ringrose stepping down from being Chief Financial Officer on 28 February 2023, and Russell O'Brien joining the Board on 1 March 2023, we did not meet target (ii) to have at least one senior position held by a woman.
- (4) To grow our diversity further, we have taken positive action which includes succession planning and mandating diverse candidates for senior roles. By the end of 2030, it is our goal for our Board, executive management and senior leaders to be 48% women and 18% ethnically diverse. As part of our commitment to the Parker Review in setting a senior leader ethnic diversity target by 2027, in 2023 we decided to bring our 18% goal forward by three years.
- (5) Our diversity data is collated through our HR management system. We encourage all colleagues to self-report information such as gender, gender identity, ethnicity, age, sexual orientation, disability and military background, whilst also including a 'prefer not to say' option. We continued to run our #ThisIsMe campaign to encourage more people to share who they are in 2023, which helps us better understand who is working for us and where we need to target action to grow greater diversity.

# SAFETY, ENVIRONMENT AND SUSTAINABILITY COMMITTEE

## MEMBERSHIP, MEETING ATTENDANCE AND KEY FOCUS

### *Committee members*

- Heidi Mottram (Chair)
- Philippe Boisseau (with effect from 1 September 2023)
- Nathan Bostock
- Amber Rudd
- Scott Wheway

Biographical details of the Committee Chair and members can be found on pages 59 to 63. Meeting attendance of the Committee members can be found on page 68.

### *Meeting attendees by invitation*

All other Non-Executive Directors, Group Chief Executive, Group General Counsel & Company Secretary, Group Chief People Officer, Group HSE Director, Group Head of Environment, Chief Procurement Officer, Head of Business Ethics and Compliance and Deputy Head of Secretariat.

### *Focus areas in 2023*

- Health and safety risks.
- Environment.
- Emerging climate reporting requirements and climate matters.
- Responsible sourcing including human rights and modern slavery risk.
- Societal contribution.
- Reputation.

## DEAR SHAREHOLDER

**On behalf of the Board, I present the Safety, Environment and Sustainability Committee (SESC) report for the year ended 31 December 2023.**

## COMMITTEE OVERVIEW

The Committee's role and responsibilities, on behalf of the Board, is to review and monitor the culture, practices, risks and performance of Centrica with respect to health and safety, climate, environment and broader responsible business matters. This is achieved through a rigorous review of performance data, and the Company's goals and initiatives in these areas. As part of its focus, the Committee also provides input to, and review of, the Company's annual climate reporting disclosure requirements.

## MAIN ACTIVITIES DURING 2023

The Committee considered a broad range of topics in 2023 and the key highlights are disclosed below.

### **Health and Safety**

The Committee's standing health and safety agenda items focused on relevant performance metrics, assurance activity and the approach to HSE risk management in specific business unit reviews. During these discussions, taking into account the needs of customers and employees, the Committee considered risk identification, appropriate HSE controls and processes.

At each meeting, the Committee invited management to discuss occupational and process safety reviews, outcomes and improvements derived from targeted interventions and future action plans. Examples included a thorough review of the British Gas Services & Solutions health and safety performance, a maturity assessment for Bord Gáis Energy and external process safety audits for Centrica Energy Storage+ and Spirit Energy, during which any concerns or incidents were considered in detail and, where appropriate, remedial actions proposed by management were scrutinised to assess their effectiveness.

The Committee acknowledged the Group's positive safety mindset driven by highly engaged employees throughout 2023.

### **Environment**

The Committee provides oversight of the Company's continued commitment to, and role in, the drive to net zero. During 2023, the Committee reviewed progress made against the Company's People & Planet Plan and the Climate Transition Plan, and specifically the implications of recent strategic investment decisions against Climate Transition Plan targets and ambitions and the Company's strategic framework.

Key focus areas for the Committee in 2023 were reviewing emerging voluntary and mandatory climate reporting requirements, both in the UK and in the EU, including Task Force on Climate related Financial Disclosures (TCFD) and Climate-Related Financial Disclosure (CRFD) regulations. The Committee considered the application of these requirements to the Company, taking into account changing stakeholder expectations, and assessing how the Company would ensure compliance and governance with impending reporting requirements. The Committee also received regular updates and training on relevant legal and policy developments and trends regarding climate matters.

## Responsible business

Throughout the year, the Committee considered the Company's responsible sourcing approach focusing on the supply chain that carry potentially higher inherent risk due to the associated jurisdiction and/or nature of the product, in particular in relation to issues such as the manufacture of solar panels, batteries or garments. The Committee reviewed the 2023 strategy for visits to supplier sites and the results of supplier audits.

During discussions, the Committee assessed on a regular basis human rights and the risk of modern slavery occurring in Centrica's operations, taking into account the increasing expectations of stakeholders and enhanced modern slavery disclosures. Further details of the Company's management of modern slavery risk can be found on our website at [centrica.com/modernslavery](https://centrica.com/modernslavery). The Committee also received training on emerging responsible sourcing supply chain requirements and considered changes that might be required to the Company's current approach.

The Committee continued to oversee societal contribution including the Company's approach to charitable partnerships, its role in local communities and its People Goals including, in that context, the Company's performance against its diversity and inclusion targets, its apprenticeship and volunteering ambitions. The Committee also reviewed perceptions of the Company's reputation amongst a wide range of stakeholders in relation to topics such as the Company's role in providing energy security in the markets in which it operates as well as supporting customers and communities in their transition to net zero in an affordable and secure way.

## Governance

In addition to the above areas of focus, the Committee also reviewed relevant disclosures in the Annual Report and Accounts within the Committee's remit, as well as the TCFD and CFD regulations. The Committee also considered and recommended to the Board the Modern Slavery Act statement, which can be found on our website.

## Committee effectiveness

The Committee undertakes an annual review of its terms of reference to ensure that it accurately reflects the role carried out by the Committee, taking into account any new internal and external developments and responsibilities. The Committee's terms of reference are available on our website, [centrica.com](https://centrica.com). The Committee considers that it has continued to discharge its oversight role effectively in an area where expectations and requirements are constantly evolving with insightful and regular engagement and support from management. Read more about the Committee's effectiveness on page 66.

## Heidi Mottram

on behalf of the Safety, Environment and Sustainability Committee

14 February 2024

 [READ MORE ABOUT OUR PEOPLE & PLANET PLAN ON PAGES 41 TO 55](#)

# REMUNERATION REPORT

## MEMBERSHIP, MEETING ATTENDANCE AND KEY FOCUS

### *Committee members*

- Carol Arrowsmith (Chair)
- CP Duggal
- Jo Harlow (with effect from 1 December 2023)
- Heidi Mottram
- Amber Rudd
- Sue Whalley (with effect from 1 December 2023)

Biographical details of the Committee Chair and members can be found on pages 59 to 63. Meeting attendance of the Committee members can be found on page 68.

### *Meeting attendees by invitation*

All other Non-Executive Directors, Chair of the Board, Group Chief Executive, Group Chief People Officer, People Director, Reward, Benefits and Wellbeing

### *Focus areas in 2023*

- Executive Directors' salary reviews
- Gender and ethnicity pay gap report
- Review of pay issues across the wider workforce
- Closure CUPS-DC pension scheme
- Review of total remuneration packages for the Centrica Leadership Team
- Review and approve 2023 financial and business targets and individual objectives.
- Recruitment of new senior executives
- Review Executive Directors shareholding
- Review and approve Director Expenses

## DEAR SHAREHOLDER

**On behalf of the Board, I am pleased to present the Remuneration Report for the year ended 31 December 2023.**

### BUSINESS CONTEXT FOR 2023

Centrica has delivered strong financial and operational performance including EPS performance of 33.4 pence. Centrica was also one of the best performing shares in the FTSE 100 with our share price increasing by more than 45% in 2023. At the same time, the Company has supported our customers through the cost of living crisis including £140m committed since 2022 to help them with their energy costs.

The turnaround of the Company over the last three years is credit to the management team led by Chris O'Shea, the Group Chief Executive. The team has simplified the business, strengthened and de-risked the balance sheet, and improved operational performance especially in our Retail businesses. As a uniquely integrated energy company, our Optimisation and Infrastructure businesses have contributed significantly towards Group profitability by applying their expertise in trading and storing energy in turbulent markets particularly during 2022 and 2023. The Company now has a solid foundation and clear purpose of energising for a greener, fairer future. This means we can invest in the future for the benefit of all our stakeholders, including our customers, colleagues, communities and shareholders. Some examples of these investments are:

**Customers:** We have invested in supporting customers by providing new on-demand services to install and maintain their home heating systems, and improved customer service by employing an extra 700 colleagues across customer contact centres in Stockport, Leicester, Leeds, Edinburgh, and Cardiff. During the year, we remained acutely aware of the cost of living pressures that our customers faced, and we have committed a total of £140m during 2022-23 to continue to help customers with their energy costs. This included creating an Energy Support Fund managed by the British Gas Energy Trust, which has so far helped over 25,000 customers while funding new drop-in centres and advisors across the UK to support people with their finances. We have launched new innovative tariffs, which aim to be greener and fairer such as 'Peak Save' to help our customers manage their energy usage through the day and save money on their bills, and our offer of free Electric Vehicle charging at home for a year for customers that buy an EV charger from British Gas.

**Colleagues:** We have hired over 1,000 new colleagues. We have launched our "Pathway to Parenthood" benefit to support colleagues through fertility treatment, adoption, or surrogacy. We have rewarded employees with £2,640 in free shares through our profit share plan to recognise our performance in 2023. This means that, over the last three years, we have paid a total of £5,886 in profit share to each colleague to ensure they share in our success. We maintained our focus on fair reward practices – from paying at least the Real Living Wage in the UK and working to reduce pay gaps. The average salary increase across the wider workforce in the UK was 6%, with our lowest paid colleagues receiving an average salary increase of between 7.8% to 9.5%.

**Communities:** We have invested in improving energy storage and security for the UK, including doubling the gas storage capacity at Rough, which now provides half the UK's gas storage capacity or enough gas to heat over three million homes. As part of our People & Planet Plan, our colleagues gave 7,200 days volunteering to help the communities and causes they are passionate about.

**Shareholders:** The financial strength of the business has also allowed us to deliver value to our shareholders with a 33% increase in the 2023 interim dividend to 1.33 pence per share, and a proposed final dividend of 2.67 pence per share, alongside the £450m extension of our share buyback programme to be completed by around July 2024.



## REMUNERATION OUTCOMES FOR 2023

In deciding the remuneration outcomes for 2023, the Remuneration Committee has focused on balancing the views and experiences of all our stakeholders with our responsibility to attract and retain high-performing executives to lead a highly complex organisation. Our remuneration principles for Executive Directors are consistent with the wider workforce and can be found on page 96.

### ANNUAL INCENTIVE PLAN (AIP)

Pay-outs under the AIP for members of the Centrica Leadership Team are based on financial and business performance (75%) and individual performance against strategic objectives (25%).

The financial and business performance element for the year was split equally between Earnings Per Share (EPS) and the outcome of a balanced scorecard of financial and operational measures critical to the success of the organisation in 2023.

The EPS measure had defined threshold, target and maximum levels that were set at the start of the financial year. During the first half of the year, market conditions were materially better than expected when the targets were set. Therefore, when reviewing progress against the EPS target during the year, the Committee determined that the original targets were no longer appropriate and should be increased to reflect these improved market conditions. Reflecting the strong performance of the business, Centrica achieved earnings performance of 33.4pence, resulting in an outturn of 100% of maximum against the revised targets for this part of the AIP.

Excellent performance across the Group also meant the majority of customer, colleague and financial targets in the balanced scorecard were met in full, including delivering operating profits of £2,752m and free cash flow of £2,207m. We were particularly pleased to see a reduction in rescheduled appointments for customers in Services and Solutions and an improvement in our customer satisfaction scores. Given the cost of living challenges faced by our customers, we have seen an increase in our bad debt charges, and we will continue to engage with those customers who are struggling to pay their bills using a variety of mechanisms including payment spreading and utilising the £140m we have committed so far to help the most vulnerable and in need. We have made significant progress against both our goal to be a net zero business by 2045, and our goal to help our customers be net zero by 2050. Performance against the balanced scorecard measures resulted in an outturn of 85% of maximum for this part of the AIP. This gave a combined financial and business performance outturn of 185% of target.

In response to shareholder feedback in previous years, we have provided more detail on each executive's individual objectives in the body of the remuneration report on page 91. Chris O'Shea achieved an individual performance outturn of 87.5% of maximum, and Russell O'Brien, Group Chief Financial Officer, achieved an individual performance outturn of 82.5% of maximum for this part of the AIP.

In determining the overall AIP outcome for 2023, the Committee considered the impact of a national newspaper undercover investigation in February 2023 into the fitting of prepayment meters under court warrant by a third-party contractor working for British Gas. The Group Chief Executive was deeply concerned when he observed a lack of empathy and respect in some of these cases; he apologised unreservedly and immediately commissioned an investigation into the issue, overseen by external compliance consultants. We ceased all warrant activity with the third-party contractor immediately.

This investigation found no wide-ranging systemic issues with the installation of prepayment meters under warrant and noted the high degree of complexity involved in the assessment of each case. However, it did highlight that in some cases the Company had fallen short of the high standards of behaviour that we set for ourselves when engaging with customers and identified where improvements should be made to existing processes.

In addition to implementing all the recommended actions identified in the investigation and fully endorsing Ofgem's new Code of Practice on the installation of prepayment meters under warrant, Centrica has re-affirmed its commitment to prepayment customers in the following ways:

- Bringing this work in-house, giving British Gas direct oversight of the process and ensuring our agents benefit from training at British Gas' award-winning academies.
- Swiftly introduced the cheapest prepayment meter tariffs of any supplier in the country, in line with the cost of energy for direct debit customers.
- Extended our scheme of direct customer support for prepayment customers to £20m, offering up to £250 in free credit to those who are struggling with energy costs.

After considering the findings of the investigation, the Remuneration Committee determined that the payment under the Annual Incentive Plan should be reduced. Therefore, the Committee reduced the outturn of the financial and business performance by 10% from 185% to 175% of target. This resulted in a reduced AIP payment for the Group Chief Executive and Group Chief Financial Officer to reflect the impact of the prepayment meter investigation.

Overall, after combining the outturn for financial and business performance with the outturn for individual performance, and after deducting 10% for the prepayment meter investigation, the total AIP for Chris O'Shea was 87.5% of the maximum opportunity, which equated to 175% of salary or £1,426,250. The AIP for Russell O'Brien, who joined part way through the year, was 86.3% of the maximum opportunity (pro-rated for time served), which equated to 118.6% of salary or £640,606. Kate Ringrose, our previous Group Chief Financial Officer who served for part of the year, received an AIP of 78.1% of maximum (pro-rated for time served), which equated to 19.5% of salary or £90,088. The Committee was satisfied that the overall AIP outcome was fair and reasonable given the strong shareholder experience and financial performance, and that the outcome also reflected the wider stakeholder experience. Half of the AIP was paid in cash and half of the AIP was deferred into shares for a further three years.

### LONG-TERM INCENTIVE PLAN

In line with our previous Remuneration Policy, a Long-Term Incentive Plan (LTIP) award was granted in 2021 to Chris O'Shea and Kate Ringrose, our former Chief Financial Officer. The maximum award granted was 300% of salary in Centrica shares for Chris O'Shea and 175% of salary for Kate Ringrose. The LTIP awards were subject to the achievement of performance conditions over three financial years ending 31 December 2023. The performance targets for the LTIP award included relative Total Shareholder Return (TSR), cumulative EPS, cash conversion (conversion of EBITDA into Operating Cash Flows), and key non-financial performance indicators (KPIs) focused on safety, customer and colleague engagement.

TSR performance over the three-year period was outstanding with Centrica having the highest TSR in the FTSE 100 comparator group. Centrica's TSR was 267.4%, which compared to 47.1% for the upper quartile TSR of the FTSE 100. Performance against the financial measures was near maximum vesting and performance against the non-financial KPIs was around target vesting.

The overall formulaic outcome was therefore 85% of the maximum. Kate Ringrose's award was also pro-rated to reflect time served.

As a matter of course, the Committee reviews the formulaic vesting outcome against the overall underlying performance of the Group and considers whether there have been any windfall gains. The 2021 LTIP was granted to the Centrica Leadership Team at a share price of 52.46p, compared to the 2020 LTIP award, which was granted at 55.0p. As there was no significant reduction in the share price between grants, the Committee concluded it was not necessary to make an adjustment for windfall gains.

Additionally, as highlighted above, management has delivered excellent performance over the period, not only in respect of key underlying financial metrics but also in our share price, with Centrica significantly outperforming the market over the period. The Committee therefore concluded that the formulaic outturn was appropriate, and no adjustment was necessary.

The value of the LTIP award for the Group Chief Executive was £5.9m as at the end of the performance period, 31 December 2023, and this has been included in the single figure for total remuneration table on page 89. Of this amount, share price growth accounted for £3.9m (or 66% of the total value). The vested shares are subject to an additional two-year holding period.

## OVERALL SINGLE FIGURE OF TOTAL REMUNERATION FOR OUR GROUP CHIEF EXECUTIVE

Having determined that the LTIP outcome was a fair reflection of business performance, the Committee also felt it appropriate to review the overall single figure of total remuneration earned by the Group Chief Executive in respect of 2023. The Group Chief Executive's single figure in 2023 was £8.23m, which compares to £4.49m in 2022. The year-on-year increase is due to continued improvements in underlying performance and substantial share price growth. Since his appointment as Group Chief Executive, Chris O'Shea has helped create significant value for shareholders with Centrica's TSR outperforming the FTSE100; his cumulative single figure of total remuneration over the same period is broadly in line with the median cumulative single figure for CEOs in the FTSE 100. The Committee believes that the single figure appropriately reflects the performance of both Chris O'Shea and the business over the relevant period. It is worth noting that the single figure of total remuneration for the Group Chief Executive over the next two years is likely to be lower to reflect outcomes of long-term incentive awards made under our Restricted Share Plan (RSP), where the maximum awards were discounted by 50% compared to previous LTIP awards.

## REMUNERATION FOR 2024

For Executive Directors, we benchmark salaries and total compensation against companies in the FTSE 100. We use this comparator group as it provides a broad group of organisations where we compete for talented executives. Centrica is a uniquely integrated energy company, with over 21,000 employees operating in a highly regulated and highly unionised environment. The FTSE 100 includes companies that operate in similar sectors and are of comparable size and complexity (e.g. the energy sectors, retail & consumer companies, support services, utilities, insurance and commodity trading companies). In terms of size, Centrica is also a constituent of the FTSE 100 index and is currently positioned around the median of the FTSE in terms of market capitalisation. The 'At a Glance' section on page 88 shows how our Executive Director salaries and target total direct compensation (salary plus target annual bonus plus expected value of long-term incentives plus pensions) compares to the median FTSE 100 benchmark.

In determining salary increases for the Executive Directors for 2024, the Committee considered both the average salary increases awarded to the wider workforce and the performance and development of the executives in their roles throughout the year.

With effect from 1 April 2024, Chris O'Shea's salary will increase by 4.9% to £855,000. Given this year's overall single figure of remuneration for the Group Chief Executive, the Committee decided to increase Chris' salary at a rate that was below the average for the wider workforce of 6%. Russell O'Brien's salary will increase by 9.3% to £590,000. The Committee awarded a higher salary increase to Russell to recognise his performance and development in the role since joining Centrica. Even after these increases, the salary and target total direct compensation for Chris and Russell are below the median benchmarks for similar roles in the FTSE 100. The Committee will keep the competitiveness of the remuneration packages for Executive Directors under review to ensure we can continue to attract and retain the talent we need to deliver the business strategy.

We have simplified some of our legacy reward arrangements and, with effect from 31 December 2023, we have closed the Centrica Unapproved Pension Scheme Defined Contribution Section (CUPS DC) to future contributions. Chris O'Shea was a member of CUPS DC, and because of the scheme closing, he has elected to receive his 10% of salary as a cash allowance in lieu of pension.

There are no changes to the AIP or RSP awards to be granted in 2024. The maximum AIP will be 200% of salary for the Group Chief Executive (and 150% of salary for the Chief Financial Officer). The maximum RSP award will be 150% of salary for the Group Chief Executive (and 125% of salary for the Group Chief Financial Officer).

## NON-EXECUTIVE DIRECTOR FEES

In the year, the Board welcomed Philippe Boisseau, Jo Harlow, and Sue Whalley as new Non-Executive Directors. They bring excellent skills and experiences, and I very much look forward to working with them.

The Committee undertook an annual review of the fees payable to Scott Wheway, Chair of the Board. With effect from 1 April 2024, Scott's fees will increase to £440,000, which is a 4.6% increase and lower than the average increase payable to the wider workforce of 6%.

The Chair of the Board, the Executive Directors, and the Chief People Officer conducted an annual review of non-executive director fees and concluded there should be no change in 2024. The review recognised that the role of a non-executive director is becoming more complex, and the time commitment is becoming increasingly demanding. However, it was decided that Non-Executive fees would be reviewed again as part of the next Remuneration Policy review during 2024.

## CONCLUSION

In 2024, the Committee will conduct a comprehensive review of our Remuneration Policy in preparation for shareholder approval at the AGM in 2025. As part of this review, we will continue to have an open and transparent dialogue with our shareholders on our remuneration arrangements and any future changes.

We try to make our Remuneration Report comprehensive and transparent and have provided additional information in support of this, including details on how the Committee benchmarks executive remuneration, insights into Centrica's remuneration policies across the wider workforce, as well as enhanced information on each Executive Director's individual objectives. We hope shareholders will find this additional information useful.

Centrica's performance and the executive team's leadership in challenging conditions are reflected in the remuneration outcomes and the decisions the Committee has made in 2023. It is also consistent with the objectives of our Remuneration Policy to deliver remuneration that attracts and retains high calibre executives in a competitive global business environment in return for the achievement of our strategic objectives and the delivery of sustainable long-term shareholder value and returns. I hope you will give us your support.

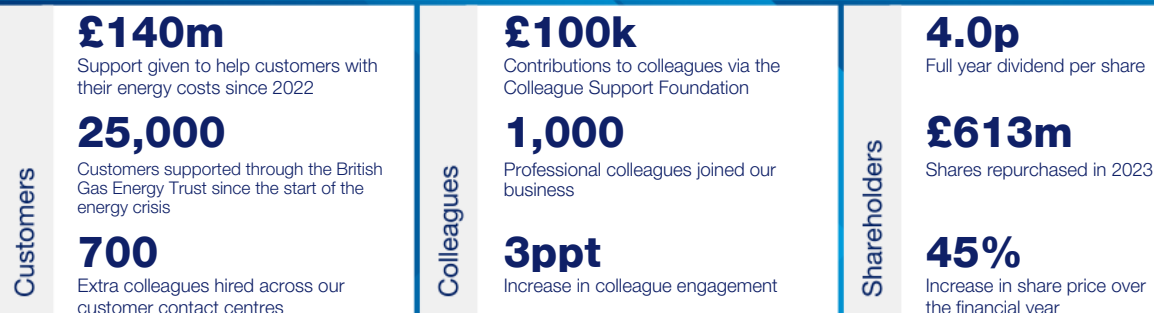
**Carol Arrowsmith**

on behalf of the Remuneration Committee

14 February 2024

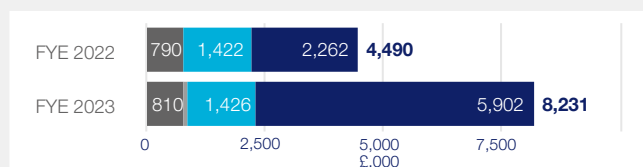
# REMUNERATION AT A GLANCE

## HOW WE'VE SUPPORTED OUR STAKEHOLDERS IN 2023



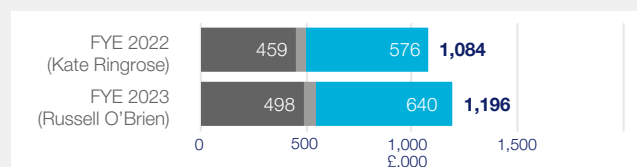
## SINGLE FIGURE OF TOTAL REMUNERATION IN FY 2023

### GROUP CHIEF EXECUTIVE



Further details on page 89 | Salary Pension and Benefits AIP LTIP

### GROUP CHIEF FINANCIAL OFFICER



Kate Ringrose stepped down from the Board on 28 February 2023. Russell O'Brien was appointed to the Board on the 1 March 2023.

## FY2023 AIP PERFORMANCE

The table below sets out details of the relevant measures in the Annual Incentive Plan and their link to our group priorities, and the resulting outcome

MEASURE	Weighting	Outcome
EPS	37.5%	100 %
BG Cost to Serve	37.5%	85 %
Customers to Ensek		
BG complaints		
BG reschedules		
BG complaints		
Centrica cost/income		
CBS order intake		
Bord Gáis Cost to Serve		
Unique customer numbers		
Colleague engagement		
Climate transition plan progress		
Adjusted operating Profit		
Free Cash Flow		
Net debt/cash		
Individual measures	25%	
Group Chief Executive		87.5 %
Group Chief Financial Officer		82.5 %
Deduction for prepayment meter investigation		(10)%
<b>OVERALL OUTCOME (% MAXIMUM)</b>		
Group Chief Executive		87.5 %
Group Chief Financial Officer		86.3 %

## 2021 LTIP OUTCOMES

The table below sets out details of the relevant measures in the Long-Term Incentive Plan and their link to our group priorities, and the resulting outcome.

MEASURE		Weighting	Vesting Outcome (% of max)
Relative TSR	<div><div></div></div>	33%	100 %
Cumulative EPS	<div><div></div><div></div></div>	22%	100 %
Cash conversion	<div><div></div></div>	22%	75 %
Employee engagement	<div><div></div></div>	22%	57 %
Aggregate Brand NPS	<div><div></div></div>		
Complaints	<div><div></div></div>		
Total Recordable Injury Frequency Rate (TRIFR)	<div><div></div></div>		
Overall outcome			85 %

## OUR GROUP PRIORITIES



## MARKET COMPETITIVE BENCHMARKS

When we set the remuneration levels, one of the factors we consider is the competitiveness of the total compensation package for the role in the relevant market. For the Group Chief Executive and Group Chief Financial Officer, we benchmark their roles against companies in the FTSE 100. The table below shows the competitiveness of salary and total compensation for target performance versus the median of the FTSE 100.

### GROUP CHIEF EXECUTIVE

	Chris O'Shea	Median FTSE 100 benchmark
Salary	£815,000	£935,000
Target Total Compensation <sup>(1)</sup>	£2,934,000	£3,533,000

(1) Salary + target annual bonus + expected value of long-term incentives + pension

### GROUP CHIEF FINANCIAL OFFICER

	Russell O'Brien	Median FTSE 100 benchmark
Salary	£540,000	£596,000
Target Total Compensation <sup>(1)</sup>	£1,674,000	£2,097,000

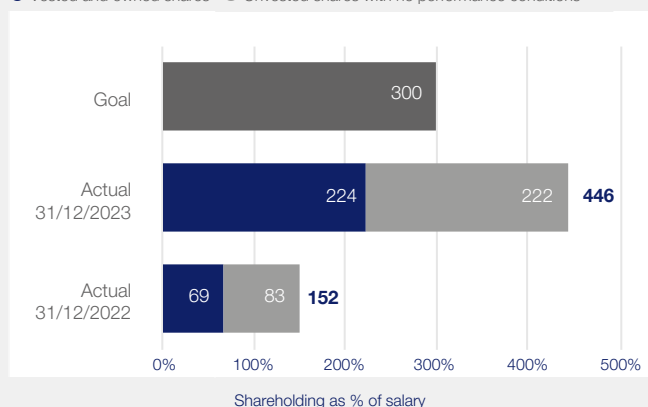
## EXECUTIVE DIRECTOR SHAREHOLDINGS % OF BASE SALARY

The chart below sets out the minimum shareholding requirements and the shareholdings of the Executive Directors. The shareholding requirement must be built up over five years and then subsequently maintained. For unvested shares with no performance conditions, we have assumed shares net of tax.

 FURTHER DETAIL REGARDING THE EXECUTIVE DIRECTORS' OUTSTANDING SHARE AWARDS CAN BE FOUND ON PAGE 94

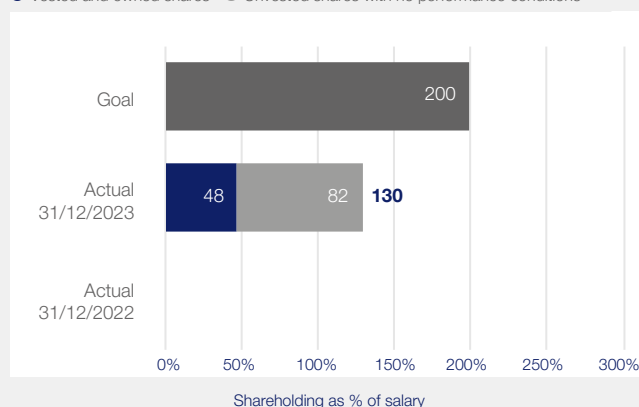
### GROUP CHIEF EXECUTIVE

 Vested and owned shares  Unvested shares with no performance conditions



### GROUP CHIEF FINANCIAL OFFICER

 Vested and owned shares  Unvested shares with no performance conditions



## 2024 REMUNERATION

The table below sets out a summary of the implementation of the Policy for 2024.

 FURTHER DETAILS CAN BE FOUND ON PAGE 101

Base Salary	Benefits	Pension	Short-term incentive	Long-term incentive
CEO: £855,000 (+4.9%) CFO: £590,000 (+9.3%) The average increases for the wider workforce in the UK was 6%.	No change and remains in line with the wider workforce	10% of salary in line with the wider workforce With effect from 31 December 2023, we have closed the Centrica Unapproved Pension Scheme Defined Contribution Section (CUPS DC) to future contributions. Chris O'Shea will no longer be eligible contribute his 10% of salary pension contribution to CUPS DC. Instead, he has elected to receive 10% of salary as a cash allowance in lieu of pension.	CEO: 200% of salary at max 100% of salary at target CFO: 150% of salary at max 75% of salary at target Measured 75% against financial and business measures and with 25% against individual objectives. 50% of any bonus earned is deferred into shares that vest after three years.	Restricted Share Plan award subject to underpin framework. CEO: 150% of salary CFO: 125% of salary Awards vest after three years and plus a two year additional holding period.



# DIRECTORS' ANNUAL REMUNERATION REPORT

## DIRECTORS' REMUNERATION IN 2023

This report sets out information on the remuneration of the Directors for the financial year ended 31 December 2023.

### Single figure for total remuneration (audited)

#### Executives

£000	Salary/ fees	Bonus (cash)	Bonus (deferred) <sup>(1)</sup>	Benefits <sup>(2)</sup>	LTIPs <sup>(3)</sup>	Pension <sup>(4)</sup>	Total	Total fixed remuneration	Total variable remuneration
<b>2023</b>									
Chris O'Shea	810	713	713	16	5,902	77	8,231	903	7,328
Russell O'Brien <sup>(5)</sup>	498	320	320	13	—	45	1,196	556	640
Kate Ringrose <sup>(6)</sup>	77	45	45	3	1,833	—	2,003	80	1,923
<b>Total</b>	<b>1,385</b>	<b>1,078</b>	<b>1,078</b>	<b>32</b>	<b>7,735</b>	<b>122</b>	<b>11,418</b>	<b>1,527</b>	<b>9,891</b>
<b>2022</b>									
Chris O'Shea	790	711	711	16	2,262	—	4,490	806	3,684
Kate Ringrose <sup>(6)</sup>	459	288	288	16	—	33	1,084	508	576
<b>Total</b>	<b>1,249</b>	<b>999</b>	<b>999</b>	<b>32</b>	<b>2,262</b>	<b>33</b>	<b>5,574</b>	<b>1,314</b>	<b>4,260</b>

(1) In accordance with the Remuneration Policy, 50% of the bonus is deferred into shares and will vest after three years.

(2) Taxable benefits include car allowance, health and medical benefits. Non-taxable benefits include matching shares received under the Share Incentive Plan (SIP). Both taxable and non-taxable benefits are included in the table.

(3) The estimated value of the LTIP award that was granted in respect of the 2021-23 performance period is included in the table above, based on a share price of 150 pence (the 3 month average share price for the period ending 31 December 2022). Of the £5.9m for Chris O'Shea, £3.9m (or 66% of the value) was due to share price growth. The award will vest in June 2024 and the shares will then be subject to an additional two-year holding period. Further details of the performance outcomes are set out on page 90. Dividend equivalents of £230K and £71K have been included.

(4) Notional contributions to the Centrica Unapproved Pension Scheme defined contribution section (CUPS DC) for Chris O'Shea and Kate Ringrose have been included in this table as if CUPS DC was a cash balance scheme. This includes a deduction in respect of an allowance for CPI inflation on the opening balance of 11.1% in 2023 (4.1% in 2022). CUPS DC was closed on 31 December 2023 and Chris O'Shea will receive his pension contribution as cash in lieu.

(5) Russell O'Brien was appointed to the Board on 1 March 2023.

(6) Kate Ringrose stepped down from the Board on 28 February 2023.

### Single figure for total remuneration (audited)

#### Non-Executives

£000	Salary/fees		Total	
	2023	2022	2023	2022
Scott Wheway	418	410	418	410
Carol Arrowsmith	96	93	96	93
Nathan Bostock <sup>(1)</sup>	97	47	97	47
CP Duggal <sup>(2)</sup>	76	3	76	3
Heidi Mottram	96	93	96	93
Kevin O'Byrne	100	109	100	109
Amber Rudd <sup>(3)</sup>	76	71	76	71
Philippe Boisseau <sup>(4)</sup>	25	N/A	25	N/A
Jo Harlow <sup>(5)</sup>	6	N/A	6	N/A
Sue Whalley <sup>(6)</sup>	6	N/A	6	N/A
<b>Total</b>	<b>996</b>	<b>826</b>	<b>996</b>	<b>826</b>

(1) Nathan Bostock joined the Board on 9 May 2022

(2) CP Duggal joined the Board on 16 December 2022

(3) Amber Rudd joined the Board on 10 January 2022

(4) Philippe Boisseau joined the Board on 1 September 2023

(5) Jo Harlow joined the board on 1 December 2023

(6) Sue Whalley joined the board on 1 December 2023

## BASE SALARY / FEES

With effect from 1 April 2024, the Group Chief Executive's salary will increase by 4.9% to £855,000 per annum. The increase is below the average salary increase for the wider workforce in the UK of 6%. Please see page 96 for further details on Reward Across the Wider Workforce. The rate of increase was set lower than the wider workforce to reflect the increase in single figure for total remuneration in 2023. The salary for the Group Chief Financial Officer will increase by 9.3% to £590,000 per annum. A higher than average workforce increase was given to the Group Chief Financial Officer to reflect his performance and development in role since joining Centrica. Both the salaries of the Group Chief Executive and the Group Chief Financial Officer remain below the median benchmarks for similar roles in the FTSE 100.

The fees for the Chair of the Board were reviewed by the Remuneration Committee and increased by 4.6% to £440,000 per annum with effect from 1 April 2024. The increase is below the increase for the wider workforce in the UK. Non-Executive Director fees were also reviewed but there will be no increase in 2024. The Non-Executive Director fees will be reviewed again as part of the next Remuneration Policy review to ensure Centrica is able to continue to attract and retain Non-Executive Directors with the right skills, knowledge and experience, and to reflect the increasing time commitment and complexity of the role.

## FY23 ANNUAL INCENTIVE PLAN (AIP)

In line with the Remuneration Policy, 75% of the award was based on a mix of financial and business measures based on Centrica's priorities for 2023 and 25% was based on individual objectives.

The financial and business performance element for 2023 was split equally between Earnings Per Share (EPS) and the outcome of a balanced scorecard of financial and operational measures critical to the success of the organisation in 2023.

The EPS measure had defined threshold, target and maximum levels that were set at the start of the financial year. During the first half of the year, market conditions were materially better than expected when the targets were set. Therefore, when reviewing progress against the EPS target during the year, the Committee determined that the original targets were no longer appropriate and should be increased to reflect these improved market conditions. This resulted in EPS targets for the FY23 AIP as follows:

	Threshold	Target	Max	Outcome
Adjusted EPS	17.6p	22.0p	26.4p	33.4p

Reflecting the strong performance of the business in the year against these revised targets, Centrica achieved earnings performance above the maximum with an EPS of 33.4 pence, resulting in an outturn of 100% for this part of the AIP.

In addition, the Committee determined a balanced scorecard for the remaining financial and business elements of the AIP. It was agreed that there would be no formula to translate the scorecard to a bonus outcome and no formal weighting of individual measures. The Committee monitored performance against the scorecard at regular points during the year. At the end of the year, the Committee took a holistic assessment of overall performance to determine an outturn. The balanced scorecard of measures, targets and outcomes are noted below.

	Measure	Target	Outcome
Group	Adjusted Operating Profit	£1,878m	£2,752m
	Free Cash Flow	£672m	£2,207m
	Net (Debt)/Cash	£1,089m	£2,744m
British Gas Energy	Complaints	11.5%	13.3%
British Gas Services & Solutions	Complaints	10.8%	8.5%
British Gas Services & Solutions	Reschedules	5.0%	3.1%
Bord Gáis	Cost to serve	€212 per customer	€187 per customer
British Gas Energy	Cost to serve <sup>(1)</sup>	£127 per customer	£142 per customer
Centrica Business Solutions	Order Intake	£264m	£225m
Centrica Energy	Opex: Gross Margin Ratio	33.5%	33.3%
	Customer numbers	10,228,00 unique customers	10,264,000 unique customers
	Colleague engagement	7.7	7.7
	Progress towards climate transition plan – see People and Planet plan for further details. See page 47.	Make good progress against the interim climate targets including;	On target for emissions reduction in line with the long-term glidepath but mixed performance against customer reduction ambitions. See page 47 for further details.
	Goal 4 – helping our customers be net zero by 2050	Centrica carbon emissions	
	Goal 5 – be a net zero business by 2045	Low carbon and transition assets	
		Electric vehicles in fleet	
		Reduction in property emissions	
		CAPEX allocated to green activities	
		Hive active heating units sold	
		SMART meters installed	
		EV charger points installed	
		Heat pumps installed	
	Customers on Ensek	5m	5.4m

(1) British Gas Energy cost to serve per customer excluding bad debt was £84, against a target of £83.

Excellent performance across the Group also meant the majority of customer, colleague and financial targets in the balanced scorecard were met in full, including delivering operating profits of £2,752m and free cash flow of £2,207m. We were particularly pleased to see a reduction in rescheduled appointments for customers in Services and Solutions and an improvement in our customer satisfaction scores. Given the cost of living challenges faced by our customers, we have seen an increase in our bad debt charges, and we will continue to engage with those customers who are struggling to pay their bills using a variety of mechanisms including payment spreading and utilising the £140m we have committed so far to help the most vulnerable and in need. We have made significant progress against both our goal to be a net zero business by 2045, and our goal to help our customers be net zero by 2050. Performance against the balanced scorecard measures resulted in an outturn of 85% for this part of the AIP. The Committee is satisfied that the current incentive structure for senior executives does not drive unintended risks or ESG concerns.

The Committee carefully considered the outcomes against the EPS target and the balanced scorecard measures, determining an outcome of 100% against the EPS target and 85% against the balanced scorecard. Achievement against the overall financial and business performance element of the AIP was 185% of target. However, as outlined in the Remuneration Committee Chair's statement, the Remuneration Committee determined that the financial and business performance part of the AIP should be reduced by 10% to 175% of target to reflect the findings of the prepayment meter investigation.

### Individual Objectives

Each Executive Director had a set of stretching individual objectives which included key non-financial and strategic performance indicators (KPIs) that were important to the success of the business in 2023. The KPIs were cascaded to business and functional leaders to ensure a strong line of sight to key priorities throughout the organisation. The Committee assessed that the majority of individual objectives were met in full and good progress was made against others. Based on an assessment of performance against Chris O'Shea's individual objectives, the Committee determined an outcome of 87.5% of maximum was appropriate. The Committee determined for Russell O'Brien an outcome of 82.5% of maximum under the individual objectives part of the Annual Incentive Plan. For Kate Ringrose, who served for two months of the financial year as CFO, the Committee determined an outcome of 50% of maximum of the individual objectives part of the AIP.

The table below summarises the key individual objectives for Executive Directors during the year:

	Key objectives	Personal objectives Outturn (as % of maximum)
Chris O'Shea	Chris delivered further improvements in capability, culture, and operational delivery, including the launch of our new corporate purpose, established a new business operating model to support strategic plans for commercial and customer growth, investment in infrastructure and net zero, and a step change in our approach to health & safety. Achieved objective to return Services and Solutions to profitability and operational improvements continue to be delivered. With the team, Chris developed a compelling strategic plan and investment case to deliver shareholder returns including dividends and share buy backs. Launched new customer propositions in the year, including PeakSave and continued to provide customer support with over £140m of committed funds to help customers during the energy crisis since 2022.	87.5%
Russell O'Brien	Smooth transition from former CFO. Refreshed capital allocation and investment framework and new risk capital framework. Developed new strategic plan and investment narrative, which was well received by investors at interim results in 2023. Reviewed the finance function with a focus on improving the efficiency and effectiveness of the function.	82.5%
Kate Ringrose	Kate's focus was to complete the financial year-end reporting process for FY2022 and to provide an effective handover to Russell O'Brien, the incoming CFO.	50%

### Overall AIP outcome

Overall, after combining the outturn for financial and business performance with the outturn for individual performance, and after deducting 10% for the prepayment meter investigation, the total AIP for Chris O'Shea was 87.5% of maximum, which equated to 175% of salary or £1,426,250. The table below summarises the outcomes under the AIP for all Executive Directors:

Measure	Chris O'Shea	Russell O'Brien	Kate Ringrose
EPS	100%	100%	100%
Balanced scorecard	85 %	85%	85%
Deduction for prepayment meter investigation	(10%)	(10%)	(10%)
Individual objectives	87.5%	82.5%	50%
Total AIP (as % of maximum)	87.5%	86.3%	78.1%
Total AIP (£)	£1,426,250	£640,406 <sup>(1)</sup>	£90,088 <sup>(2)</sup>

(1) Prorata for the employment period.

(2) Prorata for the employment period.

Half of the AIP earned was paid in cash and half of the AIP was deferred into shares, vesting in three years.

### LONG-TERM INCENTIVE AWARDS RELATING TO THE PERFORMANCE PERIOD 2021-23

The performance conditions relating to the three-year period ending in 2023 are set out below, together with the achievement against these performance conditions. Vesting between stated points is on a straight-line basis.

#### Financial targets and outcomes

Measures	Weightings	Targets		Outcomes	Vesting
		Threshold (25%)	Maximum (100%)		
Relative Total Shareholder Return (TSR)	33.3%	FTSE 100 median	FTSE 100 upper quartile	Ranked first at 267.4%	100%
Cumulative EPS	22.2%	7.5p	10.5p <sup>(1)</sup>	72.4p	100%
Cash conversion	22.2%	EBITDA to OCF of 85%	EBITDA to OCF of 100%	95.0%	75.5%
Non-financial KPI improvement	22.2%	See below	See below		57.3%
<b>Overall</b>	<b>100%</b>				<b>85%</b>

(1) 3-year cumulative EPS

Centrica's TSR was outstanding over the three-year performance period being ranked in first position relative to the FTSE 100. Our TSR was 267.4% compared to 47.1% for the upper quartile of the FTSE 100, therefore the TSR portion of the LTIP will vest at 100%.

Financial performance across the three-year performance period was strong, resulting in above maximum outcome against the Cumulative EPS target (vesting at 100%) and above target performance for cash conversion (vesting at 75.5%).



### Non-financial KPI targets and outcomes

The KPI measures, targets and outcomes for the 2021-23 cycle were:

	Targets		Outcomes	Vesting
	Threshold	Maximum		
<b>Safety</b>				
Total recordable injury frequency rate (TRIFR) <sup>(1)</sup>	0.85	0.65	0.84	29%
<b>Customer satisfaction</b>				
Aggregate brand NPS across our customer businesses weighted by customer numbers	+10.52	+12.35	+18.3	100%
Complaints per 100,000 customers across our customer businesses weighted by customer accounts	2,820	2,600	6,010	0%
<b>Colleague engagement (percentage favourable)</b>	45%	54%	77%	100%

(1) Per 200,000 hours worked.

Performance against the non-financial KPIs across the performance period was mixed with not all measures meeting threshold. The Committee determined that the outcome for this portion of the award would vest at 57.25%.

### Overall performance outcome

The LTIP award was granted in June 2021 and will vest in June 2024, after which the shares are then subject to a mandatory holding period of two years. Taking into account the achievement against the financial performance targets, and the agreed outcome against the non-financial targets, the Committee approved the overall vesting outcome of 85% of the maximum award.

The estimated value of the shares that will vest in respect of the three-year performance period, which ended in December 2023, has been included in the single figure for total remuneration on page 89. The shares will be released at the end of the holding period, in June 2026.

As stated in the Remuneration Committee Chair's statement, as a matter of course, the Committee reviews the formulaic vesting outcome against the overall underlying performance of the group. The Committee considered whether there have been any windfall gains and determined there were none, and no adjustment was made.

### Pension

In 2020, it was agreed that the pension contributions for the new and existing Executive Directors would be 10% of base salary to align them with the wider UK workforce. In 2023 the pension contribution rate across the UK workforce was 10-14%, depending on the pension scheme.

Chris O'Shea and Kate Ringrose participated in the Centrica Unapproved Pension Scheme Defined Contribution section (CUPS DC), until 31 December 2023 when we closed the scheme to future contributions. For the period to 31 December 2023, notional contributions to the CUPS DC scheme have been included in the single figure for total remuneration table as if it was a cash balance scheme and therefore notional investment returns for the year have also been included. The notional pension fund balances for each Executive are disclosed below:

	Total notional pension fund as at 31 December 2023 £	Total notional pension fund as at 31 December 2022 £
CUPS DC Scheme <sup>(1)</sup>		
Chris O'Shea <sup>(1)</sup>	431,775	319,407
Kate Ringrose <sup>(1)</sup>	79,500	78,761

(1) The retirement age for the CUPS DC scheme is 62.

Following 31 December 2023 when the CUPS DC scheme closed to future contributions Chris O'Shea chose to take his pension contribution of 10% of salary as cash in lieu of pension. Upon appointment Russell O'Brien similarly received his pension contribution of 10% of salary as cash in lieu of pension.

	% of salary
Chris O'Shea	10% cash in lieu of pension
Russell O'Brien	10% cash in lieu of pension

#### **Taxable benefits**

Taxable benefits include car allowance, health and medical benefits. Non-taxable benefits include matching shares received under the Share Incentive Plan (SIP) on the same terms as all employees. Both taxable and non-taxable benefits are included in the table of single figure for total remuneration.

#### **DIRECTORS' INTERESTS IN SHARES (NUMBER OF SHARES) (AUDITED)**

The table below shows the interests in the ordinary shares of the Company for all Directors who served on the Board during 2023.

For the Group Chief Executive the minimum shareholding requirement is 300% of base salary and for the Chief Financial Officer the minimum shareholding requirement is 200% of base salary. The achievement against the requirement is shown below.

Executive Directors have a period of five years from appointment to the Board, or from any material change in the minimum shareholding requirement, to build up the required shareholding. A post-cessation shareholding requirement of 100% of the in-employment shareholding requirement (or full actual holding if lower) is applicable for two years post-cessation of employment. The Committee continues to keep both the shareholding requirement, and achievement against the shareholding requirement, under review and will take appropriate action should they feel it necessary.

	Beneficially owned <sup>(1)</sup>	Shares subject to performance conditions	Shares vested but unexercised	Shares subject to continued service only <sup>(2)</sup>	Shares exercised in the year	Shareholding requirement (% of salary)	Current shareholding (% of salary) <sup>(3)</sup>
<b>Executives</b>							
Chris O'Shea <sup>(5)</sup>	1,295,884	7,954,419	—	1,289,274	—	300	224
Russell O'Brien <sup>(5)</sup>	185,511	—	—	314,566	—	200	48
Kate Ringrose <sup>(4)</sup>	550,940	1,501,143	—	348,139	—	200	126
<b>Non-Executives</b>							
Carol Arrowsmith	49,286	—	—	—	—	—	—
Phillippe Boisseau <sup>(7)</sup>	2,669	—	—	—	—	—	—
Nathan Bostock	27,000	—	—	—	—	—	—
CP Duggal	15,000	—	—	—	—	—	—
Jo Harlow	—	—	—	—	—	—	—
Heidi Mottram	10,000	—	—	—	—	—	—
Kevin O'Byrne	40,000	—	—	—	—	—	—
Amber Rudd <sup>(6)</sup>	42,559	—	—	—	—	—	—
Sue Whalley	13,868	—	—	—	—	—	—
Scott Wheway	110,187	—	—	—	—	—	—

(1) These shares are owned by the Director or a connected person and they are not, save for exceptional circumstances, subject to continued service or the achievement of performance conditions. They include shares purchased by the Executive Director in March with deferred AIP funds which have mandatory holding periods of three years and which will be subject to tax at the end of the holding periods.

(2) Shares owned subject to continued service include RSP shares awarded and SIP free and matching shares that have not yet been held for the three-year holding period. The values are net of tax.

(3) The share price used to calculate the achievement against the guideline was 1.4065 pence, the price on 31 December 2023.

(4) Kate Ringrose stepped down from the Board on the 28 February 2023 and the number reflects her holding on this date.

(5) During the period 1 January 2024 to 15 February 2024 both Chris O'Shea and Russell O'Brien acquired 264 shares through the SIP.

(6) During the period 1 January 2024 to 15 February 2024 Amber Rudd acquired 1,580 shares through the NED Share Purchase Agreement.

(7) During the period 1 January 2024 to 15 February 2024 Phillippe Boisseau acquired 1,459 shares through the NED Share Purchase Agreement.

## SHARE AWARDS GRANTED IN 2023 (AUDITED)

Set out below are details of share awards granted in 2023 to Executive Directors.

### 2023 RSP

	Plan	Award Type	Number of shares <sup>(1)</sup>	Basis of award % of salary	Face value of award £	Vesting date	Release date
Chris O'Shea	RSP	Conditional	1,186,547	150%	1,222,500	March 2026	March 2028
Russell O'Brien	RSP	Conditional	655,148	125%	675,000	March 2026	March 2028

(1) The number of shares awarded under the RSP was calculated by reference to a price of 103.03 pence, being the average of the Company's share price over the five trading days immediately preceding the date of grant of 21 March 2023.

The RSP award is subject to an underpin. If the Committee is not satisfied the underpin has been met, the Committee may scale back the awards (including to zero). In assessing the underpin, the Committee will consider the following:

- a review of overall financial performance over the three-year vesting period;
- whether there have been any sanctions or fines issued by a Regulatory Body (participant responsibility may be allocated collectively or individually);
- whether a major safety incident has occurred which may or may not have consequences for shareholders;
- whether there has been material damage to the reputation of the Company (participant responsibility may be allocated collectively or individually);
- whether there has been failure to make appropriate progress against our Climate Transition Plan which sets out our ambition to be a net zero business by 2045 and help our customers be net zero by 2050;
- return on capital with reference to the cost of capital;
- TSR performance over the vesting period, including with reference to the wider energy sector;
- management of customer numbers over the vesting period; and
- progress against broader ESG commitments.

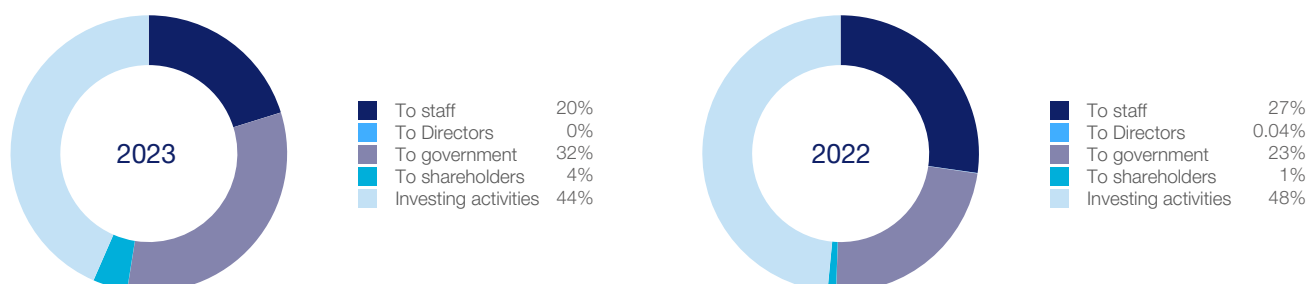
### 2023 DEFERRED AIP

The 2023 AIP award was delivered 50% in cash and 50% in deferred shares, which were awarded on 21 March 2023. The face value of the award is based on the share price on the date of award, which was 102.30 pence. Deferred shares are not subject to further performance conditions and vest in three years.

	Plan	Award Type	Number of shares	Face value of award £000	Vesting date
Chris O'Shea	AIP	Deferred shares	694,925	710,965	March 2026
Kate Ringrose	AIP	Deferred shares	281,073	287,561	March 2026

## 2023 CASH FLOW DISTRIBUTION TO STAKEHOLDERS

The Committee monitors the relationship between the Directors' total remuneration and cash outflows to other stakeholders. As demonstrated by the chart, the Directors' aggregate total remuneration for the year equates to 0.0004% (2022: 0.04%) of the Group's operating cash flow.



## Reward Across The Wider Workforce

Centrica comprises 21,000 diverse colleagues with different roles in different business units across different countries. Our approach to reward aims to unify us as a team working with a common purpose and values. To achieve this, we have established some key reward principles across the workforce that balance the needs of our colleagues with the needs of the business and our customers. The same principles apply to Executive Directors and members of the Centrica Leadership Team:

For our colleagues, we aim to provide reward that is:	For our business, we aim to provide reward that is:
Market competitive	Sustainable
Fair and consistent	Agile
Simple	Flexible
Supports wellbeing	Compliant

Total reward at Centrica consists of more than just salary. All colleagues receive fixed pay comprising a salary plus a wide range of pensions & benefits (see table below for more detail). In addition, all colleagues are eligible to earn variable pay subject to performance (such as annual bonuses, recognition awards, and Profit Share). For frontline colleagues in the organisation, they can expect a higher proportion of their total reward to be fixed pay. The variable pay element is often based on individual performance and is typically paid in cash quarterly or annually. At senior executive levels, colleagues have a higher proportion of variable pay linked to the financial and business performance of the Company. This variable pay is often paid in shares that vest over multiple years. Therefore, our approach to total reward is to vary the fixed pay and variable pay mix depending on the individual's role, responsibilities, and performance compared to competitive market practice for comparable roles.

Performance measures applying to Executive Directors and the Centrica Leadership Team are cascaded through the organisation to ensure a clear line-of-sight and alignment around performance in categories of 'Colleagues', 'Customers' and 'Cash'.

The table below summarises some key highlights of wider workforce reward in the UK. Executive Directors and the Centrica Leadership Team participate in the same benefits and on the same terms as the wider workforce.

<b>Fair pay</b>	Centrica is an accredited member of the Real Living Wage Foundation, and we pay at least the Real Living Wage in the UK. During the cost of living crisis, we have focused on improving the pay of our lowest paid colleagues, through salary increases and one-off payments. The average salary increase across the wider workforce in the UK is 6%, with our lowest paid colleagues receiving an average salary increase of between 7.8% to 9.5%. Salary levels for the wider workforce are negotiated with our recognised trade union partners to ensure fair living standards. Salary levels for management reflect the individual's role, experience and performance compared to competitive market rates.
<b>Looking after colleagues and their loved ones</b>	All employees in the UK receive comprehensive health and medical cover and can purchase additional cover for their dependants. This includes 24-hour access to a GP, eye care; support for parents with fertility, adoption, and surrogacy; life assurance; and personal accident insurance.
<b>Saving for the future</b>	The Company has various legacy pension arrangements. While our Defined Benefit pension is closed to new members it is still open to future accrual for existing members. Our Defined Contribution Scheme provides a generous employer contribution of 10% of salary or cash in lieu of pension. Our Lifestyle Savings offer discounts from everyday shopping to one-off big purchases.
<b>Recognising colleague contribution</b>	In 2023, we recognised colleagues over 258,000 times through our Recognition platform. This allows anyone in the Company to recognise the performance or values of a colleague or team, or simply say "thank you". We operate a number of performance-related incentives plans across the Group. 5,500 employees participate in an annual bonus plan aligned to the bonus for executives and senior management. All of our field engineers and customer facing teams participate in incentives aligned to their individual performance.
<b>Sharing in our success</b>	All employees in the UK are eligible to participate in our Share Incentive Plan, where they can purchase shares in the Company and receive free matching shares, provided they hold them for at least three years. In addition, all colleagues are eligible to an award of free shares every year via our Profit Share plan depending on our performance over the prior year. Field and Customer Support colleagues participate in quarterly and annual incentives linked to their performance. Senior managers are eligible to receive annual bonuses and long-term restricted share awards aligned to the performance of the business.
<b>Being an Ambassador for Centrica products &amp; services</b>	We provide discounts on colleagues' energy bills if they are a Centrica customer, as well as discounts on new boilers, HomeCare cover, and our new energy efficient products for example, Electric Car charging points, solar & battery storage, and home insulation.
<b>Making a difference in the world</b>	Colleagues are given time off to volunteer for local communities and causes they are passionate about. We also operate a Give As You Earn scheme, where colleagues can donate in a tax-efficient way. The Colleague Support Foundation aims to provide additional support for those experiencing extreme financial difficulties, where existing financial support mechanisms have been explored and exhausted.



## ANNUAL PERCENTAGE CHANGE IN REMUNERATION OF DIRECTORS AND COLLEAGUES

The table below shows the percentage changes (on a full-time equivalent basis) in the Executive and Non-Executive Directors' remuneration over the last three financial years compared to the amounts for full-time colleagues of the Group for each of the following elements of pay:

	Percentage change from 2019 to 2020			Percentage change from 2020 to 2021			Percentage change from 2021 to 2022			Percentage change from 2022 to 2023		
	Salary/fees	Benefits	Bonus	Salary/fees	Benefits	Bonus	Salary/fees	Benefits	Bonus	Salary/fees	Benefits	Bonus
<b>Executive Directors</b>												
Chris O'Shea <sup>(1)</sup>	6.3	—	—	—	-28.0	—	2.5	-11.1	100	2.6	—	0.3
Russell O'Brien <sup>(2)</sup>	—	—	—	—	—	—	—	—	—	—	—	—
Kate Ringrose <sup>(11)</sup>							2.5	6.7	18.7	-83.3	-81.2	-84.4
<b>Non-Executive Directors</b>												
Scott Wheway	268.8	—	—	—	—	—	—	—	—	2.6	—	—
Carol Arrowsmith	—	—	—	—	—	—	—	—	—	3.8	—	—
Nathan Bostock <sup>(3)</sup>	—	—	—	—	—	—	—	—	—	32.9	—	—
CP Duggal <sup>(4)</sup>	—	—	—	—	—	—	—	—	—	—	—	—
Heidi Mottram	—	—	—	27.8	—	—	—	—	—	3.8	—	—
Kevin O'Byrne <sup>(5)</sup>	—	—	—	—	—	—	—	—	—	-20.7	—	—
Amber Rudd <sup>(6)</sup>	—	—	—	—	—	—	—	—	—	—	—	—
Philippe Boisseau <sup>(7)</sup>	—	—	—	—	—	—	—	—	—	—	—	—
Jo Harlow <sup>(8)</sup>	—	—	—	—	—	—	—	—	—	—	—	—
Sue Whalley <sup>(9)</sup>	—	—	—	—	—	—	—	—	—	—	—	—
Average per colleague (excluding Directors) <sup>(10)</sup>	—	1.1	236.4	1.8	-10.3	16.3	1.9	—	—	4.4	—	42.3

(1) Chris O'Shea was appointed to the Centrica Board as Group Chief Financial Officer on 1 November 2018 and became interim Group Chief Executive with effect from 17 March 2020. He was appointed as Group Chief Executive on 14 April 2020. From 17 March until 31 December 2020, he elected to waive £100,000 of his salary.

(2) Russell O'Brien was appointed to the Board on 1 March 2023.

(3) Nathan Bostock was appointed to the Board on 9 May 2022.

(4) CP Duggal was appointed to the Board on 16 December 2022.

(5) Kevin O'Byrne took on the role of Senior Independent Director from 1 June 2022.

(6) Amber Rudd was appointed to the Board on 10 January 2022.

(7) Philippe Boisseau joined the Board on 1 September 2023.

(8) Jo Harlow joined the board on 1 December 2023.

(9) Sue Whalley joined the board on 1 December 2023.

(10) The comparator group includes all management and technical or specialist colleagues based in the UK in Level 2 to Level 6 (where Level 1 is the Executive and Non-Executive Directors). There are insufficient colleagues in the Centrica plc employing entity to provide a meaningful comparison. The colleagues selected have been employed in their role for full years to give meaningful comparison. This group has been chosen because the colleagues have a remuneration package with a similar structure to the Executive Directors, including base salary, benefits and annual bonus.

(11) Kate Ringrose stepped down from the Board on the 28 February 2023.

The chart below shows the ratio of remuneration of the CEO to the average UK colleague of the Group.

CEO pay ratio		25th percentile	50th percentile	75th percentile
2023	Option B	198:1	142:1	120:1
2022	Option B	128:1	77:1	70:1
2021	Option B	29:1	24:1	15:1
2020	Option B	32:1	15:1	14:1
2019	Option B	34:1	29:1	22:1
2018	Option B	72:1	59:1	44:1

For 2020, the CEO total remuneration figure includes the single figure chart combined earnings of both Iain Conn and Chris O'Shea for the period that they were in the CEO role during 2020.

	Salary	Total pay and benefits
2023		
CEO remuneration	810,000	8,231,007
Colleague 25th percentile	26,484	41,514
Colleague 50th percentile	41,415	58,029
Colleague 75th percentile	47,970	68,439

The Company has used its gender pay gap data (Option B in the Directors' Reporting Regulations) to determine the colleagues whose remuneration packages sit at the lower, median and upper quartile positions across the UK workforce. This is deemed the most appropriate methodology for Centrica given the different pension and benefit arrangements across the diverse UK workforce. To ensure this data accurately reflects individuals at each quartile position, a sensitivity analysis has been performed. The approach has been to review the total pay and benefits for a number of colleagues immediately above and below the identified employee at each quartile within the gender pay gap analysis. We have determined our 25th, 50th, and 75th percentile individual using data from our gender pay gap as of the 5 April 2023.

The annual remuneration for the three identified colleagues has been calculated on the same basis as the CEO's total remuneration for the same period in the single figure table on page 89 to produce the ratios.

The ratio of CEO pay compared with the pay for the average colleague has increased in the last two years due to the strong vesting of the LTIP awards that were granted in 2021 and will be released in shares in 2026. As a large proportion of CEO remuneration was delivered through the LTIP which was measured over a three-year performance period, from 2021-2023 the CEO ratio will be impacted by any long term incentive outcomes. Under the current Remuneration policy, long-term incentives will be delivered to the CEO through the Restricted Share Plan which has a lower overall quantum, at 50% of the previous LTIP. The Company believes the ratios are appropriate given financial and business performance outcomes in 2023, and the size and complexity of the business.

## Pay for performance

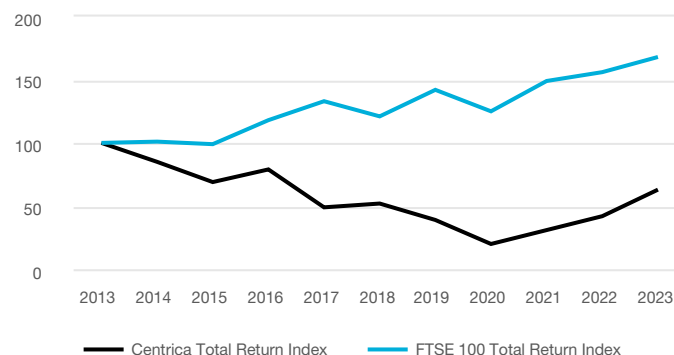
The table below shows the CEO's total remuneration over the last 10 years and the achieved annual short-term and long-term incentive pay awards as a percentage of the plan maximum.

	Chief Executive single figure for total remuneration £000	Annual short-term incentive payout against max opportunity %	Long-term incentive vesting against max opportunity %
<b>Chris O'Shea</b>			
2023	8,231	87.5	85
2022	4,490	89.5	76
2021	875	0	0
2020	765	0	0
<b>Iain Conn</b>			
2020	239	0	0
2019	1,186	0	0
2018	2,335	41	18
2017	1,678	0	26
2016	4,040	82	0
2015	3,025	63	0
<b>Sam Laidlaw</b>			
2014	3,272	34	35

For 2020 the single figure for total remuneration for both Iain Conn and Chris O'Shea are shown. The total remuneration figure for Chris O'Shea includes his earnings during 2020 as CFO and CEO.

The performance graph below shows Centrica's TSR performance against the performance of the FTSE 100 Index over the 10-year period to 31 December 2023. The FTSE 100 Index has been chosen as it is an index of similar-sized companies and Centrica has been a constituent member for the majority of the period.

## Total return indices – Centrica and FTSE 100



## FEES RECEIVED FOR EXTERNAL APPOINTMENTS OF EXECUTIVE DIRECTORS

There were no fees received for external appointments. Kate Ringrose represented Centrica as a non-executive director of EDF Energy Nuclear Generation Group Limited and Lake Acquisitions Limited. She received no fees or remuneration relating to these external appointments in 2023.

## RELATIVE IMPORTANCE OF SPEND ON PAY

The table below shows the percentage change in total remuneration paid to all colleagues compared to expenditure on dividends and share buyback for the years ended 31 December 2022 and 2023.

	2023 £m	2022 £m	% Change
Share repurchase <sup>(1)</sup>	613	43	1,326
Dividends	186	59	215
Staff and employee costs <sup>(2)</sup>	1,400	1,440	(3)

(1) 510,787,195 shares were purchased during 2023 as part of the share buyback arrangement

(2) Staff and employee costs are as per note 5(b) in the notes to the Financial Statements.

## PAYMENTS TO PAST DIRECTORS (AUDITED)

During 2023, no payments were made to past Directors with the exception of the payments disclosed in the single figure for total remuneration table on page 89.

## PAYMENTS FOR LOSS OF OFFICE (AUDITED)

Kate Ringrose stepped down from the Board as Chief Financial Officer on 28 February 2023 and she left employment with Centrica on 1 October 2023. Other than the treatment set out below, no further payments for loss of office will be made to Kate. Payments for loss of office to Kate Ringrose were consistent with the Policy and her contract of employment.

### Fixed remuneration

Kate Ringrose was paid salary and benefits for the duration of her employment to a total of £279,163.

### Annual Incentive Plan (AIP)

Kate Ringrose was eligible for an AIP award for the period worked as Chief Financial Officer during the 2023 financial year, details in respect of the achievement of which can be found on page 91. Kate's FY2023 bonus was paid 50% in cash and 50% in shares deferred for a further three years. Kate's deferred bonus of £243k from FY2021 and £288k from FY2022 will be subject to the three year deferral period in line with the usual policy. The Remuneration Committee considers that 'good leaver' treatment is appropriate in recognition of Kate's contribution to the business.

### Long-term Incentive Awards

The Remuneration Committee determined Kate Ringrose was a 'good leaver' in respect of her 2021 LTIP and 2022 RSP awards. Awards will be pro-rated based on the performance period that has elapsed at the point Kate ceased employment and will vest on the normal vesting dates, subject to relevant performance conditions and underpins. Holding periods of two years will apply to any vested shares. Kate did not participate in the FY2023 RSP award.

### Post-employment shareholding requirement

Kate Ringrose is subject to a two-year post-employment shareholding requirement. On cessation of employment, Kate had a shareholding in excess of 200% of salary. Therefore, Kate is required to maintain a shareholding of 200% of salary for a period of two years post-employment.

## ADVICE TO THE REMUNERATION COMMITTEE

Following a competitive tender process, PwC was appointed as independent external advisor to the Committee in May 2017.

PwC also provided advice to Centrica globally during 2023 in the areas of employment taxes, regulatory risk and compliance issues and additional consultancy services.

PwC's fees for advice to the Committee during 2023 amounted to £134,450 which included the preparation for and attendance at Committee meetings. The fees were charged on a time spent basis in delivering advice that materially assisted the Committee in its consideration of matters relating to executive remuneration.

The Committee takes into account the Remuneration Consultants Group's (RCG) Code of Conduct when dealing with its advisors. PwC is a member of the RCG and the Committee is satisfied that the advice it received during the year was objective and independent and that the provision of any other services by PwC in no way compromises their independence.

## STATEMENT OF VOTING

Shareholder voting on the resolutions to approve the Directors' Remuneration Policy put to the 2022 AGM, and the Directors' Remuneration Report, put to the 2023 AGM, was as follows:

Resolution	AGM	Votes for	Votes for %	Votes against	Votes against %	Votes withheld
Directors' Remuneration Policy	2022	3,132,342,144	83.48%	619,903,528	16.52%	1,275,033
Directors' Remuneration Report	2023	3,463,208,517	93.19%	252,986,960	6.81%	1,244,130

## IMPLEMENTATION IN THE NEXT FINANCIAL YEAR

The table below sets out details of how we implemented our remuneration policy in 2023, and how we intend to implement the policy in 2024.

Remuneration element	Implementation in 2023	Implementation in 2024
Base salary	With effect from 1 April 2023, salaries for Executive Directors were: <ul style="list-style-type: none"> <li>Group Chief Executive: £815,000</li> <li>Group Chief Financial Officer: £540,000</li> </ul>	With effect from 1 April 2024, salaries for Executive Directors are: <ul style="list-style-type: none"> <li>CEO: £855,000 (+4.9%)</li> <li>CFO: £590,000 (+9.3%)</li> </ul> <p>The average increase across with wider workforce in the UK is 6%. A lower increase was given to the CEO to reflect his single figure remuneration. A higher increase was given to the CFO to reflect his performance and development in role since joining Centrica</p>
Annual Incentive Plan (AIP)	Maximum opportunity: <ul style="list-style-type: none"> <li>Group Chief Executive: 200% of salary (100% of salary at target)</li> <li>Group Chief Financial Officer: 150% of salary (75% of salary at target)</li> </ul> <p>The performance measures and their weighting as a percentage of maximum opportunity were</p> <ul style="list-style-type: none"> <li>EPS: 37.5%</li> <li>Balanced Scorecard: 37.5%</li> <li>Individual objectives: 25%</li> </ul> <p>EPS payout ranges were as follows (as a percentage of maximum opportunity):</p> <ul style="list-style-type: none"> <li>Threshold performance: 25%</li> <li>On-target performance: 50%</li> <li>Maximum performance: 100%</li> </ul>	No change
Restricted Share Plan (RSP)	RSP awards were granted at the following levels: <ul style="list-style-type: none"> <li>Group Chief Executive: 150% of salary</li> <li>Group Chief Financial Officer: 125% of salary</li> </ul> <p>For the 2023 award, the underpin factors that the Committee will consider include, but are not limited to the following:</p> <ul style="list-style-type: none"> <li>a review of overall financial performance over the three-year vesting period;</li> <li>whether there have been any sanctions or fines issued by a Regulatory Body (participant responsibility may be allocated collectively or individually);</li> <li>whether a major safety incident has occurred which may or may not have consequences for shareholders;</li> <li>whether there has been material damage to the reputation of the Company (participant responsibility may be allocated collectively or individually);</li> <li>whether there has been failure to make appropriate progress against our Climate Transition Plan which sets out our ambition to be a net zero business by 2045 and help our customers be net zero by 2050;</li> <li>return on capital with reference to the cost of capital;</li> <li>TSR performance over the vesting period, including with reference to the wider energy sector;</li> <li>management of customer numbers over the vesting period;</li> <li>progress against broader ESG commitments including customer service, colleague engagement and our transition to net zero.</li> </ul>	No change
Pensions	The maximum benefit for Executives is 10% of base salary earned during the financial year. This compares with the average pension benefit across the wider UK workforce, currently 10-14% of salary.	No change
Benefits	Benefits to be provided in line with the Policy	No change
All-employee share plan	Executives were entitled to participate in all-employee share plans on the same terms as all other eligible employees.	No change
Shareholding requirements	Group Chief Executive: 300% of salary Group Chief Financial Officer: 200% of salary Post-employment, Executive Directors will continue to be expected to retain the lower of the shares held at cessation of employment and shares to the value of 300% of base salary for the CEO and 200% of base salary for the CFO for a period of two years.	No change
NED Fees		
	With effect from 1 April 2023	With effect from 1 April 2024
	Chair of the Board	£420,500
	Basic fee for Non-Executives	£76,000
	<b>Additional fees</b>	
	Chair of Audit and Risk Committee	£25,000
	Chair of Remuneration Committee	£20,000
	Chair of Safety, Environment and Sustainability Committee	£20,000
	Senior Independent Director	£20,000
	Employee Champion	£20,000

The Remuneration Report has been approved by the Board of Directors and signed on its behalf by:

**Raj Roy**

Group General Counsel & Company Secretary

14 February 2024

DIRECTORS' REMUNERATION POLICY

The Remuneration Policy was approved by shareholders at the AGM on 7 June 2022.

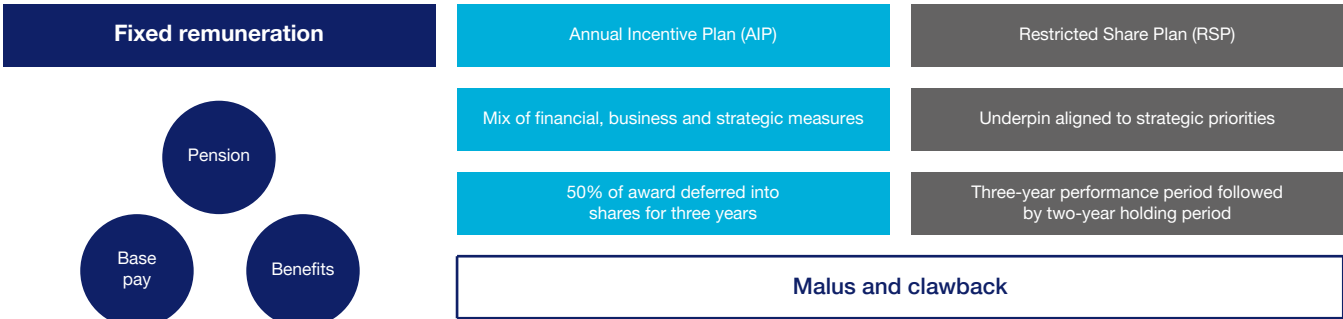
This section contains a summary of Centrica's Directors' Remuneration Policy (Policy) that will govern and guide the Group's future remuneration payments. The full version can be found on our website at centrica.com.

The Policy operated as intended in 2023.

OBJECTIVES OF THE POLICY

- The Policy aims to deliver remuneration arrangements that:
- attract and retain high-calibre Executives in a challenging and competitive global business environment;
  - place strong emphasis on both short-term and long-term performance;
  - are strongly aligned to the achievement of strategic objectives and the delivery of sustainable long-term shareholder value through returns and growth; and
  - seek to avoid creating excessive risks in the achievement of performance targets.

Summary of Policy design



HOW THE POLICY LINKS TO OUR STRATEGY

Our strategy is driven by our Purpose “energising a greener, fairer future”, and our enduring values at Centrica underpin our culture. Further information on our Purpose and values is set out on page 9. We need to engage our leadership team to fulfil our Purpose and to ensure Centrica is focused on delivery and positioned for growth.

The AIP focuses the Executives on the delivery of our near-term objectives, with at least 75% of the award based on a mix of financial and business measures based on Centrica's priorities for the forthcoming year and up to 25% based on individual strategic and personal objectives for the year. All targets align with the Group Annual Plan.

At the time of the last remuneration policy review, the Remuneration Committee identified the RSP as the appropriate long term incentive vehicle for our Executive Directors as it reduces the upper limit of payment and is aligned with our goal to simplify all aspects of our business. Potential payouts from restricted shares are far less variable than conventional long-term incentives.

The RSP has a three-year vesting period and the Committee will consider the Company's overall financial and non-financial performance during this period. Consideration will be given to elements such as revenue, profitability, shareholder experience and Centrica's progress towards a net zero future.

As we continue to restore shareholder value, the RSP will ensure a large proportion of our Executives' pay is based on direct and uninhibited share price movement.

We operate an RSP for leaders below the most senior management and this approach therefore creates alignment between our Executives and our senior colleagues.



## REMUNERATION POLICY TABLE FOR EXECUTIVE DIRECTORS

The following table summarises each element of the Remuneration Policy for the Executive Directors, explaining how each element operates and the link to the corporate strategy.

Purpose and link to strategy	Operation and clawback	Maximum opportunity	Performance measures
<b>Base pay/salary</b>			
<p>Reflects the scope and responsibility of the role and the skills and experience of the individual.</p> <p>Salaries are set at a level sufficient for the Group to compete for international talent and to attract and retain Executives of the calibre required to develop and deliver our strategy.</p>	<p>Base salaries are reviewed annually taking into account individual and business performance, market conditions and pay in the Group as a whole.</p> <p>When determining base salary levels, the Committee will consider factors including:</p> <ul style="list-style-type: none"> <li>remuneration practices within the Group;</li> <li>change in scope, role and responsibilities;</li> <li>the performance of the Group;</li> <li>experience of the Executive Director;</li> <li>the economic environment; and</li> <li>when the Committee determines a benchmarking exercise is appropriate, salaries within the ranges paid by the companies which the Committee believe are appropriate comparators for the Group.</li> </ul>	<p>Usually, base salary increases in percentage terms will be within the range of increases awarded to other employees of the Group.</p> <p>Increases may be made above this level to take account of individual circumstances such as a change in responsibility, progression/development in the role or a significant increase in the scale or size of the role.</p>	Not applicable.
<b>Annual Incentive Plan (AIP)</b>			
<p>Designed to incentivise and reward the performance of individuals and teams in the delivery of short-term financial and non-financial metrics.</p> <p>Performance measures are linked to the delivery of the Group's long-term financial goals and key Group priorities.</p>	<p>In line with the Group's annual performance management process, each Executive has an agreed set of stretching individual objectives for each financial year.</p> <p>Following the end of the financial year, to the extent that performance criteria have been met, up to half of the AIP award is paid in cash.</p> <p>To further align the interests of Executives with the long-term interests of shareholders, the remainder is paid in deferred shares which are held for three years. No further performance conditions will apply to the deferred element of the AIP award.</p> <p>Dividend equivalents may be paid as additional shares or cash.</p> <p>Malus and clawback apply to the cash and share awards.</p>	<p>Maximum of 200% of base salary earned during the financial year.</p> <p>For threshold performance, up to 25% of the maximum opportunity will pay out. For on-target performance, 50% of the maximum opportunity will pay out.</p>	<p>At least 75% based on a mix of financial performance and business measures aligned to Centrica's priorities for the forthcoming financial year and up to 25% based on individual objectives aligned to the Group's priorities and strategy.</p> <p>Performance is assessed over one financial year.</p>

Purpose and link to strategy	Operation and clawback	Maximum opportunity	Performance measures
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#### Restricted Share Plan (RSP)

Designed to reward and incentivise the delivery of long-term performance and shareholder value creation.	RSP awards granted to Executive Directors will normally vest after three years subject to the achievement of an underpin, and are subject to a two-year post-vesting holding period during which the Executive Directors may not normally dispose of their vested shares except as is necessary to pay tax and social security contributions arising in respect of their RSP awards. Dividend equivalents are accrued during the vesting period and calculated on vesting on any RSP share awards. Dividend equivalents are paid as additional shares or as cash. Malus and clawback apply to the awards.	The maximum opportunity for RSP awards will be 150% of salary earned during the financial year for Executive Directors.	<p>The RSP will be subject to an underpin framework. In assessing the underpin, the Committee will consider the Company's overall performance, including financial and non-financial performance measures over the course of the vesting period as well as any material risk or regulatory failures identified.</p> <p>Financial performance can include elements such as revenue, profitability, shareholder experience and return on capital. Non-financial performance can include a range of operational and strategic measures critical to the Company's long-term sustainable success.</p> <p>The Committee may scale back the awards (including to zero) if it is not satisfied the underpin has been met.</p>
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#### Pensions

Positioned to provide a market competitive post-retirement benefit, in a way that manages the overall cost to the Company.	<p>Executives are entitled to participate in a Company money purchase pension arrangement or to take a fixed salary supplement (calculated as a percentage of base salary, which is excluded from any AIP calculation) in lieu of pension entitlement.</p> <p>The Group's policy is not to offer defined benefit arrangements to new employees at any level, unless this is specifically required by applicable legislation or an existing contractual agreement.</p>	The maximum benefit for Executives is 10% of base salary earned during the financial year. This compares with the average pension benefit across the wider UK workforce, currently 10-14% of salary.	Not applicable.
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#### Benefits

Positioned to support health and wellbeing and to provide a competitive package of benefits that is aligned with market practice.	<p>The Group offers Executives a range of benefits including (but not limited to):</p> <ul style="list-style-type: none"> <li>• a company-provided car and fuel, or a cash allowance in lieu;</li> <li>• life assurance and personal accident insurance;</li> <li>• health and medical insurance for the Executive and their dependants; and</li> <li>• health screening and wellbeing services.</li> </ul>	<p>Cash allowance in lieu of company car – currently £15,120 per annum.</p> <p>The benefit in kind value of other benefits will not exceed 5% of base salary.</p>	Not applicable.
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#### All-employee share plans

Provides an opportunity for employees to voluntarily invest in the Company.	Executives are entitled to participate in all-employee share plans on the same terms as all other eligible employees.	Maximum contribution limits are set by legislation or by the rules of each plan. Levels of participation apply equally to all participants.	Not applicable.
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Purpose and link to strategy	Operation and clawback	Maximum opportunity	Performance measures
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### Shareholding requirements

To align the interests of Executive Directors with shareholders over a long-term period including after departure from the Group.

#### In-employment requirement

During employment, the Group Chief Executive and Group Chief Financial Officer are required to build and maintain a minimum shareholding of 300% and 200% of their base salary respectively.

Executives must also hold 100% of vested incentive shares (net of tax) until the shareholding requirement is met.

#### Post-employment requirement

Executive Directors are required to hold shares after cessation of employment to the full value of the shareholding requirement (or the existing shareholding if lower at the time) for a period of two years. Shares purchased by Executives with their own monies are excluded from the post-employment requirement.

#### In-employment requirement

The current shareholding requirement is maintained at 300% of base salary for the Group Chief Executive and 200% of base salary for the Group Chief Financial Officer.

#### Post-employment requirement

Executive Directors will be expected to retain the lower of the shares held at cessation of employment and shares to the value of 300% of base salary for the Group Chief Executive and 200% of base salary for the Group Chief Financial Officer for a period of two years.

Only shares earned from vested incentives will be included within the post-employment shareholding requirement.

Not applicable.

### Notes to the Remuneration Policy Table

The Committee reserves the right to make any remuneration payments and payments for loss of office, notwithstanding that they are not in line with the Policy set out above, where the terms of the payment were agreed before the Policy came into effect, at a time when the relevant individual was not an Executive Director of the Company and, in the opinion of the Committee, the payment was not in consideration for the individual becoming a Director of the Company. For these purposes payments include the amounts paid in order to satisfy awards of variable remuneration and, in relation to an award over shares, the terms of the payment are agreed at the time the award is granted. The Committee may make minor amendments to the Policy (for regulatory, exchange control, tax or administrative purposes or to take account of a change in legislation) without obtaining shareholder approval for that amendment.

#### Malus and clawback

In line with UK corporate governance best practice, the Committee can apply malus (that is reduce the number of shares in respect of which an award vests) or delay the vesting of awards. In addition, where an award has vested, the resulting shares will generally be held for a period during which they may be subject to clawback. The following provisions apply:

- AIP – cash awards: malus will apply up to the payment of the cash AIP award and clawback will apply for a period of 3 years after the cash AIP payment.
- AIP – deferred shares: clawback will apply during the period of three years following the payment of the cash AIP award the deferred share relates to.
- historic LTIP awards: malus will apply during the vesting period and up to the date of vesting and clawback will apply for a period of two years post-vesting.
- RSP awards: malus will apply during the vesting period and up to the date of vesting and clawback will apply for a period of two years post-vesting.

Legacy awards are governed by the malus and clawback provisions within the respective policy and plan rules. For awards granted under the proposed policy malus and clawback provisions may be applied in the following circumstances:

- material financial misstatement;
- where an award was granted, or performance was assessed, based on an error or inaccurate or misleading information;
- action or conduct of a participant amounts to fraud or gross misconduct;
- events or the behaviour of a participant have led to censure of the Company or Group by a regulatory authority or cause significant detrimental reputational damage;
- material failure of risk management; or
- corporate failure.

During the year, the Remuneration Committee has not needed to apply clawback or malus to any payments to Executive Directors or other members of the Centrica Leadership Team.

#### Pension arrangements applying to Executives

All registered scheme benefits are subject to HMRC guidelines and the Lifetime Allowance.

The Centrica Unapproved Pension Scheme (CUPS) defined contribution (DC) section provides benefits for individuals not eligible to join the CUPS defined benefit (DB) section and for whom registered scheme benefits are expected to exceed the Lifetime Allowance. The CUPS DC section is offered as a direct alternative to a cash salary supplement.

CUPS is unfunded but the benefits are secured by a charge over certain Centrica assets. An appropriate provision in respect of the accrued value of these benefits has been made in the Company's balance sheet. CUPS was closed to future contributions from 31 December 2023.

## Discretion and judgement

It is important that the Committee maintains the flexibility to apply discretion and judgement to achieve fair outcomes as no remuneration policy and framework, however carefully designed and implemented, can pre-empt every possible scenario. The Committee needs to be able to exercise appropriate discretion to determine whether mechanistic or formulaic outcomes are fair, in context and can be applied in an upward or downward manner when required.

Judgement is applied appropriately by the Committee, for example when considering the political and social pressures on the business, the impact of significant movements in external factors such as commodity prices, in setting and evaluating delivery against individual and non-financial performance targets to ensure they are considered sufficiently stretching and that the maximum and minimum levels are appropriate and fair.

The Committee has absolute discretion to decide who receives awards, the level of the awards under the incentive plans and the timing, within the parameters set in the rules and the limits in the Policy table.

## Recruitment Policy

The Committee will apply the same remuneration policy during the policy period as that which applies to existing Executives when considering the recruitment of a new Executive in respect of all elements of remuneration as set out in the Remuneration Policy table.

Whilst the maximum level of remuneration which may be granted would be within plan rules and ordinarily subject to the maximum opportunity set out in the Remuneration Policy table, in certain circumstances, an arrangement may be established specifically to facilitate recruitment of a particular individual up to 25% above the maximum opportunity, albeit that any such arrangement would be made within the context of minimising the cost to the Company.

The policy for the recruitment of Executives during the policy period includes the opportunity to provide a level of compensation for forfeiture of AIP entitlements and/or unvested long-term incentive awards (at an expected value no greater than what is forfeit) from an existing employer, if any, and the additional provision of benefits in kind, pensions and other allowances, as may be required in order to achieve a successful recruitment. The Company has a clear preference to use shares wherever possible and will apply timescales at least as long as previous awards.

Details of the relocation and expatriate assistance that may be available as part of the recruitment process can be found in the table below.

Relocation and expatriate assistance	
Purpose and link to strategy	Enables the Group to recruit or promote the appropriate individual into a role, to retain key skills and to provide career opportunities.
Operation and clawback	Assistance may include (but is not limited to) removal and other relocation costs, housing or temporary accommodation, education, home leave, repatriation and tax equalisation.
Maximum opportunity	Maximum of 100% of base salary.
Performance measures	Not applicable.
Changes	No changes.

## Service Contracts

Service contracts provide that either the Executive or the Company may terminate the employment by giving one year's written notice. The Committee retains a level of flexibility, as permitted by the UK Corporate Governance Code 2018, in order to attract and retain suitable candidates. It reserves the right to offer contracts which contain an initial notice period in excess of one year, provided that at the end of the first such period the notice period reduces to one year. All Executive and Non-Executive Directors are required to be re-elected at each AGM.

Executive Director	Date of appointment to role	Date of current contract	Notice from the Group	Notice from the individual
Chris O'Shea	1 November 2018	10 December 2020	12 months	12 months
Russell O'Brien	30 January 2023	30 January 2023	12 months	12 months

## Termination policy

The Committee carefully considers compensation commitments in the event of an Executive Director's termination. The aim is to avoid rewarding poor performance and to reduce compensation to reflect the departing Executive's obligations and to mitigate losses.

Remuneration element	Scenario	Payment
Base salary, pension and other benefits	Dismissal with cause	No further payments made except those that an individual may be contractually entitled to.
	All other scenarios	Either continue to provide base salary, pension and other benefits for any unworked period of notice or, at the option of the Company, to make a payment in lieu of notice comprising base salary only.  Typically any payment in lieu of notice will be made in monthly instalments and reduce, or cease completely, in the event.
AIP	Dismissal with cause	AIP award and any deferred awards will be forfeit.
	Resignation	Executives leaving as a result of resignation will forfeit any potential AIP award for the performance year in which the resignation occurs.
	Change of control	The AIP award will be prorated for time (based on the proportion of the AIP period elapsed at the date of change of control).  The Committee has discretion to determine that the AIP does not pay out on change of control and will continue under the terms of the acquiring entity.  The Committee has discretion to dis-apply prorating in exceptional circumstances.  Deferred awards may vest immediately or be exchanged for new equivalent awards in the acquirer where appropriate.
	Exceptions*	An AIP award for the year in which the termination occurs may be made following the normal year end assessment process, subject to achievement of the agreed performance measures and time apportioned for the period worked.  Any award would normally be payable at the normal time with a 50% deferral vesting in line with the normal time-frame.  The Committee has discretion to accelerate the vesting of deferred awards.
LTIP and RSP	Dismissal with cause or resignation	All unvested awards will lapse.
	Change of control	Existing awards will be exchanged on similar terms or vest to the extent that the performance conditions have been met at the date of the event and be time-apportioned to the date of the event or the vesting date, subject to the overriding discretion of the Committee.
	Exceptions*	Any outstanding awards will normally be prorated for time based on the proportion of the performance and/or vesting period elapsed.  Performance will be measured at the end of the performance period.  On death in service, awards may vest earlier than the normal date.  The Committee has the discretion to dis-apply prorating or accelerate testing of performance conditions in exceptional circumstances.

\* "Exceptions" are defined by the plan rules and include those leaving due to the following reasons: ill health, disability, redundancy, retirement (with agreement from the Company), death, or any other reason that the Committee determines appropriate.

Following termination, awards continue to be subject to malus and clawback provisions in line with those set out in the rules and the policy.

## Pay fairness across the Group

The Group operates in a number of different environments and has many employees who carry out a range of diverse roles across a number of countries. In consideration of pay fairness across the Group, the Committee believes that ratios related to market competitive pay for each role profile in each distinct geography are the most helpful.

The ratios of salary to the relevant market median are compared for all permanent employees across the Group and are updated using salary survey benchmarking data on an annual basis.

Unlike the significant majority of the workforce who receive largely fixed remuneration, mainly in the form of salary, the most significant component of Executive compensation is variable and dependent on performance. As such, the Committee reviews total compensation for Executives against benchmarks rather than salary alone.

A number of performance-related incentive schemes are operated across the Group which differ in terms of structure and metrics from those applying to Executives.

The Group also offers a number of all-employee share schemes in the UK, Ireland, Europe and North America and Executives participate on the same basis as other eligible employees.

Performance measures applying to Executives are cascaded down through the organisation and Group employment conditions include high standards of health and safety and employee wellbeing initiatives.

No consultation in respect of the development of the Director's Remuneration Policy place with employees occurred.



## External appointments of Executives

It is the Company's policy to allow each Executive to accept one non-executive directorship of another company, although the Board retains the discretion to vary this policy. Fees received in respect of external appointments are retained by the individual Executive and are set out in the Directors' Annual Remuneration Report each year.

## Consideration of the UK Corporate Governance Code

As part of its review of the Policy, the Committee has considered the factors set out in provision 40 and provision 41 of the UK Corporate Governance Code (the 'Code'). In the Committee's view, the proposed Policy addresses those factors as set out below:

Principles of the Code	How the Policy aligns
<b>Clarity</b> Remuneration arrangements should be transparent and promote effective engagement with shareholders and the workforce	<p>The Policy is simple and designed to support long-term, sustainable performance. Shareholders were extensively consulted on the design of the Policy, and the key rationale for the changes that were made. The Policy received shareholder approval at the AGM in June 2022. The Committee proactively seeks engagement with shareholders on remuneration matters on an ongoing basis.</p> <p>During the year, consultation took place with recognised trade unions on pay across the wider workforce. No direct engagement with the workforce occurred on executive remuneration.</p> <p>In order to enhance the level of engagement with our employees, a Shadow Board, comprising colleagues across the business and in different locations, was launched in 2021. In 2023 a new Shadow Board was established and through the Shadow Board, colleagues are able to share views with the Board on executive pay, wider workforce terms &amp; conditions, and people-related policies.</p> <p>The Shadow Board will be our primary forum for engaging on executive pay. The Remuneration Committee is actively exploring ways to enhance engagement across all groups in 2024.</p>
<b>Simplicity</b> Remuneration structures should avoid complexity and their rationale and operation should be easy to understand	<p>The latest Policy results in a clear simplification of remuneration arrangements through the replacement of a performance share plan, with a simpler restricted share plan.</p> <p>We further operate an annual incentive (the AIP) with a straightforward deferral structure to allow it to be easily understood.</p> <p>The performance conditions for variable elements are clearly communicated to, and understood by, participants and aligned with the Group strategy.</p>
<b>Risk</b> Remuneration arrangements should ensure reputational and other risks from excessive rewards, and behavioural risks that can arise from target-based incentive plans, are identified and mitigated	<p>The majority of the Executive Directors' total remuneration is weighted towards variable pay (and provided in shares).</p> <p>The changes result in a reduced risk of excessive reward, through lower quantum for the Executive team alongside an increased discouragement of excessive risk-taking behaviour through the use of a post-employment shareholding requirement.</p> <p>The Committee also retains discretion to override formulaic outcomes for incentive plans. Malus and clawback provisions mitigate behavioural risks by enabling payments to be reduced or reclaimed in specific circumstances.</p>
<b>Predictability</b> The range of possible values of rewards to individual Directors and any other limits or discretions should be identified and explained at the time of approving the Policy	<p>The Policy sets out the maximum potential value for each element of remuneration subject to the achievement of performance conditions.</p> <p>The potential total remuneration outcomes are easily quantifiable and are set out in the illustrations provided in the Policy.</p> <p>As highlighted in Risk, the Committee has discretion to override formulaic outcomes if they were deemed to be inappropriate.</p>
<b>Proportionality</b> The link between individual awards, the delivery of strategy and the long-term performance of the Group should be clear. Outcomes should not reward poor performance	<p>Remuneration is appropriately balanced between fixed and variable pay.</p> <p>Short-term performance targets are linked to the Group's strategy and the use of deferral in the AIP ensures a link to long-term performance through this element.</p> <p>The introduction of an RSP ensures a strong link to long-term performance as executive reward is directly linked to the share price of the Company.</p>
<b>Alignment to culture</b> Incentive schemes should drive behaviours consistent with the Group's purpose, values and strategy	<p>The short-term incentive plans are measured against performance measures which underpin the Group's culture and strategy.</p> <p>The incentive structure is cascaded through the top six levels of the organisation ensuring that it drives the same behaviours across the Group.</p>

## NON-EXECUTIVE DIRECTORS' REMUNERATION

Centrica's policy on Non-Executive Directors' ('Non-Executives') fees takes into account the need to attract the high-calibre individuals required to support the delivery of our strategy.

Purpose and link to strategy	Operation and clawback	Maximum opportunity	Performance measures
<b>Chair and Non-Executive Director Fees</b>			
<p>Sufficient level to secure the services of individuals possessing the skills, knowledge and experience to support and oversee the Executive Directors in their execution of the Board's approved strategies and operational plans.</p> <p>Fees reflect market practice as well as the responsibilities and time commitment required by our Non-Executives.</p>	<p>The fee levels for the Chair are reviewed by the Remuneration Committee.</p> <p>The fee levels of the Non-Executives are reviewed by the Chair of the Board, Executive Directors and the Chief People Officer.</p> <p>Non-Executives are paid a base fee for their services. Where individuals serve as Chair of a Committee of the Board, additional fees are payable. The Senior Independent Director also receives an additional fee.</p> <p>The Company reserves the right to pay a Committee membership fee in addition to the base fees.</p>	<p>The maximum level of fees payable to Non-Executives, in aggregate, is set out in the Articles of Association.</p>	<p>Not applicable.</p>

### Recruitment policy

The policy on the recruitment of new Non-Executives during the policy period would be to apply the same remuneration elements as for the existing Non-Executives. It is not intended that variable pay, day rates or benefits in kind be offered, although in exceptional circumstances such remuneration may be required in currently unforeseen circumstances. The Committee will include in future Remuneration Reports details of the implementation of the policy as utilised during the policy period in respect of any such recruitment to the Board.

### Terms of appointment

Non-Executives, including the Chair, do not have service contracts. Their appointments are subject to Letters of Appointment and the Articles of Association. All Non-Executives are required to be re-elected at each AGM. The date of appointment and the most recent re-appointment and the length of service for each NED are shown in the table below:

Non Executive Director	Date of appointment to role	Date of current contract	Notice from the Group	Notice from the individual
Scott Wheway	1 May 2016	13 June 2023	6 months	6 months
Carol Arrowsmith	11 June 2020	13 June 2023	3 months	3 months
Amber Rudd	10 January 2022	13 June 2023	3 months	3 months
Nathan Bostock	9 May 2022	13 June 2023	3 months	3 months
CP Duggal	16 December 2022	13 June 2023	3 months	3 months
Heidi Mottram	1 January 2020	13 June 2023	3 months	3 months
Kevin O'Byrne	13 May 2019	13 June 2023	3 months	3 months
Phillippe Boisseau	1 September 2023	1 September 2023	3 months	3 months
Jo Harlow	1 December 2023	1 December 2023	3 months	3 months
Sue Whalley	1 December 2023	1 December 2023	3 months	3 months

## OTHER STATUTORY INFORMATION

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The Directors submit the Annual Report and Accounts for Centrica plc, together with the consolidated Financial Statements of the Centrica group of companies, for the year ended 31 December 2023. The Directors' Report required under the Companies Act 2006 (the 'Act') comprises this Directors' and Corporate Governance Report (pages 57 to 112) including the TCFD section for disclosure of our greenhouse gas (GHG) emissions in the Strategic Report (pages 47 to 55) and note 26 (page 189) to the Financial Statements. The index on this page includes matters contained in the Strategic Report that would otherwise be required in the Directors' Report. The management report required under Disclosure Guidance and Transparency Rule 4.1.5 R comprises the Strategic Report (pages 2 to 55) (which includes the risks relating to our business), Shareholder Information (page 243) and details of acquisitions and disposals made by the Group during the year in note 12 (page 161). The Strategic Report on pages 2 to 55 fulfils the requirements set out in Section 414 of the Act. This Directors' and Corporate Governance Report fulfils the requirements of the corporate governance statement required under Disclosure Guidance and Transparency Rule 7.2.1.

### ARTICLES OF ASSOCIATION ('ARTICLES')

The Company's Articles were adopted at the 2023 Annual General Meeting (AGM) and may only be amended by a special resolution of the shareholders. The Articles include various rules outlining the running and governing of the Company, for example rules relating to the appointment and removal of the Directors and how the Directors can use all of the Company's powers (except where the Articles or legislation says otherwise), for example in relation to issuing and buying back shares. The Articles can be found on our website [centrica.com](https://centrica.com).

### CENTRICA SHARES

#### Significant shareholdings

At 31 December 2023, Centrica had received notification of the following interests in voting rights pursuant to the Disclosure and Transparency Rules:

	Date notified	% of share capital <sup>(1)</sup>
BlackRock, Inc.	08.04.2022	5.25%
Schroders Investment Management Limited	27.04.2023	<5%
Bank of America Corporation	02.06.2023	<5%

(1) Percentages are shown as a percentage of the Company's issued share capital when the Company was notified of the change in holding. As at 14 February 2024, the Company had received no further notifications. Copies of historic notifications and any notifications received since 14 February 2024, can be found on our website at [centrica.com/rnsannouncements](https://centrica.com/rnsannouncements).

### Share capital

The Company has a single share class which is divided into ordinary shares of 6 <sup>14</sup>/<sub>81</sub> pence each. The Company was authorised at the 2023 AGM to allot up to 1,895,391,323 ordinary shares as permitted by the Act. A renewal of a similar authority will be proposed at the 2024 AGM. The Company's issued share capital as at 31 December 2023, together with details of shares issued during the year, is set out in note 25 to the Financial Statements on page 189.

### Rights attaching to shares

Each ordinary share of the Company carries one vote. Further information on the voting and other rights of shareholders is set out in the Articles and in explanatory notes which accompany notices of general meetings, all of which are available on our website [centrica.com](http://centrica.com). There are no shareholder agreements or restrictions in 2023.

### Purchase of shares

As permitted by the Articles, the Company obtained shareholder authority at the 2023 AGM to purchase its own shares up to a maximum of 568,617,397 ordinary shares of 6 <sup>14</sup>/<sub>81</sub> pence each ('shares'). The 2022-23 repurchase programme completed on 29 March 2023 having purchased 250,483,802 shares. The 2023 programme commenced on 5 April 2023 and completed on 9 October 2023 with 235,455,079 shares purchased.

As announced in the Company's Interim Results on 27 July 2023, the Company intends to repurchase a further £450m of shares to return surplus capital to shareholders. The 2023-2024 programme commenced on 10 October 2023. From 10 October 2023 to 31 December 2023, 72,049,447 shares were purchased (of which 70,465,051 shares had settled and were held as treasury shares). The shares purchased during this period represent approximately 1.2% of the issued ordinary share capital at an aggregate cost of approximately £108m (£106m in respect of settled shares).

The total number of shares purchased during the financial year was 512,273,445, which represents approximately 8.7% of the Company's issued share capital, at an aggregate cost of approximately £615m. Of the total number of shares purchased during the year, 66,123,754 were used for share schemes with the rest held as treasury shares. As at 31 December 2023, there were 490,250,737 shares held in the treasury shares account representing approximately 8.3% of the Company's issued share capital. Dividends are waived in respect of shares held in the treasury share account. Further details are set out in note S4 to the Financial Statements on page 212.

### Shares held in employee benefit trusts

The Centrica plc Employee Benefit Trust (EBT) is used to purchase shares on behalf of the Company for the benefit of employees, in connection with the Restricted Share Scheme. The Centrica plc Share Incentive Plan Trust (SIP Trust) is used to purchase shares on behalf of the Company for the benefit of employees, in connection with the SIP. Both the Trustees of the EBT and the SIP Trust, in accordance with best practice, have agreed not to vote any unallocated shares held in the EBT or SIP Trust at any general meeting and dividends are waived in respect of these shares. In respect of allocated shares in both the EBT and the SIP Trust, the Trustees shall vote in accordance with participants' instructions. In the absence of any instruction, the Trustees shall not vote.

### EMPLOYEE PARTICIPATION IN SHARE SCHEMES

The Company's all-employee share schemes are a long-established and successful part of our total reward package, encouraging the involvement of UK employees in the Company's performance through employee share ownership. We offer a Share Incentive Plan (SIP) in the UK, with a take-up of 28%. In 2023, all eligible employees globally were awarded a Profit Share award under the SIP.

## OTHER INFORMATION

### Directors' indemnities and insurance

In accordance with the Articles, the Company has granted a deed of indemnity, to the extent permitted by law, to the Directors of the Company. Qualifying third-party indemnity provisions (as defined by Section 234 of the Act) were in force during the year ended 31 December 2023 and remain in force. The Company also maintains directors' and officers' liability insurance for its Directors and officers. The Company has granted qualifying pension scheme indemnities in the form permitted by the Companies Act 2006 to the directors of Centrica Pension Plan Trustees Limited, Centrica Engineers Pension Trustees Limited and Centrica Pension Trustees Limited, that act as trustees of the Company's UK pension schemes.

### Political donations

The Company operates on a politically neutral basis. No political donations were made by the Group for political purposes during the year.

### Payments policy

We recognise the importance of good supplier relationships to the overall success of our business. We manage dealings with suppliers in a fair, consistent and transparent manner.

### Significant agreements – change of control

There are a number of agreements to which the Company is party that take effect, alter or terminate upon a change of control of the Company following a takeover bid.

The significant agreements of this kind include:

- Those that relate to 2009, when the Company entered into certain transactions with EDF Group in relation to an investment in the former British Energy Group, which owned and operated a fleet of nuclear power stations in the UK. The transactions include rights for EDF Group and the Company to offtake power from these nuclear power stations. As part of the arrangements, on a change of control of the Company, the Group loses its right to participate on the boards of the companies in which it has invested. Furthermore, where the acquirer is not located in certain specified countries, EDF Group is able to require Centrica to sell out its investments to EDF Group; and
- Committed facility agreements, subordinated fixed rate notes and bonds issued under the Company's medium-term note programme.

The Remuneration Policy sets out on page 107 details on the treatment of the Executive Directors' pay arrangements, including the treatment of share schemes in the event of a change of control.

### Disclosures required under Listing Rule 9.8.4 R

The Company is required to disclose certain information under Listing Rule 9.8.4 R in the Directors' Report or advise where such relevant information is contained. All such disclosures are included in this Directors' and Corporate Governance Report, other than the following sections of the 2023 Annual Report and Accounts:

Information	Location in Annual Report	Page(s)
Capitalised interest (borrowing costs)	Financial Statements	156, note 8
Details of long-term incentive schemes	Remuneration Report	85 and 92

## DIRECTORS' STATEMENTS

Accounting standards require that Directors satisfy themselves that it is reasonable for them to conclude whether it is appropriate to prepare the Financial Statements on a going concern basis. The Group's business activities, together with factors that are likely to affect its future development and position, are set out in the Group Chief Executive's Statement on pages 6 to 8 and the Business Reviews on pages 23 to 25. After making enquiries, the Board has a reasonable expectation that Centrica and the Group as a whole have adequate resources to continue in operational existence and meet their liabilities as they fall due, for the foreseeable future.

For this reason, the Board continues to adopt the going concern basis in preparing the Financial Statements.

Additionally, the Directors' Viability Disclosure, which assesses the prospects for the Group over a longer period than the 12 months required for the going concern assessment, is set out on pages 35 to 37. Further details of the Group's liquidity position are provided in notes 24 and S3 to the Financial Statements on pages 185 to 188 and 204 to 210.

### *Directors' responsibilities*

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 are required to prepare the Group financial statements in accordance with international accounting standards, in conformity with the requirements of the Companies Act 2006. The Directors have also chosen to prepare the parent company financial statements in accordance with Financial Reporting Standard 101 'Reduced Disclosure Framework'.

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 the parent company financial statements, the Directors are required to:

- Select suitable accounting policies and then apply them consistently;
- Make judgements and accounting estimates that are reasonable and prudent;
- State whether Financial Reporting Standard 101 'Reduced Disclosure Framework' has been followed, subject to any material departures disclosed and explained in the Financial Statements; and
- Prepare the Financial Statements on the going concern basis unless it is inappropriate to presume that the Company will continue in business.

In preparing the Group Financial Statements, International Accounting Standard 1 requires that Directors:

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

## DIRECTORS' RESPONSIBILITY STATEMENT

Each of the Directors confirm that to the best of their knowledge:

- The Financial Statements, prepared in accordance with the relevant financial reporting framework, give a true and fair view of the assets, liabilities, financial position and profit or loss of the Company and the undertakings included in the consolidation taken as a whole;
- The Strategic Report includes a fair review of the development and performance of the business and the position of the Company and the undertakings included in the consolidation taken as a whole, together with a description of the Principal Risks and Uncertainties that they face; and
- The Annual Report and Financial Statements, taken as a whole, are fair, balanced and understandable and provide the information necessary for shareholders to assess the Company's position and performance, business model and strategy.

The names of the Directors and their functions are listed on pages 59 to 62.

### *Information to the independent auditors*

The Directors who held office at the date of this Report confirm that:

- There is no relevant audit information of which Deloitte LLP are unaware; and
- They have taken all the 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 auditors are aware of that information.

This confirmation is given and should be interpreted in accordance with the provisions of Section 418 of the Companies Act 2006.

Deloitte LLP have expressed their willingness to continue in office as auditors and a resolution to re-appoint them will be proposed at the forthcoming AGM.

This report, including the Directors' Responsibility Statement, was approved by the Board of Directors on 14 February 2024 and is signed on its behalf by:

By order of the Board

**Raj Roy**

Group General Counsel & Company Secretary

14 February 2024





# Financial Statements

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# INDEPENDENT AUDITOR'S REPORT

## REPORT ON THE AUDIT OF THE FINANCIAL STATEMENTS

### 1. Opinion

In our opinion:

- the financial statements of Centrica plc (the 'Company') and its subsidiaries (the 'Group') give a true and fair view of the state of the Group's and of the Company's affairs as at 31 December 2023 and of the Group's profit for the year then ended;
- the Group financial statements have been properly prepared in accordance with United Kingdom adopted international accounting standards;
- the Company financial statements have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice, including Financial Reporting Standard 101 'Reduced Disclosure Framework'; and
- the financial statements have been prepared in accordance with the requirements of the Companies Act 2006.

We have audited the financial statements which comprise:

- the Group Income Statement;
- the Group Statement of Comprehensive Income;
- the Group Statement of Changes in Equity;
- the Group Balance Sheet;
- the Group Cash Flow Statement;
- the related notes to the Group financial statements 1 to 26;
- the supplementary notes S1 to S11 of the Group financial statements;
- the Company Statement of Changes in Equity;
- the Company Balance Sheet; and
- the notes I to XVI to the Company financial statements.

The financial reporting framework that has been applied in the preparation of the Group financial statements is applicable law and United Kingdom adopted international accounting standards. The financial reporting framework that has been applied in the preparation of the Company financial statements is applicable law and United Kingdom Accounting Standards, including FRS 101 'Reduced Disclosure Framework' (United Kingdom Generally Accepted Accounting Practice).

### 2. Basis for opinion

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

We are independent of the Group and the Company in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the Financial Reporting Council's (the 'FRC's') Ethical Standard as applied to listed public interest entities, and we have fulfilled our other ethical responsibilities in accordance with these requirements. The non-audit services provided to the Group for the year are disclosed in note S9 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 Company.

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

### 3. Summary of our audit approach

#### Key audit matters

The key audit matters identified in the current year were:

- the valuation of residential energy supply billed debt provisions within British Gas;
- the accuracy and completeness of revenue arising from British Gas's new billing platform, ENSEK, including manual adjustments made in respect of revenue recognised through this platform;
- impairment considerations in respect of the Group's investment in its Nuclear associate;
- accounting for the Electricity Generator Levy ("EGL"); and
- the valuation of complex energy derivative contracts.

Other than as explained below, these key audit matters are consistent with those identified in the prior year:

- In the prior year, we noted a key audit matter in respect of energy supply arrangements, which covered a number of judgements associated with the supply of energy including the billed debt provision, accounting for customer support schemes and ENSEK revenue. This year the judgement in respect of government support schemes has reduced following the wind-down of those schemes, leading to this area no longer being considered a key audit matter, and the other two areas have been reported on as separate key audit matters this year. The Group has continued to migrate customers onto ENSEK and ENSEK is now a bigger proportion of overall Group revenue which has led to increased risk.
- A new key audit matter in the year relates to accounting for the Electricity Generator Levy ("EGL"). At the end of 2022, the Government announced the implementation of the temporary levy applicable to receipts that the Group has realised from electricity generation in the UK from nuclear and renewable sources in the period from 1 January 2023 to 31 March 2028.

There is significant uncertainty in how the legislation should be interpreted in relation to the Group's significant minority shareholder off-take arrangement with its Nuclear associate. Payment has been made on account to HMRC for the maximum potential cost however the Group has also made considerations as to whether this could constitute a tax deposit asset. Given the complexity of the legislation, the impact on the Group and the estimation uncertainty in relation to the amount of levy the Group owes for 2023 and whether a tax deposit asset should be recorded for the recovery of payments on account made to HMRC, we identified a key audit matter in respect of the accounting for the EGL.

Whilst the commodity price environment has remained volatile in 2023, commodity prices are lower than in 2022. Centrica's higher liquidity headroom, reduced volatility and management's active liquidity risk management has reduced margin call risk significantly. Hence the audit of the going concern assumption is no longer identified as a key audit matter. Section 4 of our report describes the specific procedures performed to reach our conclusions related to the going concern basis of accounting in the preparation of the Group financial statements.

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 used for the audit of the Group financial statements is £135m (2022: £158m), determined based on adjusted profit before tax. Adjusted profit before tax is the pre-tax profit adjusted for the impact of exceptional items and certain remeasurements. The decrease in materiality in 2023 reflects the decrease in commodity prices contributing to lower adjusted profit in the Upstream and Trading segments, partially offset by profit in the Energy Supply segments which is higher than in prior year.

#### Scoping

All components of the Group were subject to a full-scope audit other than New Energy Services (within the Centrica Business Solutions segment) which continues to be subject to review procedures and the components presented below which were subject to specified audit procedures:

- Centrica Business Solutions Energy Supply;
- Bord Gáis;
- British Gas Services and Solutions segment; and
- Centrica Energy Storage+ (within the Upstream segment).

Component materiality levels were set based on the size and audit risk associated with each component on a range of applicable metrics. Our risk assessment procedures resulted in a reduction in the group reporting scope for Centrica Business Solutions Energy Supply from a full-scope audit in the prior year to an audit of specified account balances in the current year.

In the current year the audit team has defined Head office as a separate component of the Group. The business activities of the Head office component are materially in line with those of the Company and this component has been subject to a full-scope audit in line with the audit of the Company.

#### Significant changes in our approach

Other than the changes in key audit matters and scope discussed above, there were no other significant changes in our audit approach when compared to 2022.

#### 4. Conclusions relating to going concern

In auditing the financial statements, we have concluded that the directors' use of the going concern basis of accounting in the preparation of the financial statements is appropriate. Our evaluation of the directors' assessment of the Group's and Company's ability to continue to adopt the going concern basis of accounting included:

- Assessing the Group's future cash flow forecasts, by considering actual cash flow performance in 2023, the current commodity price environment, historical accuracy of the Group forecasts and key assumptions underpinning management's going concern assessment;
- Agreeing the level of committed undrawn facilities of £3.8bn (2022: £4.0bn) to signed facility agreements, along with support from our treasury specialists, where relevant, to review the key terms of new facility agreements;
- We obtained an understanding of the relevant controls over the going concern and viability assessment.
- Testing the clerical accuracy of the model used to prepare the cash flow forecasts and assessing the sophistication of the model used to prepare the forecasts;
- Assessing whether management's cash flows consider the impact of Group's planned investment strategy announced in July 2023;
- Assessing the sensitivities run by the directors and the linkage of these sensitivities to the Group's principal risks disclosed on pages 30 to 34 of the Annual Report & Accounts. These sensitivities include the impact of margin cash volatility, a reduction in the Group's credit rating, a reduction in commodity prices and Upstream asset underperformance, a reduction in commodity trading performance, or the risk of adverse weather and worsening macroeconomic factors and the resultant impact on cashflows;
- Assessing the mitigating actions that could be taken by the directors to maximise liquidity headroom including a reduction in capital expenditure and a reduction in discretionary spend; and
- Assessing the appropriateness of management's going concern disclosures in light of the above assessment.

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 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.

## 5. Key audit matters

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

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

### 5.1 The valuation of residential energy supply billed debt provisions within British Gas <|>

#### Key audit matter description

The Group supplies gas and power to residential customers in the UK through its British Gas Energy segment. Of the Group total of £2,991 million (2022: £2,207 million) billed trade receivables, the British Gas Energy reporting segment contributes £2,380 million (2022: £1,531 million). British Gas Energy includes residential and small business customers.

The Group's energy supply business has seen changes as a result of current macroeconomic factors, restrictions on debt recovery actions and reduced continued pressure on customer finances throughout 2023. As a result, there continues to be increased judgement in determining the recoverability of customer debt, which raises the risk of material misstatement in determining the billed debt provision at 31 December 2023. Credit losses of £1,240m (2022: £822m) have been recognised on billed trade receivables of which £764m (2022: £501m) relate to UK residential customers, including additional provisions to reflect changes in the macroeconomic environment as a result of the cost-of-living crisis. Further details on billed debt provisions relating to trade receivables can be found in notes 3(b) and 17. These matters are also considered by the Audit and Risk Committee in its report on pages 75 to 78.

To determine the billed debt provision, certain key assumptions are made. These include the methodology used to assess the impact of macroeconomic factors on future cash collection. The need to make significant additional provisions ("additional macroeconomic" provision) beyond those provisions that are indicated by past collection performance ("business-as-usual" provision) increases the level of judgement and accordingly risk of material misstatement. We have therefore also identified this as a fraud risk.

In the current year the "business-as-usual" provision has increased as a result of declines in actual cash collection rates during 2023, triggered by the ongoing cost-of living crisis now being reflected in the backwards looking calculation. Consequently, the "additional macroeconomic" provision for residential customers has reduced as a percentage of billed debt in the current year from 3.9% to 3.8%.

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

- We tested and relied upon controls relevant to the calculation of billed debt provisions, where applicable.
- With involvement of our IT and data analytics specialists, we tested the accuracy of the underlying debt books, including the age of debt, and recalculated management's provision rates based on historical cash collection.
- We assessed how amounts receivable at 31 December 2022 were collected over 2023 in order to estimate an expected profile of the recovery of 31 December 2023 balances, on a "business as usual" basis. We applied this profile to 31 December 2023 debt and then assessed:
  - the impact and sensitivity of this profile based on external forecasts such as household disposable income and inflation forecasts and the impact on billed debt provisions as the economic situation changes; and
  - management's accounting for the impact of these changes in the billed debt provision estimate.
- We considered the extent to which the provision on a "business as usual" basis factors in the continuing uncertainty in the current macroeconomic environment.
- We obtained an understanding of the relevant controls and challenged the methodology over the determination and recording of the "additional macroeconomic" provision, with reference to available third party analysis.
- We performed procedures to challenge the completeness and the appropriateness of the "additional macroeconomic" provision by evaluating the reasonableness of management's assumptions and economic data (both forecast and historical) used to derive this.
- We assessed the appropriateness of the disclosures provided relating to this key source of estimation uncertainty, and the range of sensitivities disclosed.

#### Key observations

We are satisfied that the billed debt provisions including the additional provisions to reflect macroeconomic uncertainty on residential customers, and the associated methodology to calculate this adjustment, are appropriate. We consider the "additional macroeconomic" provision recognised beyond "business-as-usual" provisions to be appropriate and close to the mid-point of a calculated reasonable range, which is consistent with the prior year.



## 5.2. The accuracy and completeness of revenue arising from British Gas's new billing platform, ENSEK, including manual adjustments made in respect of revenue recognised through this platform

### Key audit matter description

In 2023, British Gas Energy generated revenues of £17.7bn (2022: £13.0bn) with 5.4m (2022: 2m) customers having been migrated to the new ENSEK platform by the year end, as seen on page 90. As at 31 December 2023 a significant proportion of this revenue was therefore recognised from customers on this platform. Revenue from customers on the ENSEK platform is presented within the overall revenue figure for British Gas Energy in note 4.

These matters are also considered by the Audit and Risk Committee in its report on pages 75 to 78.

ENSEK was adopted in order to improve customer service and reduce cost to serve, hence the consumption mechanism is deliberately more simplistic in ENSEK when compared to the one in the legacy SAP system. Whilst SAP applies sophisticated bias correction factors, reflecting machine learning as a result of comparing estimated to actual consumption, when it comes to the estimation of unbilled revenue, ENSEK relies more on industry data flows which is a more common approach taken by other suppliers in the market. Industry data flows are based on historical information however and experience delays from data collection to publication. Judgemental manual adjustments to estimated unbilled revenue are therefore required in ENSEK to allow for the most recent consumption trends experienced.

ENSEK is a Software-as-a-Service ("SaaS") arrangement and the system is controlled by, and continues to be developed by a third party. British Gas Energy Supply is therefore dependent on the efficacy of the general IT controls, application controls, and other controls that the third party operates on its behalf. As highlighted in the Audit and Risk Committee's report on page 73, the ENSEK system is still in development and evolving alongside the migration process and hence these controls are evolving and developing and cannot be tested directly by British Gas due to the nature of the SaaS arrangement. Given the significant quantum of revenue, as well as the developing ENSEK control environments and the differences in the process between the unbilled revenue recognition for customers on the legacy SAP system and the ENSEK system, there remains a reliance on manual adjustments to appropriately record ENSEK-driven unbilled revenue. This increases the risk of material misstatement, and we have additionally identified this as a potential fraud risk given the extent of judgement applied in determining the appropriate manual adjustments.

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

- We obtained an understanding of the relevant controls over the recognition of revenue from customers within the ENSEK system, both in the Centrica and ENSEK environment, including those regarding the completeness and accuracy of consumption data within the ENSEK environment and the manual adjustment to ENSEK estimated revenue. We did not plan to place reliance on these controls due to the maturity of the control environment, as detailed by the Audit and Risk Committee in its report on pages 75 to 78.
- Considering the developing control environment, we performed test of details over the billed energy supply volume and pricing revenue data in the ENSEK platform, agreeing amounts back to contractual tariffs and actual or estimated meter readings.
- We calculated an expectation of the billed energy supply revenue recognised through the ENSEK environment, comparing differences to predetermined thresholds and tested the completeness and accuracy of the key inputs to the expectation.
- We worked with our data analytics specialists to recalculate the unbilled revenue recognised through the ENSEK platform and to test the accuracy and completeness of the source data used in the recalculation, including that migrated from the legacy SAP systems.
- We challenged the methodology and key inputs used to calculate the manual adjustment to billed and unbilled revenue in ENSEK. We have also tested the arithmetical accuracy of the model computing the revenue derecognition adjustment.

### Key observations

Given we did not rely on ENSEK controls due to their developing nature, we increased the level of substantive testing performed to respond to the increased level of risk. Through the performance of our fully substantive procedures, we are satisfied that the accuracy and completeness of the Group's energy supply revenue recognised through the ENSEK platform, including the methodology to generate unbilled revenue and manual derecognition adjustment is appropriate.

Management has had in place throughout the year a Finance Systems Roadmap, which includes plans in relation to the development of an established control environment in ENSEK. Progress against these plans is reported to the Audit and Risk Committee at regular intervals. We have provided feedback to management to further enhance these plans, including: negotiating the right to perform, directly or indirectly, testing of the ENSEK system to gain assurance over the system controls; and formalising management's review controls to provide sufficient evidence of effective operation.

### 5.3. Impairment considerations in respect of the Group's investment in its Nuclear associate <D>

#### Key audit matter description

Power prices have continued to reduce from the high levels in 2022, resulting in a significant decrease in the expected cash flows from the Nuclear investment. The decrease in future forecast cashflows in the assessment of the value of the investment in Nuclear was offset by the extension of station lives pertaining to Heysham 1 and Hartlepool, both which have been extended to operate to March 2026, which represents a two year extension. The total pre-impairment book value of the investment in Nuclear was £1,452m (2022: £1,560m) with a pre-tax impairment of £549m (2022: pre-tax impairment reversal of £195m) recorded at 31 December 2023.

The details on the key sources of estimation uncertainty underpinning the impairment for these assets can be found in note 3(b). Details on the sensitivity of the above impairment reviews to changes in key assumptions such as power prices are disclosed in note 7(c). This includes sensitivities associated with the Group's commodity price curves if these curves were aligned with the Net Zero scenario ('Net Zero curve') which assumes governmental policies are put in place to achieve the temperature and net zero goals by 2050. The matter is also considered by the Audit and Risk Committee in its report on page 77.

Given the significant impairment in the investment in Nuclear in the current year, we identified a key audit matter around the valuation of these assets for impairment testing purposes. The underlying impairment cost has been recorded within the exceptional items and certain re-measurements column of the Group income statement.

The key assumptions and judgements underpinning the impairment testing of the investment in Nuclear include:

- forecast future commodity prices, including the likely impact of climate change and international governmental intervention to reduce CO<sub>2</sub> emissions on those prices;
- forecast future generation profiles of the assets;
- forecast future cash flows for the assets;
- useful life estimates;
- impact of the Electricity Generator Levy on the future forecast of cashflows; and
- the discount rate.

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

##### **Procedures on the overall impairment review:**

- We understood management's process for identifying indicators of impairment and impairment costs and for performing their impairment assessment.
- We obtained an understanding of the relevant controls relating to the asset impairment models, the underlying forecasting process and the impairment reviews performed.
- We evaluated and challenged the key assumptions and inputs into the impairment models, which included performing sensitivity analysis, to evaluate the impact of selecting alternative assumptions. We evaluated changes in key assumptions and assessed retrospectively whether prior year assumptions were appropriate.
- We involved our valuation specialists to evaluate management's discount rates, which involved benchmarking against available market views and analysis.
- We tested the arithmetical accuracy of the impairment models.
- We assessed the appropriateness of management's disclosures of the key assumptions and sensitivities including the presentation of the impairment cost within the exceptional items and certain re-measurements column of the Group income statement.

##### **Procedures relating to forecast future cash flows:**

- We assessed whether forecast cash flows were consistent with the operator approved forecasts, where relevant, and analysed reasonably possible downside sensitivities.
- We assessed the reasonableness of the plants' forecast outage rates by looking at recent historical outage rates and sensitised the impact of a change in assumptions on the overall impairment model.
- We assessed the reasonableness of the life extension at Heysham 1 and Hartlepool by assessing management's intention and rationale for the extension. We further inspected evidence from the station operators, EDF, as well as information available in the public domain.
- We evaluated the Group's estimation of future commodity prices, benchmarked against externally available future commodity price estimates and performed sensitivity analysis with alternative future prices. This includes a scenario which assumes governmental policies are put in place to achieve the temperature and net zero goals by 2050. We recalculated management's disclosures relating to the sensitivity of the Group's impairment tests to reduced commodity prices, including the Net Zero curves.
- We worked with our tax specialist to conclude on the reasonableness of implementation of the Electricity Generator Levy and as a result, aid our subsequent impact assessment on the forecast future cash outflows.

#### Key observations

We are satisfied that the key assumptions used to determine the value in use of the Group's investment in Nuclear, including production and availability forecasts, are appropriate. We are also satisfied that the Group's discount rate assumptions are based on acceptable valuation methodologies.

The Group's future commodity price estimates fall within the middle of the acceptable range of external sources, which is consistent with the prior year. We observed that the baseload price forecasts from acceptable external sources were generally higher than the assumed prices in the net zero scenario. We consider the sensitivity disclosures related to the impact of future commodity price estimates arising from climate change on the Group's impairment reviews to be acceptable.

We are satisfied that the impairment cost recognised by the Group for the year is appropriate and we found the presentation of this cost under the exceptional items and certain re-measurements column of the Group income statement to be consistent with Group policy.

## 5.4. Accounting for the Electricity Generator Levy (“EGL”) !

### Key audit matter description

At the end of 2022, the UK Government announced the implementation of the EGL, a new, temporary levy applicable to receipts that the Group has realised from electricity generation in the UK from nuclear and renewable sources in the period from 1 January 2023 to 31 March 2028. The levy applies a 45% charge on receipts generated from the production of wholesale electricity sold at an average price in excess of £75/Mwh, exceeding an annual threshold of £10m. It applies to generators whose generation exceeds 50GWh annually, as well as off-take arrangements with significant minority shareholders in such generators.

During the year, the Group’s share of its Nuclear associate’s EGL payments amounted to £41m (recorded within the share of profit after tax from associates). The Group has also made payments on account to HMRC of £285m in relation to its estimated EGL liabilities for its minority shareholder Nuclear offtake arrangements during the December 2023 financial year and this expense has been recorded within the income statement, as part of Cost of Sales.

The EGL legislation is new and its interpretation and application is unclear in respect of the Group’s minority shareholder Nuclear offtake arrangements. While the Group has made payments on account to HMRC totalling £285m, were it considered probable that these payments on account are recoverable, then (up to) the £285m could be recognised as a tax deposit asset on the balance sheet rather than as a cost within the income statement, in accordance with the 2019 IFRIC Agenda decision on Deposits relating to taxes other than income taxes. However, no tax deposit asset has been recorded because it is not deemed probable, as at the balance sheet date, that this will ultimately be recoverable (or used to settle another tax liability).

Given the complexity of the legislation and the impact on the Group, we identified a key audit matter in respect of the accounting for the EGL, principally whether the amounts due should be recorded within the income statement or as a tax deposit on the balance sheet. The Group has recognised the full charge in the income statement. Further detail can be found in note 3(b). The Audit & Risk Committee also consider this matter on page 75.

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

- We gained an understanding of the Group’s process and judgements applied in accounting for and recognising EGL within the financial statements and evaluated the objectivity and competence of management’s experts and the appropriateness of the underlying source documents relied upon.
- We gained an understanding of the relevant controls in relation to review of the judgements formed by management.
- We tested EGL payments on account to HMRC in the year to supporting third party evidence.
- We worked with our tax specialists to assess the appropriate interpretation of the EGL legislation in addition to reviewing legal advice received by the Group. We assessed the accounting for the EGL with a particular focus on whether any of the amount of £285m paid in December 2023 should be recorded in the income statement or on the balance sheet as a tax asset. We evaluated the appropriateness of management’s conclusions, considering the identified sources of estimation uncertainty, the opinions of management’s experts and the evaluation of reasonability performed by our tax specialists.
- We considered the appropriateness of the disclosures within the financial statements on the accounting position adopted and the judgements involved.
- We considered the nature and impact of the contradictory audit evidence on management’s assessment.

### Key observations

We are satisfied that that the EGL expenditure has been appropriately presented within the Group income statement, that the non-recognition of a tax deposit asset at this stage is appropriate and that the disclosures within the financial statements relating to EGL are appropriate.

## 5.5. The valuation of complex energy derivative contracts <D>

### Key audit matter description

Note 7 of the financial statements discloses a re-measurements profit of £3,573m for the year (2022: loss of £5,160m) on energy derivative contracts. Details on the Group's energy contracts can be found in note 19 and note S3(a). The key sources of estimation uncertainty associated with energy contracts can be found in note 3(b) with further details on the presentation of certain re-measurement arising on derivatives disclosed in note 2(b). The matter is also considered by the Audit and Risk Committee in its report on page 76.

The Group undertakes proprietary trading activities and enters into forward commodity contracts to optimise the value of its production and generation assets, as well as to meet the future needs of its customers. Certain of these arrangements are accounted for as derivative financial instruments and are recorded at fair value. We identified a key audit matter related to the valuation of complex derivative trades performed internally by management's valuation specialists. Valuing complex energy derivative contracts requires judgement, particularly where there is modelling complexity and bespoke contractual terms (level 3 in accordance with IFRS 13 'Fair Value Measurement'). Given the judgement involved and the potential for management bias in the modelling, we identified a potential risk of fraud.

Level 3 complex energy derivative financial assets of £156m (2022: £592m) were recognised at 31 December 2023 and £272m (2022: £850m) level 3 complex energy derivative financial liabilities. Although the value of complex energy derivative contracts decreased during the year due to the continued reduction in commodity prices, these continue to be a significant balance within the financial statements. Given the continued complexity and heightened level of risk, the valuation of these contracts is a key audit matter.

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

- We obtained an understanding of the Group's processes, including the user access and segregation of duties controls, for authorising and recording commodity trades.
- We obtained an understanding of management's process and the relevant controls relating to the valuation of complex energy derivatives within the Group's Centrica Energy business. We were unable to place reliance on these controls due to findings relating to user access and the oversight of service organisations, as set out in the Audit and Risk Committee report on page 73. We increased the extent of our substantive work to sample further valuations to mitigate the risk.
- We assessed the competence, capability and objectivity of management's own internal valuation specialists.
- We worked with our financial instrument specialists to assess the value of material complex trades, either by creating an independent valuation or by testing how management developed their estimate. Particular emphasis was made to assess any new material models and material changes to relevant models including additional procedures to assess the reasonableness and appropriateness of these.
- We assessed the movement in the fair values based on the change in significant inputs, while testing these inputs, where relevant.
- We considered the appropriateness of the relevant complex derivative energy contracts disclosures, including the key source of estimation uncertainty disclosures.

### Key observations

We are satisfied that complex derivative energy contracts are valued on an appropriate basis.

We have provided feedback to management with respect to control improvements in respect of user access and oversight of service organisations.

## 6. Our application of materiality

### 6.1 Materiality

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

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

	Group financial statements	Company financial statements
<b>Materiality</b>	£135 million (2022: £158 million)	£54 million (2022: £150 million)
<b>Basis for determining materiality</b>	We determined materiality on the basis of 5% (2022: 5%) of adjusted profit before tax. Adjusted profit before tax is the pre-tax profit adjusted for the impact of exceptional items and certain remeasurements.	We determined materiality based on 3.0% (2022: 3.0%) of net assets but capped materiality at 40% (2022: 95%) of the Group materiality. Our final materiality constituted 0.7% of net assets (2022: 2.8% of net assets).
<b>Rationale for the benchmark applied</b>	<p>We considered adjusted profit before tax to be the most appropriate benchmark to measure the performance of the Group. We consider it appropriate to adjust for exceptional items and remeasurements as these items are volatile and not reflective of the underlying performance of the Group.</p> <p>In determining materiality, we also considered a range of alternative benchmarks. The materiality of £135m represents 0.4% (2022: 0.5%) of business performance revenue, 0.6% (2022: 0.5%) of total assets, and 6.1% (2022: 6.4%) of free cash flow. Given that the determined materiality was within the range of those alternative benchmarks, we have concluded it to be appropriate.</p> <p>We considered our established materiality against the final audit results and considered that it remained appropriate in the context of the financial statements as a whole.</p>	We considered net assets to be the most appropriate benchmark given the primary purpose of the Company is a holding company. We reduced the cap on Group materiality percentage in the current year to align to the group audit strategy more clearly.

### 6.2. Performance materiality

We set performance materiality at a level lower than materiality to reduce the probability that, in aggregate, uncorrected and undetected misstatements exceed the materiality for the financial statements as a whole.

	Group financial statements	Company financial statements
<b>Performance materiality</b>	70% (2022: 70%) of Group materiality	70% (2022: 70%) of Company materiality
<b>Basis and rationale for determining performance materiality</b>	<p>The factors we considered in setting performance materiality at 70% of Group and Company materiality included:</p> <ul style="list-style-type: none"><li>• The overall quality of the control environment and that we were able to rely on controls in certain of the Group's businesses.</li><li>• The nature, size and number of uncorrected misstatements identified in previous audits and management's willingness to correct those adjustments.</li></ul>	

### 6.3. Error reporting threshold

The decrease in materiality has led to a decrease in the error reporting threshold, which stands at £6.8m (2022: £7.9m). We have however, at the Audit and Risk Committee's request continued to report individual audit differences in excess of £5m (2022: £5m), as well as differences below that threshold that, in our view, warranted reporting on qualitative grounds. We also reported to the Audit and Risk Committee on disclosure matters that we identified when assessing the overall presentation of the financial statements.



## 7. An overview of the scope of our audit

### 7.1 Identification and scoping of components

The Group is organised into segments as outlined in note 4. These segments contain a number of individual businesses, and we use these businesses as the basis for identifying and scoping components. In the current year, the Head Office was identified as a component of the Group given the significant contribution to the Group's adjusted profit before tax. Other changes in scoping have been outlined in section 3 above.

Our audit was scoped by obtaining an understanding of the Group and its environment, including Group-wide controls, and assessing the risks of material misstatement at the Group level. Having performed this assessment, we established the following audit scope for each of the Group's businesses.

Segment	Business	Audit scope
British Gas Energy	British Gas Energy	Full scope audit
British Gas Services and Solutions	British Gas Services and Solutions	Audit of specified account balances
Bord Gáis Energy	Bord Gáis Energy	Audit of specified account balances
Centrica Energy (formerly EM&T)	Centrica Energy (London) (formerly EM&T (London))	Full scope audit
	Centrica Energy (Aalborg) (formerly EM&T (Aalborg))	Full scope audit
Centrica Business Solutions	New Energy Services	Review procedures
	Energy supply	Audit of specified account balances
Upstream	Nuclear	Full scope audit
	Spirit Energy	Full scope audit
	Centrica Energy Storage+ (formerly Centrica Storage)	Audit of specified account balances
Head office	Central functions	Full scope audit

This scoping resulted in 99% of Group revenue, 98% of Group adjusted profit before tax and 88% of Group shareholders' equity being subject to audit excluding those where we performed review procedures. The equivalent figures in 2022 were 99% of Group revenue, 100% of the adjusted profit before tax and 89% of shareholders' equity.

### 7.2 Our consideration of the control environment

Our audit strategy is to rely on controls over certain processes within the more established businesses of the Group. These included revenue within British Gas Services and Solutions, Bord Gáis and within the legacy SAP system in British Gas Energy and Centrica Business Solutions Energy supply; billed debt provision in British Gas Energy; and the Group's central expenditure processes. The use of data analytics in Centrica Energy (London) means the need for controls reliance is reduced as we are able to test close to 100% of all trades.

Given the importance of IT to the recording of financial information and transactions, we tested the general IT controls, and placed reliance on them in certain areas. The key IT systems we included in scope include the Group's SAP general ledger and consolidation financial reporting systems, the SAP and ENSEK revenue reporting systems in British Gas Energy and CBS Energy, the SAP reporting system in Bord Gáis Energy, the Endur trading system in Centrica Energy, and Workday which is used to manage the Group's payroll processes.

The control environment within the more established processes is regarded as mature and we are generally able to place reliance on these controls. The control environment for the ENSEK platform has continued to evolve in 2023, and therefore as described in section 5.2, we did not plan to place reliance on these controls this year.

Across some of Group's systems we had findings in relation to the Group's approach to the oversight of service organisations and user access controls, including in respect of the Centrica Energy complex valuations (section 5.5) and the Group's central payroll system. As a result, we performed mitigating procedures and extended our substantive testing. We have provided feedback to management in relation to their improvement of the oversight of service organisations and to enhance the robustness of user access controls.

### 7.3 Our consideration of climate-related risks

Management performed an assessment of the resilience of their annual strategic and financial planning process in the face of climate-related issues. This included assessing the potential impact of the material risks and opportunities and its Climate Transition Plan on both the current balance sheet position and its accounting policies.

Management identified higher risks of material misstatement on the impact of the Net Zero price scenario on the non-current long-life asset Upstream impairment tests. In response, management performed further sensitivities based on forecast prices aligned to net zero price curves. The net zero price curves for E&P and Nuclear consider prices from third party experts in forecast curves.

We reviewed management's climate change risk assessment and evaluated the completeness of the identified risks and impact on the financial statements. We also considered climate change within our audit risk assessment process in conjunction with our assessment of the balances.

To mitigate the Net Zero price scenario risk for the Exploration and Production (E&P) assets and the Group's investment in Nuclear, we performed the following procedures:

- Assessed the reasonableness of management's net zero prices by comparing these to credible third-party net zero price curves.
- Evaluated the price providers data utilised by the Group to assess whether net zero price curves are appropriate.
- Verified the mathematical accuracy of the conversion to Nominal 2023 prices by adjusting the raw external price forecast data for inflation.

With the involvement of our climate specialists, we:

- evaluated the financial statement disclosures to assess whether climate risk assumptions underpinning specific account balances were appropriately disclosed; and
- read the climate change-related statements (as disclosed in the 'People and Planet' section in the Strategic Report) and considered whether the information included in the narrative reporting is materially consistent with the financial statements and our knowledge obtained in the audit.

#### **7.4 Working with other auditors**

All components except for Bord Gáis Energy and Aalborg are audited from the UK and we oversee all component audits through regular meetings and direct supervision. Whilst we visited Aalborg during the year, the oversight procedures on Bord Gáis were performed virtually.

The Group audit team was directly involved in overseeing the component audit planning and execution, through frequent conversations, virtual and in person meetings, debate, challenge and review of reporting and underlying work papers. We held a two-day planning meeting with all component teams and specialists to discuss audit execution and our risk assessment, including risks of material misstatement due to fraud. In addition to our direct interactions and detailed instructions to our component audit teams, Jane Boardman, as lead audit partner, is also the lead Audit Partner for the British Gas segment. This enables direct Group supervision on one of the most significant components of the Group.

We are satisfied that the level of involvement of the lead audit partner and Group audit team in the component audits has been extensive and has enabled us to conclude that sufficient appropriate audit evidence has been obtained in support of our opinion on the Group financial statements as a whole.

#### **8. Other information**

The other information comprises the information included in the annual report other than the financial statements and our auditor's report thereon. This information comprises the Strategic report, the Directors' and Corporate Governance report, the Committee reports, the Remuneration Report and the Other Statutory Information. 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.

#### **9. Responsibilities of directors**

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

In preparing the financial statements, the directors are responsible for assessing the Group's and the 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 Company or to cease operations, or have no realistic alternative but to do so.

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

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

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](http://www.frc.org.uk/auditorsresponsibilities). This description forms part of our auditor's report.

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

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

### 11.1 Identifying and assessing potential risks related to irregularities

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

- the nature of the industry and sector, control environment and business performance including the design of the Group's remuneration policies, key drivers for directors' remuneration, bonus levels and performance targets;
- the Group's own assessment of the risks that irregularities may occur either as a result of fraud or error including the Group's fraud risk programme;
- results of our enquiries of management, internal audit and the Audit and Risk Committee 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; and
  - the internal controls established to mitigate risks of fraud or non-compliance with laws and regulations.
- the matters discussed among the audit engagement team including the component audit teams and relevant internal specialists, including tax, valuations, pensions, climate change, treasury and IT, regarding how and where fraud might occur in the financial statements and any potential indicators of fraud.

As a result of these procedures, we considered the opportunities and incentives that may exist within the organisation for fraud and identified the greatest potential for fraud in the following areas:

- The valuation of residential energy supply billed debt provisions within British Gas;
- The accuracy and completeness of revenue arising from British Gas's new billing platform, ENSEK, including manual adjustments made in respect of revenue recognised through this platform;
- The valuation of complex energy derivative contracts; and
- The valuation of decommissioning provisions.

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, the UK Listing Rules, the Electricity Generator Levy, pensions and tax legislation; and
- 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 regulations set by the Office of Gas and Electricity Markets (Ofgem) and Regulations levied by the UK Financial Conduct Authority and Prudential Regulatory Authority.

### 11.2. Audit response to risks identified

As a result of performing the above, we identified the following as key audit matters related to the potential risk of fraud: (1) the valuation of residential energy supply billed debt provisions within British Gas; (2) the accuracy and completeness of revenue arising from British Gas's new billing platform, ENSEK, including manual adjustments made in respect of revenue recognised through this platform and (3) the valuation of complex energy derivative contracts. The key audit matters section of our report explains the matters in more detail and also describes the specific procedures we performed in response to those key audit matters.

Our procedures to respond to risks identified included the following:

- reviewing the financial statement disclosures and testing to supporting documentation to assess compliance with provisions of relevant laws and regulations described as having a direct effect on the financial statements;
- enquiring of management, the Audit and Risk Committee, in-house legal counsel and the Group's ethics team concerning actual and potential litigation and claims;
- reviewing the reporting to the Audit and Risk Committee, on matters relating to fraud and potential non-compliance with laws and regulations including the Group's whistleblowing programme;
- 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, Ofgem, the FCA and the PRA;
- in addressing the risk of fraud associated with decommissioning provisions, we used data analytics to identify the assumptions to which the decommissioning model is most sensitive and performed audit procedures, including benchmarking these inputs to independent documentation (such as project management cost, wells cost and norms and rates) and external industry reports; 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 component audit teams, and remained alert to any indications of fraud or non-compliance with laws and regulations throughout the audit.

## REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

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

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

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

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

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

### 13. Corporate Governance Statement

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

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

- the directors' statement with regards to the appropriateness of adopting the going concern basis of accounting and any material uncertainties identified set out on page 112;
- the directors' explanation as to its assessment of the Group's prospects, the period this assessment covers and why the period is appropriate set out on pages 35 to 37;
- the directors' statement on fair, balanced and understandable set out on page 73;
- the Board's confirmation that it has carried out a robust assessment of the emerging and principal risks set out on page 29;
- the section of the annual report that describes the review of effectiveness of risk management and internal control systems set out on page 73; and
- the section describing the work of the Audit and Risk Committee set out on pages 72 to 78.

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

#### 14.1 Adequacy of explanations received and accounting records

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

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

We have nothing to report in respect of these matters.

#### 14.2. Directors' remuneration

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

We have nothing to report in respect of these matters.

### 15. Other matters which we are required to address

#### 15.1. Auditor tenure

Following the recommendation of the Audit and Risk Committee, we were reappointed by the shareholders on 13 June 2023 to audit the financial statements for the year ending 31 December 2023 and subsequent financial periods. The period of total uninterrupted engagement including previous renewals and reappointments of the firm is 7 years, covering the years ending 31 December 2017 to 31 December 2023.

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

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

### 16. Use of our report

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

As required by the Financial Conduct Authority (FCA) Disclosure Guidance and Transparency Rule (DTR) 4.1.15R – DTR 4.1.18R, these financial statements form part of the Electronic Format Annual Financial Report filed on the National Storage Mechanism of the FCA in accordance with DTR 4.1.15R – DTR 4.1.18R. This auditor's report provides no assurance over whether the Electronic Format Annual Financial Report has been prepared in compliance with DTR 4.1.15R – DTR 4.1.18R. This auditor's report provides no assurance over whether the annual financial report has been prepared in compliance with DTR 4.1.15R – DTR 4.1.18R.

**Jane Boardman FCA (Senior statutory auditor)**

For and on behalf of Deloitte LLP

Statutory Auditor

London, United Kingdom

14 February 2024

# GROUP INCOME STATEMENT

Year ended 31 December	Notes	2023			2022		
		Business performance £m	Exceptional items and certain re-measurements £m	Results for the year £m	Business performance £m	Exceptional items and certain re-measurements £m	Results for the year £m
Group revenue	4,7	32,561	(6,916)	25,645	32,785	(9,896)	22,889
Insurance services revenue	4, S7	813	—	813	852	—	852
<b>Total Group revenue</b>		<b>33,374</b>	<b>(6,916)</b>	<b>26,458</b>	<b>33,637</b>	<b>(9,896)</b>	<b>23,741</b>
Cost of sales <sup>(i)</sup>	5,7	(27,682)	17,497	(10,185)	(27,616)	14,986	(12,630)
Insurance services cost of sales	5,S7	(475)	—	(475)	(582)	—	(582)
Re-measurement and settlement of derivative energy contracts	7	—	(6,175)	(6,175)	—	(8,484)	(8,484)
<b>Gross profit</b>	4,7	<b>5,217</b>	<b>4,406</b>	<b>9,623</b>	<b>5,439</b>	<b>(3,394)</b>	<b>2,045</b>
Operating costs before insurances services operating costs, exceptional items and credit losses on financial assets	5	(1,778)	—	(1,778)	(1,608)	—	(1,608)
Insurance services operating costs	5,S7	(294)	—	(294)	(264)	—	(264)
Credit losses on financial assets	5,17	(602)	—	(602)	(351)	—	(351)
Exceptional items – (impairment)/write-back of power assets	7	—	(563)	(563)	—	207	207
Exceptional items – impairment of gas storage asset	7	—	(82)	(82)	—	—	—
Exceptional items – net loss on significant disposals	7	—	—	—	—	(362)	(362)
Operating costs	5	(2,674)	(645)	(3,319)	(2,223)	(155)	(2,378)
Share of profits/(losses) of joint ventures and associates, net of interest and taxation	6	209	(1)	208	92	1	93
<b>Group operating profit/(loss)</b>	4	<b>2,752</b>	<b>3,760</b>	<b>6,512</b>	<b>3,308</b>	<b>(3,548)</b>	<b>(240)</b>
Financing costs	8	(308)	—	(308)	(220)	—	(220)
Investment income	8	269	—	269	77	—	77
<b>Net finance cost</b>	8	<b>(39)</b>	<b>—</b>	<b>(39)</b>	<b>(143)</b>	<b>—</b>	<b>(143)</b>
<b>Profit/(loss) before taxation</b>		<b>2,713</b>	<b>3,760</b>	<b>6,473</b>	<b>3,165</b>	<b>(3,548)</b>	<b>(383)</b>
Taxation on profit/(loss)	7,9	(838)	(1,595)	(2,433)	(1,046)	793	(253)
<b>Profit/(loss) for the period</b>		<b>1,875</b>	<b>2,165</b>	<b>4,040</b>	<b>2,119</b>	<b>(2,755)</b>	<b>(636)</b>
Attributable to:							
Owners of the parent		1,859	2,070	3,929	2,050	(2,832)	(782)
Non-controlling interests		16	95	111	69	77	146
<b>Earnings per ordinary share</b>				Pence			Pence
Basic	10			70.6			(13.3)
Diluted	10			69.4			(13.3)
<b>Interim dividend paid per ordinary share</b>	11			1.33			1.00
<b>Final dividend proposed per ordinary share</b>	11			2.67			2.00

(i) Cost of sales includes an £833 million credit (2022: £1,766 million credit) relating to the unwind of the onerous energy supply contract provision within the certain re-measurements column. See note 7.

The notes on pages 132 to 228 form part of these Financial Statements.



# GROUP STATEMENT OF COMPREHENSIVE INCOME

Year ended 31 December	Notes	2023 £m	2022 £m
<b>Profit/(loss) for the period</b>		<b>4,040</b>	<b>(636)</b>
<b>Other comprehensive income</b>			
Items that will be or have been reclassified to the Group Income Statement:			
Impact of cash flow hedging, net of taxation	S4	(2)	(20)
Exchange differences on translation of foreign operations <sup>(i)</sup>	S4	(44)	(90)
Exchange differences reclassified to the Group Income Statement on disposal	S4	—	272
Items that will not be reclassified to the Group Income Statement:			
Net actuarial losses on defined benefit pension schemes, net of taxation	S4	(288)	(124)
Gains on revaluation of equity instruments measured at fair value through other comprehensive income, net of taxation	S4	3	—
Share of other comprehensive loss of associates, net of taxation	14, S4	(95)	(293)
<b>Other comprehensive loss, net of taxation</b>		<b>(426)</b>	<b>(255)</b>
<b>Total comprehensive income/(loss) for the period</b>		<b>3,614</b>	<b>(891)</b>
Attributable to:			
Owners of the parent		<b>3,504</b>	<b>(1,042)</b>
Non-controlling interests	S11	<b>110</b>	<b>151</b>

(i) Exchange differences on translation of foreign operations includes £43 million (2022: £95 million) of losses attributable to the equity holders of the parent, and £1 million of losses (2022: £5 million of gains) attributable to non-controlling interests.

The notes on pages 132 to 228 form part of these Financial Statements.

## GROUP STATEMENT OF CHANGES IN EQUITY

	Share capital £m	Share premium £m	Retained earnings £m	Other equity £m	Total £m	Non-controlling interests £m	Total equity £m
1 January 2022	363	2,377	377	(752)	2,365	385	2,750
(Loss)/profit for the year	—	—	(782)	—	(782)	146	(636)
Other comprehensive (loss)/income	—	—	—	(260)	(260)	5	(255)
Total comprehensive (loss)/income	—	—	(782)	(260)	(1,042)	151	(891)
Employee share schemes and other share transactions	2	17	(2)	(14)	3	—	3
Share buyback programme (note S4)	—	—	—	(250)	(250)	—	(250)
Dividends paid to equity holders (note 11)	—	—	(59)	—	(59)	—	(59)
Distributions to non-controlling interests	—	—	—	—	—	(273)	(273)
31 December 2022	365	2,394	(466)	(1,276)	1,017	263	1,280
Profit for the year	—	—	3,929	—	<b>3,929</b>	111	<b>4,040</b>
Other comprehensive loss	—	—	—	(425)	<b>(425)</b>	(1)	<b>(426)</b>
Total comprehensive income/(loss)	—	—	3,929	(425)	<b>3,504</b>	110	<b>3,614</b>
Employee share schemes and other share transactions	—	—	(3)	45	<b>42</b>	—	<b>42</b>
Share buyback programme (note S4)	—	—	—	(500)	<b>(500)</b>	—	<b>(500)</b>
Dividends paid to equity holders (note 11)	—	—	(186)	—	<b>(186)</b>	—	<b>(186)</b>
Distributions to non-controlling interests (note 12)	—	—	—	—	<b>—</b>	(17)	<b>(17)</b>
<b>31 December 2023</b>	<b>365</b>	<b>2,394</b>	<b>3,274</b>	<b>(2,156)</b>	<b>3,877</b>	<b>356</b>	<b>4,233</b>

The notes on pages 132 to 228 form part of these Financial Statements.

# GROUP BALANCE SHEET

	Notes	31 December 2023 £m	31 December 2022 £m
<b>Non-current assets</b>			
Property, plant and equipment	13	1,846	1,748
Interests in joint ventures and associates	14	903	1,580
Other intangible assets	15	340	707
Goodwill	15	405	409
Deferred tax assets	16	456	1,709
Trade and other receivables, and contract-related assets	17	210	129
Derivative financial instruments	19	899	1,393
Retirement benefit assets	22	64	150
Other investments		61	—
Securities	24	116	525
		<b>5,300</b>	<b>8,350</b>
<b>Current assets</b>			
Trade and other receivables, and contract-related assets	17	5,409	8,450
Other intangible assets	15	293	—
Inventories	18	1,079	1,269
Derivative financial instruments	19	2,373	6,034
Current tax assets		64	93
Securities	24	405	—
Cash and cash equivalents	24	6,443	4,842
		<b>16,066</b>	<b>20,688</b>
<b>Total assets</b>		<b>21,366</b>	<b>29,038</b>
<b>Current liabilities</b>			
Derivative financial instruments	19	(2,391)	(8,841)
Trade and other payables, and contract-related liabilities	20	(7,000)	(10,016)
Insurance contract liabilities	S7	(165)	(160)
Current tax liabilities		(299)	(472)
Provisions for other liabilities and charges	21	(279)	(1,213)
Bank overdrafts, loans and other borrowings	24	(1,002)	(1,009)
		<b>(11,136)</b>	<b>(21,711)</b>
<b>Non-current liabilities</b>			
Deferred tax liabilities	16	(424)	(8)
Derivative financial instruments	19	(615)	(1,310)
Trade and other payables, and contract-related liabilities	20	(207)	(165)
Provisions for other liabilities and charges	21	(1,469)	(1,446)
Retirement benefit obligations	22	(181)	(110)
Bank loans and other borrowings	24	(3,101)	(3,008)
		<b>(5,997)</b>	<b>(6,047)</b>
<b>Total liabilities</b>		<b>(17,133)</b>	<b>(27,758)</b>
<b>Net assets</b>		<b>4,233</b>	<b>1,280</b>
Share capital	25	365	365
Share premium		2,394	2,394
Retained earnings		3,274	(466)
Other equity	S4	(2,156)	(1,276)
<b>Total shareholders' equity</b>		<b>3,877</b>	<b>1,017</b>
Non-controlling interests	S11	356	263
<b>Total shareholders' equity and non-controlling interests</b>		<b>4,233</b>	<b>1,280</b>

The Financial Statements on pages 127 to 228, of which the notes on pages 132 to 228 form part, were approved and authorised for issue by the Board of Directors on 14 February 2024 and were signed below on its behalf by:

**Chris O'Shea**                      **Russell O'Brien**  
**Group Chief Executive**        **Group Chief Financial Officer**

Centrica plc Registered No: 03033654

# GROUP CASH FLOW STATEMENT

Year ended 31 December	Notes	2023 £m	2022 £m
Group operating profit/(loss) including share of results of joint ventures and associates		<b>6,512</b>	(240)
Deduct share of profits of joint ventures and associates, net of interest and taxation	6	<b>(208)</b>	(93)
Group operating profit/(loss) before share of results of joint ventures and associates		<b>6,304</b>	(333)
Add back/(deduct):			
Depreciation and amortisation	13,15	<b>518</b>	669
Write-downs, impairments and write-backs	4,7	<b>669</b>	(99)
Loss on disposals		<b>—</b>	343
Decrease in provisions		<b>(1,021)</b>	(1,903)
Cash contributions to defined benefit schemes in excess of service cost income statement charge		<b>(215)</b>	(184)
Employee share scheme costs		<b>31</b>	10
Unrealised (gains)/losses arising from re-measurement of energy contracts		<b>(2,949)</b>	4,095
Operating cash flows before movements in working capital relating to business performance and payments relating to taxes, exceptional charges and operating interest		<b>3,337</b>	2,598
Decrease/(increase) in inventories		<b>186</b>	(593)
Decrease/(increase) in trade and other receivables and contract-related assets relating to business performance		<b>2,911</b>	(2,302)
(Decrease)/increase in trade and other payables and contract-related liabilities relating to business performance		<b>(2,853)</b>	2,239
Operating cash flows before payments relating to taxes, exceptional charges and operating interest		<b>3,581</b>	1,942
Taxes paid	9	<b>(803)</b>	(574)
Operating interest paid	8	<b>(20)</b>	(30)
Payments relating to exceptional charges in operating costs	7	<b>(6)</b>	(24)
<b>Net cash flow from operating activities</b>		<b>2,752</b>	1,314
Purchase of businesses, net of cash acquired	12	<b>(34)</b>	12
Sale of businesses, including receipt of deferred consideration	12	<b>55</b>	92
Purchase of property, plant and equipment and intangible assets	4	<b>(335)</b>	(371)
Sale of property, plant and equipment and intangible assets		<b>—</b>	11
Investments in joint ventures and associates	14	<b>(9)</b>	(18)
Dividends received from joint ventures and associates	14	<b>220</b>	60
Interest received		<b>267</b>	46
Net purchase of other investments		<b>(37)</b>	—
Settlement of securities	24	<b>—</b>	150
Purchase of securities	24	<b>(12)</b>	(548)
<b>Net cash flow from investing activities</b>		<b>115</b>	(566)
Proceeds from exercise of share options	S4	<b>6</b>	—
Payments for own shares	S4	<b>—</b>	(5)
Share buyback programme	S4	<b>(613)</b>	(43)
Cash inflow from borrowings	24	<b>930</b>	1,220
Distributions to non-controlling interests	12	<b>(17)</b>	(273)
Financing interest paid	24	<b>(286)</b>	(172)
Cash outflow from repayment of borrowings and capital element of leases	24	<b>(1,248)</b>	(1,585)
Equity dividends paid	11	<b>(186)</b>	(59)
<b>Net cash flow from financing activities</b>		<b>(1,414)</b>	(917)
<b>Net increase/(decrease) in cash and cash equivalents</b>		<b>1,453</b>	(169)
Cash and cash equivalents including overdrafts, and cash classified as held for sale at 1 January		<b>4,242</b>	4,328
Effect of foreign exchange rate changes	24	<b>(66)</b>	83
<b>Cash and cash equivalents including overdrafts at 31 December</b>	24	<b>5,629</b>	4,242
Included in the following line of the Group Balance Sheet:			
Cash and cash equivalents	24	<b>6,443</b>	4,842
Overdrafts included within current bank overdrafts, loans and other borrowings	24	<b>(814)</b>	(600)

The notes on pages 132 to 228 form part of these Financial Statements.

# NOTES TO THE FINANCIAL STATEMENTS

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

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

In addition, for clarity, notes begin with a simple introduction outlining its purpose.

## 1. BASIS OF PREPARATION AND SUMMARY OF SIGNIFICANT NEW ACCOUNTING POLICIES AND REPORTING CHANGES

This section details new accounting standards, amendments to standards and interpretations, whether these are effective in 2023 or later years, and if and how these are expected to impact the financial position and performance of the Group.

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

### (a) Basis of preparation

The consolidated Financial Statements have been prepared in accordance with United Kingdom adopted International Accounting Standards and in conformity with the requirements of the Companies Act 2006.

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

The Directors have, at the time of approving the financial statements, a reasonable expectation that the Company and Group have adequate resources to continue in operational existence for the foreseeable future, which reflects a period of twelve months from the date of approval of the accounts, with modelled analysis extending to 31 December 2026. The scenarios considered as part of the going concern assessment are consistent with those used in the longer-term viability statement. In particular, cash forecasts for the Group have been stress-tested for different scenarios including reasonably possible increases/decreases in commodity prices and the risk scenarios described in the viability statement, assessing reasonably possible combinations of risks, the largest of which is the increased margin outflows in our trading and upstream businesses. Risks considered also include the impact of significant adverse weather events, increased bad debt charges due to the cost of living crisis, the risk of financial loss due

to counterparty default, underperformance of the trading business and production falls in the Group's upstream business. The persistent volatility of the external risk environment in recent years underscores the significance of securing ample financial facilities, placing a heightened emphasis on trading entities to maintain sufficient collateral for mark-to-market positions. The Group continues to manage the Group's financing profile through accessing a diverse source of term funding and maintaining access to carefully assessed levels of standby liquidity which support the Group's planned financial commitments. The level of undrawn committed bank facilities and available cash resources has enabled the Directors to conclude that there are no material uncertainties relating to going concern. As a result, the Group continues to adopt the going concern basis of accounting in preparing the financial statements. Further information on the Group's strong liquidity position, including its indebtedness and available committed facilities, is provided in note 24.

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

### (b) New accounting policies, standards, amendments and interpretations effective or adopted in 2023

From 1 January 2023, the following standards and amendments are effective in the Group's consolidated Financial Statements:

- IFRS 17 'Insurance Contracts';
- Amendments to IAS 8 'Accounting policies, Changes in Accounting Estimates and Errors', distinguishing changes in accounting estimates from changes in accounting policies;
- Amendments to IAS 1 'Presentation of Financial Statements', disclosure of accounting policies and materiality judgements; and
- Amendments to IAS 12 'Income Taxes':
  - Deferred tax related to assets and liabilities arising from a single transaction; and
  - International tax reform, pillar 2 model rules.

There has been no material impact on the consolidated Financial Statements from any amendments effective during the year.

#### IFRS 17 'Insurance Contracts'

IFRS 17 became effective on 1 January 2023. The Group has fixed-fee service contracts that it previously accounted for as insurance contracts under IFRS 4 'Insurance Contracts'. These contracts fall within the scope of IFRS 17 where the Group reflects an assessment of the risk associated with an individual customer in setting the price of the contract. The Group is applying the simplified 'Premium Allocation Approach' to its fixed-fee service contracts on the basis that the coverage period of the Group's insurance contracts is not greater than one year. No material change in accounting has arisen from the application of IFRS 17 and therefore there has been no impact on the opening balance sheet. Revenue arising from the Group's insurance contracts within the scope of IFRS 17 amounts to £813 million (2022: £852 million). The Group has presented both current and prior year revenue and costs from insurance contracts on the Group Income Statement and net insurance liabilities on the Group Balance Sheet in accordance with IFRS 17. Further detail regarding the Group's fixed fee insurance contracts is provided in note S7.



## 1. BASIS OF PREPARATION AND SUMMARY OF SIGNIFICANT NEW ACCOUNTING POLICIES AND REPORTING CHANGES

### Electricity Generator Levy

At the end of 2022, the Government announced the implementation of the Electricity Generator Levy (EGL), a new, temporary levy applicable to receipts that the Group realises from electricity generation in the UK from nuclear and renewable sources in the period from 1 January 2023 to 31 March 2028. It was legislated in the Finance (No 2) Act 2023. The levy applies a 45% charge on receipts generated from the production of wholesale electricity sold at an average price in excess of £75/MWh, exceeding an annual threshold of £10 million. It applies to generators whose generation exceeds 50GWh annually, as well as off-take arrangements with significant minority shareholders in such generators (e.g. generation within our Nuclear associate and potentially our off-take from that associate).

The Group has determined that the accounting for the levy falls within the scope of IAS 37 'Provisions, contingent liabilities, and contingent assets' and IFRIC 21 'Levies' on the basis that the levy represents a legislative liability imposed by the Government, calculated with reference to revenue generated. The Group recognises the levy progressively over time, as the related electricity is sold. The Group also considered the applicability of IAS 12 'Income Taxes', however the EGL is based on revenue generated, and not taxable profit and is therefore outside the scope of IAS 12. During the year an amount of £285 million has been reflected within cost of sales as a result of this levy. A further £41 million is recorded within the share of profit after tax from the Nuclear associate.

Whilst the legislation was substantively enacted on 20 June 2023 and received Royal Assent on 11 July 2023, there remain some uncertainties in how it should be interpreted in relation to significant minority shareholder off-take arrangements. It is currently expected to remain in effect until 31 March 2028. As payment has been made on account to HMRC, the Group also considered whether this tax deposit could constitute an asset. In accordance with the 2019 IFRIC agenda decision on Deposits relating to taxes other than income taxes, the Group's policy is to recognise an asset where it is probable that the EGL payment on account will ultimately be due back from HMRC (or used to settle another tax liability). The Group's current view is that it is not probable and accordingly no asset has been recorded. Further details are included in the Key Sources of Estimation Uncertainty, note 3(b).

### Renewables certificates

The Group purchases both renewable certificates and carbon dioxide emissions allowances in order to comply with, and meet its obligations under a number of UK and EU renewable energy schemes. These items are initially recognised at cost and are presented within other intangible assets. The certificates are classified as current or non-current based on the Group's expectations, at the end of each reporting period, of when it expects to realise those assets. Where the renewable certificates are expected to be surrendered within a year of purchase they are presented as current assets, otherwise they are presented as non-current. At 31 December 2022, the portfolio of certificates of £280 million was classified as non-current. At 31 December 2023, the portfolio of renewable certificates of £293 million was classified as current based on the Group's assessment of the expected submission dates of the certificates within the portfolio.

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

At the date of authorisation of these consolidated Financial Statements, the Group has not applied the following new and revised standards and amendments that have been issued but are not yet effective:

- Amendments to IAS 1 'Presentation of Financial Statements':
  - Classification of liabilities as current or non-current, effective from 1 January 2024; and
  - Non-current liabilities with covenants, effective from 1 January 2024;
- Amendments to IFRS 16 'Leases'; effective from 1 January 2024:
  - Lease liability in a sale and leaseback;
- Amendments to IAS 7 'Statement of Cash Flows' and IFRS 7 'Financial Instruments: Disclosures', effective from 1 January 2024:
  - Supplier finance arrangements;
- Amendments to IAS 21 'The Effects of Changes in Foreign Exchange Rates', effective from 1 January 2025; and
- Amendments to IFRS 10 'Consolidated Financial Statements and IAS 28 'Investments in Associates and Joint Ventures'; effective date deferred but available for early adoption.

Management does not expect other issued but not effective amendments or standards, or standards not discussed above to have a material impact on the consolidated Financial Statements.

## 2. CENTRICA SPECIFIC ACCOUNTING MEASURES

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

### (a) Use of adjusted performance measures

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

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

- Exceptional items; and
- Certain re-measurements.

Exceptional items and certain re-measurements are excluded because these items are considered by the Directors to distort the Group's underlying business performance. See section (b) of this note for further details. Similarly, for Segmental adjusted operating profit, the impact of the colleague profit share is excluded because management considers it unrelated to Segmental business performance.

Adjusted earnings is defined as earnings before:

- Exceptional items net of taxation; and
- Certain re-measurements net of taxation.

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

Free cash flow is used by management to assess the cash generating performance of each segment. Segmental free cash flow is defined as net cash flow from operating and investing activities before:

- Deficit reduction payments made to the UK defined benefit pension schemes;
- Movements in variation margin and collateral;
- Interest received;
- Sale, settlement and purchase of securities; and
- Taxes paid and refunded.

Segmental free cash flow as assessed by management excludes cash flows relating to tax. This is because the effect of Group relief and similar reliefs could distort the measure of segment performance. As a Group-wide measure, free cash flow includes taxes paid and refunded.

Free cash flow gives a measure of the cash generation performance of the business after taking account of the need to maintain its capital asset base. By excluding deficit reduction payments and movements in variation margin and collateral, which are predominantly triggered by wider market factors and, in the case of collateral and margin movements, represent timing differences, free cash flow gives a measure of the underlying performance of the Group.

Interest received and cash flows from the sale, settlement and purchase of securities are excluded from free cash flow as these items are included in the Group's adjusted net cash/(debt) measure and are therefore viewed by the Directors as related to the manner in which the Group finances its operations.

Adjusted net cash/(debt) is used by management to assess the underlying indebtedness of the business. Adjusted net cash/(debt) is defined as cash and cash equivalents, net of bank overdrafts, borrowings, leases, interest accruals and related derivatives. This is adjusted for:

- Securities; and
- Sub-lease assets.

### (b) Exceptional items and certain re-measurements

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

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

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

Fair value movements on these commodity derivative trades do not reflect the underlying performance of the business because they are economically related to our upstream assets, capacity/off-take contracts or downstream demand, which are typically not fair valued. Similarly, where our downstream customer supply contracts have become onerous as a result of significant market price movements (and the fact any associated commodity hedges have separately been recognised at fair value under IFRS 9 and therefore the onerous supply contract assessment must reflect the reversal of those gains in subsequent periods), movements in the required provision are also reflected as a certain re-measurement in the 'Cost of sales' line item and separately disclosed in note 7.

Movements in this provision do not reflect the underlying performance of the business because they are economically related to both the hedges and forecast future profitability of the supply contracts. Therefore, these certain re-measurements are reported separately and are subsequently reflected in business performance when the underlying transaction or asset impacts profit or loss.

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

## 2. CENTRICA SPECIFIC ACCOUNTING MEASURES

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

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

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

### 3. CRITICAL ACCOUNTING JUDGEMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY

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

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

Management has made the following key judgements in applying the Group's accounting policies that have the most significant effect on the consolidated Group Financial Statements.

##### Share buyback programme

On 10 November 2022, the Group announced an intention to undertake a share buyback of £250 million and the Group entered into contracts with third parties to undertake this repurchase programme which has now completed. During 2023, the Group firstly increased the share buyback by an additional £300 million which completed during the second half of the year.

Subsequently, in July 2023, the Group announced a further £450 million extension to the share buyback programme and as a result, the Group signed an agreement with a third party to undertake the repurchase of £200 million of shares which is expected to complete by March 2024. The repurchase of the remaining £250 million of shares is expected to commence in the first half of 2024.

The Group judges that the terms and conditions of the contracts mean that, at 31 December 2023, it was unable to cancel the obligation arising under the contract signed in the second half of 2023. Accordingly, the Group has recorded a financial liability at 31 December 2023 of £94 million (31 December 2022: £207 million) for this obligation in accordance with IAS 32 'Financial instruments: Presentation' that is subsequently measured in accordance with IFRS 9 'Financial instruments'. This liability is included within other payables, with the corresponding debit presented in the other equity reserve.

The Group has not recognised a liability relating to the further £250 million announced during 2023, as no contract has been signed and therefore no financial liability has yet arisen. The monthly breakdown of all shares purchased and the average price paid (excluding expenses) in relation to the financial liability recognised at 31 December 2023 are detailed in note S4.

##### Spirit Energy consolidation

During 2017, the Group acquired Bayerngas Norge's exploration and production business and combined this with the Group's existing exploration and production business to form the Spirit Energy business. The Group holds a 69% interest in Spirit Energy. While Spirit Energy has a 31% non-controlling interest, the Group, through its Board majority, can control decisions that represent Board Reserved Matters and the Directors consider that these rights provide control over the relevant activities that most significantly influence the variable returns of the Spirit Energy business. The Group has concluded that it controls Spirit Energy and consequently Spirit Energy is fully consolidated with a non-controlling interest of 31%.

##### Metering contracts

As part of the ongoing smart meter roll-out, the Group periodically renews meter rental arrangements with third parties. The last renegotiation took place in 2021. The Group assessed that these were not leases under IAS 17 and IFRIC 4 because at inception of the contract there were no specified assets, the Group did not have the right to physically or operationally control the smart meters and other parties took more than an insignificant amount of the output from the assets. This assessment was grandfathered on adoption of IFRS 16.

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

##### LNG contracts

The Group is active in the Liquefied Natural Gas (LNG) market, both procuring long-term LNG supply arrangements and transacting in shorter-term LNG cargoes. As part of its operations in the market, the Group optimises its contractual positions in order to meet customer demand for physical commodity. In response to the continuing development of the global LNG market which, consistent with prior years, is not considered to be active, the Group has reviewed its portfolio of LNG transactions and contracts. It has judged that its activities are carried out for the purpose of receipt or delivery of physical commodity in accordance with its expected purchase and sale requirements. As a result, the Group's contracts to buy and sell LNG are outside the scope of IFRS 9 and are accounted for on an accruals basis.

##### Assets held for sale and discontinued operations

On 8 December 2021 the Group announced that it had agreed to sell Spirit Energy's entire Norwegian portfolio plus the Statfjord field to Sval Energi and Equinor. The transaction completed in the first half of 2022. See note 12.

The Group assessed whether the disposal group constituted a discontinued operation. Key considerations included the effect of the disposal on the Upstream business and whether the disposal group represented a separate major line of business or geographical operation. Following the disposal, because the Upstream segment retained other European producing fields, the Group judged that it was neither exiting a geographical area nor a separate major line of business, and hence concluded the disposal group did not constitute a discontinued operation.

##### Supplier of Last Resort (SoLR)

During 2021, the Group was appointed as the Supplier of Last Resort (SoLR) to eight suppliers who ceased trading during the year; one further appointment was made in January 2022. Under Ofgem's licence conditions, the Group was entitled to make a Last Resort Supplier Payment (LRSP) claim for the shortfall between costs reasonably incurred in supplying gas and electricity to premises under the Last Resort Supply Direction, and the charges recovered from customers.

The Group submitted an initial claim in 2021 and a second claim in 2022, both of which were accepted by Ofgem. The claims covered both incremental commodity costs, incurred as a result of procuring gas and electricity to supply affected customers, and the cost of recovering customer credit balances, where the Group had not waived the right to do so. The initial claim was settled between April 2022 and April 2023 and the second claim is being settled over the current twelve month period ending in April 2024.

The value recognised for the SoLR receivable at 31 December 2023 is £48 million (31 December 2022: £275 million). This includes residual balances for which the Group has submitted a third claim to be settled between April 2024 and April 2025, but no significant incremental costs have been incurred during the year (31 December 2022: £299 million).

The Group has concluded that the LRSP process represents an Ofgem support mechanism, enabling energy suppliers to provide stability to the customers of failed suppliers. The Group determines that the LRSP is within the scope of IAS 20 'Government Grants' and amounts receivable under the mechanism are recognised as a credit within cost of sales and operating costs, as the related expenses are incurred.

### 3. CRITICAL ACCOUNTING JUDGEMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY

#### (b) Key sources of estimation uncertainty

The sections below detail the assumptions the Group makes about the future and other major sources of estimation uncertainty when measuring its assets and liabilities at the reporting date. The information given relates to the sources of estimation uncertainty that have a significant risk of resulting in a material adjustment to those assets and liabilities in the next financial year.

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

#### Electricity Generator Levy

As detailed in note 1(b), the Electricity Generator Levy (EGL) is applicable from 1 January 2023. During the year, the Group's share of its Nuclear associate's EGL payments amounted to £41 million (recorded within the share of profit after tax from associates). The Group has also made payments on account to HMRC of £285 million in relation to its estimated EGL liabilities for its minority shareholder Nuclear offtake arrangements during the December 2023 financial year and this expense has been recorded within the income statement, as part of Cost of Sales.

Similar to other relevant businesses, the Group is reviewing the EGL legislation and its application. The EGL legislation is new, and its interpretation and application is unclear in respect of the Group's minority shareholder Nuclear offtake arrangements. As such, the extent of the levy that will ultimately be due in this regard is not yet certain, and a different amount may eventually be determined. If this were the case, a tax deposit asset would be recorded on the Group Balance Sheet, and as a credit within Cost of Sales in the income statement, when it became probable, in accordance with the 2019 IFRIC Agenda decision on Deposits relating to taxes other than income taxes. No tax deposit asset has been recorded because it is not deemed probable, as at the balance sheet date, that this will ultimately be recoverable (or used to settle another tax liability).

We have determined there is a key source of estimation uncertainty in relation to the amount of levy the Group owes for 2023 and whether a tax deposit asset should be recorded for the recovery of payments on account made to HMRC of up to £285 million. Whilst a material change in the accounting could occur in the next financial period, ultimate resolution of this uncertainty may take a number of years.

#### Credit provisions for trade and other receivables

The macroeconomic environment continues to be challenging with continued higher interest rates, high inflation and low growth all contributing to cost of living pressures which may impact the ability of the Group's customers to pay amounts due. Leading debt indicators, including the number of customers going into debt and direct debit cancellation rates in the Group's residential portfolio have continued to deteriorate in 2023. The Group also suspended all debt recovery field activity throughout the majority of the year, and this has resulted in a deterioration of debt performance for affected cohorts of customers during the period. Customer support schemes, implemented by the Government in 2022 to provide discounts to energy customers, largely ended on 30 June 2023 and despite declining commodity prices during the year, prices are still significantly higher than in previous years.

These factors all result in the assessment and adequacy of credit provisions for trade and other receivables to continue to be a key source of estimation uncertainty. See note 17 for further information.

The Group utilises a range of factors, including both internal and external, historic and forward-looking, to assess the adequacy of the Group's credit provisions. Whilst the Group utilises a matrix output model to record provision coverage, management recognises that the model does not adequately capture scenarios where there is a delayed impact on customer payments, such as the ending of Government support schemes, and forward-looking macroeconomic challenges. The Group has therefore recorded a macroeconomic credit provision of £175 million (31 December 2022: £125 million) which results in a total credit provision for trade and other receivables at 31 December 2023 of £1,309 million (31 December 2022: £872 million).

#### British Gas Energy and Centrica Business Solutions Onerous Supply Contracts

The Group operates and manages a hedging strategy to ensure that the future costs of supplying customers of the British Gas Energy and Centrica Business Solutions portfolios are appropriately managed.

Hedges are measured at fair value under IFRS 9 and are recognised as certain re-measurements in the Group's Income Statement until the point at which the related costs to purchase electricity and gas are incurred. Fair value movements on energy purchase contracts entered to meet the future needs of customers are economically related to customer demand; the supply contracts for which are measured on an accrual basis.

Gains and losses arising from hedges have been recognised in the income statement (within certain re-measurements) in accordance with the requirements of IFRS 9. Because of this hedge value recognition, the assessment of whether the supply contracts are onerous must include the contracted energy purchase costs and those mark-to-market reversals. As a result, the Group recognised an onerous supply contract provision of £999 million in the consolidated Group Financial Statements for the year ended 31 December 2022.

During 2023, commodity costs have declined and as a result, fair value movements on energy purchase contracts entered to meet the future needs of both British Gas Energy residential customers and the Group's non-domestic customers have resulted in losses rather than gains being recognised as certain re-measurements in the Group's Income Statement. As a result, the Group determined that at the reporting date, the future costs to fulfil both British Gas residential and the Group's non-domestic customer contracts fell below charges recoverable from customers and the onerous supply contract provision previously recognised in relation to the fulfilment of the Group's customer contracts has been either utilised, or reversed, in full. £833 million of this movement has been reflected in certain re-measurements, where it was originally recorded. The remainder, which was recognised on the balance sheet as part of the Avanti Gas acquisition in 2022, has been presented in the business performance column to match the unwind of the related derivatives also acquired.

Note that cumulatively, over time, the onerous contract provision certain re-measurements movement in the Group's Income Statement will total £nil.

The key sources of estimation uncertainty previously related to the expected future tenure of the Group's customer portfolio, and the estimated gross margin attributable to them. Due to the fair value losses recognised on energy purchase contracts at 31 December 2023, no onerous supply contract arises and the estimation of tenure and gross margin is no longer required. Therefore, there is no longer a key source of estimation uncertainty. If commodity prices increase, a provision may be required in the future. Further disclosures relating to movements in certain re-measurements are provided in note 7.



### 3. CRITICAL ACCOUNTING JUDGEMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY

#### **Impairment and impairment reversals of long-lived assets**

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

Forward commodity prices have declined during 2023, both in terms of observable market prices and forecast forward prices. This follows significant year-on-year increases in both 2021 and 2022. Predominantly as a result of the declining prices the recoverable amounts of certain assets have been affected and an impairment of £645 million has been recorded. See note 7(b) for details.

#### **Upstream gas assets**

Forward prices for gas are a key input in the determination of the recoverable amount of the Group's gas assets (including storage asset). 2023 has seen declines in the prices of this commodity, both in terms of observable market prices and forecast forward prices. As a result of both price declines and increased operating costs, the Group assesses that the net recoverable value of the Rough storage asset has fallen below its carrying value and an impairment of £82 million has been recognised at the year-end. Impairment headroom remains for the Group's other significant fields at the year-end. As at 31 December 2023, this remains a key source of estimation uncertainty due to potential future price decreases. As a sensitivity, were gas prices in the liquid period (2024-28) to fall by 50% a post-tax impairment of £269 million would arise. Potential future price increases give rise to less estimation uncertainty, as the recoverable amounts of the Group's gas assets are capped at depreciated historic cost.

Further details of the assumptions used in determining the recoverable amounts and sensitivities to the assumptions are provided in note 7.

#### **Nuclear investment**

The recoverable amount of the Nuclear investment is based on the value of the existing UK nuclear fleet operated by EDF. The existing fleet value is calculated by discounting pre-tax cash flows derived from the stations based on forecast power generation and power prices, whilst taking account of outages and the likely operational lives of the stations. During the year, the recoverable amount has decreased, predominantly due to falling forecast commodity prices. This has resulted in an impairment of £549 million.

The key source of estimation uncertainty is commodity price forecasts, other input assumptions include production levels, application of the Electricity Generator Levy and station lives. Further details of these uncertainties, together with the methodology, assumptions and impairment booked during the year are provided in note 7, together with related sensitivities.

#### **Revenue recognition – unread gas and electricity meters**

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

An assessment is also made of any factors that are likely to materially affect the ultimate economic benefits that will flow to the Group, including bill cancellation and re-bill rates. Estimated revenue is restricted to the amount the Group expects to be

entitled to in exchange for energy supplied. The judgements applied, and the assumptions underpinning these judgements, are considered to be appropriate. However, a change in these assumptions would have an impact on the amount of revenue recognised. The primary source of estimation uncertainty relating to unread revenue arises in the respect of gas and electricity sales to UK downstream customers in British Gas Energy and Centrica Business Solutions, including where changes in customer behaviour in response to elevated prices, affects estimated consumption. At 31 December 2023 unread revenue arising from these customers amounted to £2,992 million (2022: £2,893 million). A change in these assumptions of 2% would impact revenue and profit by £60 million.

#### **Decommissioning costs**

The estimated cost of decommissioning at the end of the producing lives of gas fields is reviewed periodically and is based on reserves, price levels and technology at the balance sheet date. Provision is made for the estimated cost of decommissioning at the balance sheet date. The payment dates of total expected future decommissioning costs are uncertain and dependent on the lives of the facilities, but are currently anticipated to be predominantly incurred by 2035.

The level of provision held is sensitive to the discount rate used to discount the estimated decommissioning costs. The real discount rate used to discount the decommissioning liabilities at 31 December 2023 is 1% (2022: 1%). There are a number of variable inputs into the calculation of discount rates including risk-free interest rates and debt and equity risk premium. A 1% change in this discount rate would change the decommissioning liability by approximately £85 million.

#### **Gas and liquids reserves**

The volume of proven and probable (2P) gas and liquids reserves is an estimate that affects the unit of production method of depreciating producing gas and liquids property, plant and equipment (PP&E) as well as being a significant estimate affecting decommissioning and impairment calculations.

The impact of a change in estimated 2P reserves is dealt with prospectively by depreciating the remaining book value of producing assets over the expected future production. If 2P reserves estimates are revised downwards, earnings could be affected by higher depreciation expense or an immediate write-down (impairment) of the asset's book value. A change in reserves estimates could also change the timing of decommissioning activity, which could change the carrying value of the Group's provisions. The complex interaction of field-specific factors means that it is not possible to give a meaningful sensitivity of the Group's financial position or performance to gas and liquids reserves estimates. The factors impacting gas and liquids estimates, the process for estimating reserve quantities and reserve recognition and details of the Group's 2P reserves are given on page 241. Details of impairments of exploration and production fields and goodwill, along with associated sensitivities, are given in note 7.

#### **Determination of fair values – energy derivatives**

The fair values of energy derivatives classified as Level 3 in accordance with IFRS 13 'Fair Value Measurement' are determined to be a key source of estimation uncertainty as they are not actively traded and their values are estimated by reference in part to published price quotations in active markets and in part by using complex valuation techniques. The key source of estimation uncertainty is future commodity prices and their inclusion in the reliable estimation of the unobservable components of the Group's Level 3 derivatives in an elevated and volatile commodity price environment. More detail on the assumptions used in determining fair valuations of energy derivatives is provided in note S6 and on the sensitivities to these assumptions in note S3.

### 3. CRITICAL ACCOUNTING JUDGEMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY

#### Climate change

In preparing the financial statements, the Directors have considered the impact of climate change in the context of the risks and opportunities identified in the Task Force on Climate-related Financial Disclosures (TCFD) disclosures on pages 47 to 55. There has been no material impact identified on the financial reporting judgements and estimates. The Directors specifically considered the impact of climate change in the following areas:

- Cash flow forecasts used in the impairment assessment of non-current assets, including goodwill;
- Carrying value and useful economic lives of property, plant and equipment;
- Recoverability of deferred tax assets; and
- Going concern and viability of the Group over the next three years.

Whilst there is no short-term impact expected from climate change, the Directors are aware of the risks and regularly assess these risks against judgements and estimates made in preparation of the Group's financial statements.

Further detail is provided in the 'Climate change' note below.

### 3. CRITICAL ACCOUNTING JUDGEMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY

#### (c) Climate change

The Group's assessment of how climate-related issues might affect the business has been integrated into its annual strategic and financial planning process. At the same time, the Group reviews the potential impact of the material risks and opportunities and its Climate Transition Plan on both the current balance sheet position and its accounting policies (including the useful economic lives of its assets).

#### Summary of our most material risks and opportunities

TCFD category	Climate-related trend	Potential impact
Transition: Policy, Markets and Technology	Transition away from fossil fuelled heating	Risk: Reduced GM from the sale and servicing of natural gas residential boilers and commercial Combined, Heat and Power (CHP) units at British Gas Services & Solutions (BG S&S), Centrica Business Solutions (CBS) and Bord Gáis Energy (Bord Gáis)
Transition: Policy, Markets and Technology	Growth in low carbon heating market	Opportunity: Increased sales and servicing of electric and hydrogen fuelled heating systems, and associated opportunities in energy efficiency at BG S&S, CBS and Bord Gáis
Transition: Policy, Markets and Technology	Transition away from natural gas	Risk: Reduced GM from the sale of natural gas from fuel switching and energy efficiency at British Gas Energy (BGE), CBS and Bord Gáis
Transition: Policy, Markets and Technology	Growth in low carbon heating market	Opportunity: Increased sales of electricity and green/low carbon hydrogen at BGE, CBS and Bord Gáis
Transition: Markets	Growth of EV transport market	Opportunity: Access to new and growing value pools related to EV charging installs, operation and maintenance (O&M), and energy supply at BG S&S and Bord Gáis
Transition: Energy Source	Growth in demand for renewable energy	Opportunity: Strong growth in solar and battery markets driven by decarbonisation at CBS, Bord Gáis and BG S&S
Physical Chronic	Rising mean temperatures	Risk: Reduced sales of natural gas and electricity for heat at BGE, CBS and Bord Gáis

IFRS dictates how each asset or liability should be accounted for (e.g. cost, fair value or other measurement criteria) and accordingly, there is a fundamental difference between the holistic forward-looking risk and opportunities business analysis (see TCFD disclosure on pages 47 to 55), and the possible sensitivity of current accounting carrying values to these risks and opportunities.

For example, whilst the activity of supplying gas to customers or servicing/installing gas boilers is clearly subject to climate-related risks (and opportunities), the balance sheet does not reflect an overall value of those businesses (aside from an element of goodwill). Instead, accounting balances related to these businesses generally manifest themselves in short-term working capital assets and liabilities associated with procuring and selling gas or servicing/installing boilers; with those balances generally settled within six months and so specifically less exposed to climate risks.

In a similar vein, Upstream assets are tested for impairment in accordance with relevant IFRS accounting standards. These generally require the recoverable amount of the asset to be calculated based on a best estimate of long-term forecast commodity prices, which the Group estimates based on current market prices and the consensus of reputable commodity pricing consultants forecasts. However, these estimates are not consistent with net zero scenarios from the consultants (as they do not factor in any prospective, yet to be announced legislative or market changes that would be required to meet temperature targets) and hence impairment reviews are not based on net zero scenario forward prices. The Group instead discloses the impact on the carrying value of Upstream assets by way of sensitivity analysis (see note 7(c)).

### 3. CRITICAL ACCOUNTING JUDGEMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY

Accordingly, the Group is mindful of these dynamics when it considers which areas of the balance sheet are exposed to key estimation uncertainty from climate-related issues. The Group considers which assets are most exposed to impairment from climate risks and similarly whether there are any liabilities that are either currently unrecognised or might increase as a result of those risks.

The Group's assets/liabilities have been segmented into three tranches, grading each balance's exposure to climate risks/opportunities:

- (i) Higher risk – As the consumption of gas and power is intrinsically linked to carbon emissions, their pricing is consequently exposed to climate and legislative risk. Accordingly, where assets or contract values have a key dependency on commodity price assumptions, those assets (or contracts) are deemed higher risk.
- (ii) Medium risk – Gross margin energy transition considerations and their potential impact on forward-looking balances (e.g. Supply and Services and Energy Trading goodwill) and decommissioning balances in E&P.
- (iii) Lower risk – No significant risk identified on the basis that positions are short-term in nature or are specifically linked to the energy transition or are immaterial.

The key non-current asset (and decommissioning provision) balance sheet items have been presented in more granular detail below, together with the groupings into the above risks and with rationale set out below the table:

As at 31 December 2023 related to (£m):	Goodwill	Intangibles	Investment in associates	Property, plant & equipment	Deferred tax assets	Decommissioning provision
<b>Energy Supply</b>	197					
Customer relationships		14				
Application software		117				
<b>Energy Services</b>	63					
Customer relationships		6				
Brand (mainly Dyno)		57				
Application software		107				
Battery storage				66		
Electric vehicles (vans/cars)				55		
Non-electric vehicles (vans/cars)				50		
<b>Energy Trading</b>	145					
Customer relationships		2				
Application software		27				
LNG vessel leases				100		
<b>Gas Assets (E&amp;P and Storage)</b>						
E&P fields (Spirit)				1,015	(69)	(1,191)
E&P tax losses (Spirit)					94	
Gas storage facility (Rough)				8	145	(319)
<b>Power Assets</b>						
Nuclear investment			903			
Gas-fired power stations/engines				233		(17)
Combined heat power (CHP)/other power assets				53		
Solar				39		
<b>Group/Other</b>						
Application software		10				
Land & buildings <sup>(i)</sup>				145		
Derivatives deferred tax <sup>(i)</sup>					343	
Other <sup>(i)</sup>				82	(57)	
<b>Total (notes 13-16 and 21)</b>	<b>405</b>	<b>340</b>	<b>903</b>	<b>1,846</b>	<b>456</b>	<b>(1,527)</b>

(i) Land & buildings, Derivatives deferred tax and Other Property, plant & equipment/Deferred tax have not been allocated out across business type.

	Higher
	Medium
	Lower

### 3. CRITICAL ACCOUNTING JUDGEMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY

All items noted above may be impacted by climate-related risks but are not currently considered to be key areas of judgement or sources of estimation uncertainty in the current financial year.

#### Higher risk

E&P field valuations are dependent on forecast commodity prices. Climate change risk means that there is uncertainty over gas demand and forecast prices. This is not currently a key source of estimation uncertainty because current liquid commodity prices mean that there is impairment headroom over current carrying values. Nonetheless, valuation sensitivity information based on a net zero price forecast has been provided in note 7(c) to show field values can move significantly. (Note that the Group's intention is to run-off remaining fields with most production forecast in the next five years. Decommissioning obligations will be substantively met by the early 2030s, whilst further investment in exploring for new gas fields has ceased.) Recoverability of E&P deferred tax assets associated with historic losses is dependent on future field profitability and so is subject to climate change risk.

The valuation of the investment in Nuclear is also highly dependent on forecast commodity prices. Climate change risks and opportunities means there is uncertainty over electricity demand and forecast prices. The underlying Nuclear stations, which produce electricity with no carbon emissions, have different useful economic lives, with the last station forecast to cease operating in 2055. Valuation sensitivity information based on a net zero price forecast has been provided in note 7(c).

#### Medium risk

The Group's small number of gas-fired power stations and engines are exposed to climate change risk, with valuations dependent on forecast gas and electricity prices and electricity demand. However, they are deemed medium risk as they do not have a significant carrying value in the context of the Group.

Similarly the Group's investment in CHP and other power assets are also exposed to climate risk. They have useful economic lives of up to 15 years but they do not, individually or in total, have material carrying values.

LNG Vessels on the balance sheet are exposed to risk from climate change, but as they are leased assets with the current term remaining less than five years, this risk is reduced to medium.

The Group is in the process of transitioning to an electrified vehicle fleet. Non-electric vehicles are deemed medium risk because their remaining useful economic lives are generally quite short.

Decommissioning provisions are generally longer-term but this could be brought forward for E&P assets if the energy transition accelerates. However, as the decommissioning discount rate is only 1% (real), the balance sheet and income statement impact of earlier decommissioning would not be material.

Deferred tax associated with field accelerated capital allowances and decommissioning in E&P and Storage is not considered high risk due to the length of carry-back rules for decommissioning and the mechanical unwind of other temporary differences. Deferred tax assets associated with derivatives are considered medium risk as the derivatives generally realise within two years.

Energy Supply, Energy Services and Energy Trading Goodwill and Application Software are categorised as medium risk because the businesses are exposed to energy transition risk as a result of climate change. However, there are also significant opportunities for these businesses and the carrying values are not material.

#### Lower risk

All other assets denoted in the table above are considered lower risk because they are either specifically related to the energy transition (e.g. electric vehicles, battery storage) or are immaterial.

#### Other contracts

The Group also has long-term LNG supply contracts with Cheniere, Delfin and Mozambique. These are not reflected on the balance sheet but the Group has certain purchase commitments (see note 23). The contracts currently have significant value because of gas price locational spreads but are exposed to climate-change risk and therefore could ultimately become onerous in net zero scenarios. The commitments note provides detail of the length of the contracts and commodity purchase commitments.



## 4. SEGMENTAL ANALYSIS

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

### (a) Segmental structure

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

Segment	Description
<b>British Gas Services &amp; Solutions</b>	<ul style="list-style-type: none"> <li>o The installation, repair and maintenance of domestic central heating and related appliances, and the provision of fixed-fee maintenance/breakdown service and insurance contracts in the UK; and</li> <li>o the supply of new technologies and energy efficiency solutions in the UK.</li> </ul>
<b>British Gas Energy</b>	<ul style="list-style-type: none"> <li>o The supply of gas and electricity to residential and small business customers in the UK.</li> </ul>
<b>Bord Gáis Energy</b>	<ul style="list-style-type: none"> <li>o The supply of gas and electricity to residential, commercial and industrial customers in the Republic of Ireland;</li> <li>o the installation, repair and maintenance of domestic central heating and related appliances in the Republic of Ireland;</li> <li>o the procurement, trading and optimisation of energy in the Republic of Ireland<sup>(i)</sup>; and</li> <li>o power generation in the Republic of Ireland.</li> </ul>
<b>Centrica Business Solutions</b>	<ul style="list-style-type: none"> <li>o The supply of gas and electricity to business customers in the UK<sup>(i)</sup>;</li> <li>o the supply of energy services and solutions to large organisations in the UK, Europe and North America; and</li> <li>o the development and operation of large-scale power assets in the UK and Europe.</li> </ul>
<b>Centrica Energy</b>	<ul style="list-style-type: none"> <li>o The procurement, trading and optimisation of energy in the UK and Europe<sup>(i)</sup>; and</li> <li>o the global procurement and sale of LNG.</li> </ul>
<b>Upstream</b>	<ul style="list-style-type: none"> <li>o The production and processing of gas and liquids principally within Spirit Energy<sup>(i)</sup>;</li> <li>o the sale of power generated from nuclear assets in the UK; and</li> <li>o gas storage in the UK.</li> </ul>

(i) Where income is generated from contracts in the scope of IFRS 9, this is included in re-measurement and settlement of derivative energy contracts.

## 4. SEGMENTAL ANALYSIS

### (b) Revenue

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

Year ended 31 December	2023			2022		
	Gross segment revenue £m	Less inter-segment revenue £m	Total Group revenue £m	Gross segment revenue £m	Less inter-segment revenue £m	Total Group revenue £m
<b>British Gas Services &amp; Solutions</b>	1,597	(57)	1,540	1,527	(50)	1,477
<b>British Gas Energy</b>	17,742	—	17,742	13,096	—	13,096
<b>Bord Gáis Energy</b>	1,815	—	1,815	1,771	—	1,771
<b>Centrica Business Solutions</b>	3,522	(6)	3,516	3,000	(19)	2,981
<b>Centrica Energy</b>	7,732	(476)	7,256	14,441	(219)	14,222
<b>Upstream</b>	2,935	(1,430)	1,505	3,351	(3,261)	90
<b>Total Group revenue included in business performance</b>	<b>35,343</b>	<b>(1,969)</b>	<b>33,374</b>	<b>37,186</b>	<b>(3,549)</b>	<b>33,637</b>
Less: revenue arising on contracts in scope of IFRS 9 included in business performance			(6,916)			(9,896)
<b>Total Group revenue</b>			<b>26,458</b>			<b>23,741</b>

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

Year ended 31 December	2023				
	Revenue from contracts with customers in scope of IFRS 15 <sup>(i)</sup> £m	Revenue from fixed-fee service and insurance contracts in scope of IFRS 17, and leasing contracts in scope of IFRS 16 £m	Total Group revenue £m	Revenue in business performance arising from contracts in scope of IFRS 9 £m	Total Group revenue included in business performance £m
Energy services and solutions	727				
<b>British Gas Services &amp; Solutions</b>	727	813	1,540	—	1,540
Energy supply – UK	17,742				
<b>British Gas Energy</b>	17,742	—	17,742	—	17,742
Energy supply – Republic of Ireland	1,438				
<b>Bord Gáis Energy</b>	1,438	—	1,438	377	1,815
Energy supply – UK	2,232				
Energy services	208				
<b>Centrica Business Solutions</b>	2,440	4	2,444	1,072	3,516
Energy sales to trading and energy procurement counterparties	3,132				
<b>Centrica Energy</b>	3,132	29	3,161	4,095	7,256
Gas and liquid production	133				
<b>Upstream</b>	133	—	133	1,372	1,505
	<b>25,612</b>	<b>846</b>	<b>26,458</b>	<b>6,916</b>	<b>33,374</b>

(i) The Group has recognised £3,698 million (2022: £1,539 million) of revenue from the Government in relation to the Energy Price Guarantee scheme for domestic customers in the British Gas Energy segment. A further £448 million (2022: £219 million) of revenue has been recognised in respect of the Energy Bill Relief Scheme. £320 million (2022: £175 million) of this total relates to Centrica Business Solutions customers and £128 million (2022: £44 million) relates to non-domestic customers in the British Gas Energy segment.

## 4. SEGMENTAL ANALYSIS

Year ended 31 December	2022				
	Revenue from contracts with customers in scope of IFRS 15 £m	Revenue from fixed-fee service and insurance contracts in scope of IFRS 17, and leasing contracts in scope of IFRS 16 £m	Total Group revenue £m	Revenue in business performance arising from contracts in scope of IFRS 9 £m	Total Group revenue included in business performance £m
Energy services and solutions	625				
<b>British Gas Services &amp; Solutions</b>	625	852	1,477	—	1,477
Energy supply – UK	13,096				
<b>British Gas Energy</b>	13,096	—	13,096	—	13,096
Energy supply – Republic of Ireland	1,323				
<b>Bord Gáis Energy</b>	1,323	—	1,323	448	1,771
Energy supply – UK	1,465				
Energy services	249				
<b>Centrica Business Solutions</b>	1,714	14	1,728	1,253	2,981
Energy sales to trading and energy procurement counterparties	5,639				
<b>Centrica Energy</b>	5,639	16	5,655	8,567	14,222
Gas and liquid production	462				
<b>Upstream</b>	462	—	462	(372)	90
	22,859	882	23,741	9,896	33,637

### Geographical analysis of revenue and non-current assets

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

Year ended 31 December	Total Group revenue (based on location of customer)		Non-current assets (based on location of assets) <sup>(i)</sup>	
	2023 £m	2022 £m	2023 £m	2022 £m
UK	22,207	17,480	2,875	3,827
Republic of Ireland	1,438	1,323	229	152
Scandinavia (including Denmark)	919	1,473	170	181
North America	390	867	12	14
Rest of the world	1,504	2,598	314	353
	26,458	23,741	3,600	4,527

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

## 4. SEGMENTAL ANALYSIS

### (c) Adjusted gross margin and adjusted operating profit/(loss)

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

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

Year ended 31 December	Adjusted gross margin		Adjusted operating profit/(loss)	
	2023 £m	2022 £m	2023 £m	2022 £m
<b>British Gas Services &amp; Solutions</b>	<b>616</b>	504	<b>47</b>	(9)
<b>British Gas Energy <sup>(i)</sup></b>	<b>2,141</b>	1,114	<b>751</b>	72
<b>Bord Gáis Energy</b>	<b>139</b>	160	<b>1</b>	31
<b>Centrica Business Solutions</b>	<b>309</b>	238	<b>104</b>	44
<b>Centrica Energy</b>	<b>1,016</b>	1,558	<b>774</b>	1,400
<b>Upstream</b>	<b>999</b>	1,874	<b>1,083</b>	1,793
<b>Segmental adjusted gross margin/adjusted operating profit</b>	<b>5,220</b>	5,448	<b>2,760</b>	3,331
<b>Reconciling items to Group Income Statement:</b>				
<b>Colleague profit share <sup>(ii)</sup></b>	<b>(3)</b>	(9)	<b>(8)</b>	(23)
<b>Total Group adjusted gross margin/adjusted operating profit</b>	<b>5,217</b>	5,439	<b>2,752</b>	3,308
<b>Certain re-measurements:</b>				
Onerous energy supply contract provision movement	<b>833</b>	1,766	<b>833</b>	1,766
Derivative contracts	<b>3,573</b>	(5,160)	<b>3,573</b>	(5,160)
Share of re-measurement of certain associates' energy contracts (net of taxation)	<b>—</b>	—	<b>(1)</b>	1
<b>Gross profit</b>	<b>9,623</b>	2,045		
Exceptional items in operating profit			<b>(645)</b>	(155)
<b>Operating profit/(loss) after exceptional items and certain re-measurements</b>			<b>6,512</b>	(240)

(i) Included within British Gas Energy adjusted operating profit in 2023 is a £84 million (2022: £50 million) charge relating to increases in the British Gas Energy Support Fund, supporting downstream customers. £62 million of this charge is booked as a revenue deduction and £22 million within operating costs.

(ii) The impact of the colleague profit share is excluded because management considers it unrelated to segmental business performance.

## 4. SEGMENTAL ANALYSIS

### (d) Included within adjusted operating profit

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

Year ended 31 December	Depreciation and impairments of property, plant and equipment		Amortisation, write-downs and impairments of intangibles	
	2023 £m	2022 £m	2023 £m	2022 £m
British Gas Services & Solutions	(42)	(31)	(12)	(16)
British Gas Energy	(3)	(3)	(54)	(79)
Bord Gáis Energy	(9)	(8)	(11)	(13)
Centrica Business Solutions	(11)	(13)	(26)	(32)
Centrica Energy	(30)	(31)	(18)	(15)
Upstream	(281)	(481)	—	—
Other <sup>(i)</sup>	(28)	(31)	(17)	(24)
	(404)	(598)	(138)	(179)

(i) The Other segment includes corporate functions, subsequently recharged.

#### Impairments and write-downs of PP&E

During 2023, £9 million of impairments of PP&E (2022: £88 million) were recognised within business performance.

#### Impairments and write-downs of intangible assets

During 2023, £15 million of impairments of other intangible assets (2022: £20 million) were recognised within business performance.



## 4. SEGMENTAL ANALYSIS

### (e) Capital expenditure

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

Year ended 31 December	Capital expenditure on property, plant and equipment		Capital expenditure on intangible assets other than goodwill	
	2023 £m	2022 £m	2023 £m	2022 £m
<b>British Gas Services &amp; Solutions</b>	<b>45</b>	52	<b>32</b>	25
<b>British Gas Energy</b>	<b>—</b>	—	<b>565</b>	582
<b>Bord Gáis Energy</b>	<b>69</b>	3	<b>7</b>	4
<b>Centrica Business Solutions</b>	<b>80</b>	47	<b>193</b>	205
<b>Centrica Energy</b>	<b>5</b>	—	<b>14</b>	14
<b>Upstream</b>	<b>95</b>	124	<b>18</b>	13
<b>Other</b>	<b>79</b>	26	<b>—</b>	—
<b>Capital expenditure</b>	<b>373</b>	252	<b>829</b>	843
Capitalised borrowing costs (note 8)	(2)	—	—	—
Inception of new leases and movements in payables and prepayments related to capital expenditure	(89)	(49)	4	5
Capital expenditure cash outflow subsequent to transfer to held for sale	—	109	—	10
Purchases of emissions allowances and renewable obligation certificates (note 15) <sup>(i)</sup>	—	—	(780)	(799)
<b>Net cash outflow</b>	<b>282</b>	312	<b>53</b>	59

(i) Purchases of emissions allowances and renewable obligation certificates of £565 million (2022: £578 million) in British Gas Energy, £193 million (2022: £203 million) in Centrica Business Solutions, £18 million (2022: £13 million) in Upstream, and £4 million (2022: £5 million) in Centrica Energy.

## 4. SEGMENTAL ANALYSIS

### (f) Free cash flow

Free cash flow is used by management to assess the cash-generating performance of each segment, after taking account of the need to maintain its capital asset base. By excluding deficit reduction payments and movements in collateral and margin cash, which are predominantly triggered by wider market factors, and in the case of collateral and margin movements, represent timing movements, free cash flow is used by management as an adjusted measure of the cash generation of the business. Free cash flow excludes investing cash flows that are related to adjusted net cash/debt. This measure is reconciled to the net cash flow from operating and investing activities.

Year ended 31 December	2023 £m	2022 £m
<b>British Gas Services &amp; Solutions</b>	<b>64</b>	<b>(19)</b>
<b>British Gas Energy <sup>(i)</sup></b>	<b>302</b>	<b>1,283</b>
<b>Bord Gáis Energy</b>	<b>(146)</b>	<b>81</b>
<b>Centrica Business Solutions</b>	<b>220</b>	<b>(48)</b>
<b>Centrica Energy <sup>(ii)</sup></b>	<b>1,354</b>	<b>199</b>
<b>Upstream <sup>(iii)</sup></b>	<b>1,236</b>	<b>1,539</b>
<b>Other <sup>(iv)</sup></b>	<b>(20)</b>	<b>26</b>
<b>Segmental free cash flow excluding tax</b>	<b>3,010</b>	<b>3,061</b>
Taxes paid	(803)	(574)
<b>Total free cash flow</b>	<b>2,207</b>	<b>2,487</b>
UK pension deficit payments (note 22)	(180)	(214)
Movements in variation margin and collateral (note 24)	585	(1,173)
Interest received	267	46
Purchase and settlement of securities (note 24)	(12)	(398)
	<b>2,867</b>	<b>748</b>
<b>Net cash flow from operating activities</b>	<b>2,752</b>	<b>1,314</b>
<b>Net cash flow from investing activities</b>	<b>115</b>	<b>(566)</b>
<b>Total cash flow from operating and investing activities</b>	<b>2,867</b>	<b>748</b>

(i) British Gas Energy free cash flow in 2023 includes significant working capital outflows of approximately £500 million largely related to the impact of falling commodity prices. British Gas Energy free cash flow in 2022 includes £440 million received under the Energy Bill Support Scheme, which was disclosed as restricted cash, and accelerated cash flows of approximately £700 million under the Energy Price Guarantee.

(ii) Centrica Energy free cash flow in 2023 includes operating cash inflows of around £580 million driven by profit on 2022 derivative positions cash settling during the year. Centrica Energy free cash flow in 2022 includes cash outflows associated with increased gas in storage, and working capital movements of approximately £500 million. Centrica Energy adjusted operating profit in 2022 included a significant portion of unrealised derivative positions.

(iii) Upstream free cash flow in 2023 includes inflows of £55 million relating to deferred consideration received from the 2022 Spirit Norway disposal, and realised hedge cash outflows of £34 million (2022: £161 million) have been incurred relating to the Norwegian assets, but were held outside the disposal groups. £630 million of free cash flow excluding tax in 2022 relates to the Norwegian disposal groups, including its disposal cash flows. £300 million of taxes paid in 2022 relate to the Norway disposal group.

(iv) The Other segment includes corporate functions.

## 5. COSTS

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

### (a) Analysis of costs by nature

Year ended 31 December	2023			2022		
	Cost of sales and settlement of certain energy contracts £m	Operating costs £m	Total costs £m	Cost of sales and settlement of certain energy contracts £m	Operating costs £m	Total costs £m
Transportation, distribution, capacity market and metering costs	(4,813)	—	(4,813)	(4,694)	—	(4,694)
Commodity costs <sup>(i)</sup>	(20,258)	—	(20,258)	(20,748)	—	(20,748)
Depreciation, amortisation, impairments and write-downs	(324)	(218)	(542)	(441)	(336)	(777)
Employee costs	(608)	(777)	(1,385)	(704)	(753)	(1,457)
Other direct costs <sup>(i)</sup>	(2,154)	(1,077)	(3,231)	(1,611)	(783)	(2,394)
<b>Costs included within business performance before credit losses on financial assets</b>	<b>(28,157)</b>	<b>(2,072)</b>	<b>(30,229)</b>	<b>(28,198)</b>	<b>(1,872)</b>	<b>(30,070)</b>
Credit losses on financial assets (net of recovered amounts) (note 17)	—	(602)	(602)	—	(351)	(351)
<b>Total costs included within business performance</b>	<b>(28,157)</b>	<b>(2,674)</b>	<b>(30,831)</b>	<b>(28,198)</b>	<b>(2,223)</b>	<b>(30,421)</b>
Adjustment for gross cost of settled energy contracts in the scope of IFRS 9 and onerous energy supply contract provision	17,497	—	17,497	14,986	—	14,986
Exceptional items and re-measurement and settlement of derivative energy contracts (note 7)	(6,175)	(645)	(6,820)	(8,484)	(155)	(8,639)
<b>Total costs within Group operating profit</b>	<b>(16,835)</b>	<b>(3,319)</b>	<b>(20,154)</b>	<b>(21,696)</b>	<b>(2,378)</b>	<b>(24,074)</b>

(i) Commodity costs include £nil recoverable under the Last Resort Supplier Payment claim (2022: £241 million credit), a further credit of £5 million is included in other direct operating costs (2022: £nil). These credits offset costs incurred as a result of the Group's appointment as Supplier of Last Resort to customers of energy suppliers who have ceased trading. See note 3.

### (b) Employee costs

The below employee costs exclude the costs of redundancy and similar termination benefits.

Year ended 31 December	2023 £m	2022 £m
Wages and salaries	(1,105)	(1,159)
Social security costs	(146)	(100)
Pension and other post-employment benefits costs	(118)	(171)
Share scheme costs (note S4)	(31)	(10)
	<b>(1,400)</b>	<b>(1,440)</b>
Capitalised employee costs	15	10
Repayment of Coronavirus government support programmes	—	(27)
<b>Employee costs recognised in business performance in the Group Income Statement</b>	<b>(1,385)</b>	<b>(1,457)</b>

## 5. COSTS

### (c) Average number of employees during the year

Year ended 31 December	2023 Number	2022 Number
British Gas Services & Solutions	12,309	12,470
British Gas Energy	3,979	3,257
Bord Gáis Energy	395	320
Centrica Business Solutions	1,334	1,444
Centrica Energy	780	573
Upstream	699	670
Group Functions	1,518	1,220
	21,014	19,954

## 6. SHARE OF RESULTS OF JOINT VENTURES AND ASSOCIATES

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

### Share of results of joint ventures and associates

The Group's share of results of joint ventures and associates principally arises from its interest in Nuclear – Lake Acquisitions Limited, an associate, reported in the Upstream segment.

Year ended 31 December	2023			2022		
	Share of business performance £m	Share of exceptional items and certain re- measurements £m	Share of results for the year £m	Share of business performance £m	Share of exceptional items and certain re- measurements £m	Share of results for the year £m
Income	680	—	680	592	—	592
Expenses before exceptional items and certain re-measurements	(397)	—	(397)	(472)	—	(472)
Exceptional items and re-measurement of certain contracts	—	(1)	(1)	—	1	1
Operating profit/(loss)	283	(1)	282	120	1	121
Financing gain	—	—	—	3	—	3
Taxation on profit/(loss)	(74)	—	(74)	(31)	—	(31)
<b>Share of post-taxation results of joint ventures and associates</b>	<b>209</b>	<b>(1)</b>	<b>208</b>	<b>92</b>	<b>1</b>	<b>93</b>

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

## 7. EXCEPTIONAL ITEMS AND CERTAIN RE-MEASUREMENTS

### (a) Certain re-measurements

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

If the future costs to fulfil customer supply contracts, including the mark-to-market reversal of any energy hedging contracts entered into to meet this demand, exceed the charges recoverable from customers, an onerous contract provision will be recognised. Because the associated hedging gains or losses will be recognised in certain re-measurements, the movements in the onerous provision will also be recognised in certain re-measurements.

Year ended 31 December	2023 £m	2022 £m
Certain re-measurements recognised in relation to energy contracts:		
Net gains/(losses) arising on delivery of contracts	3,529	(1,403)
Net gains/(losses) arising on market price movements and new contracts	44	(3,757)
<b>Net re-measurements included within gross profit before onerous supply contract provision</b>	<b>3,573</b>	<b>(5,160)</b>
Onerous energy supply contract provision movement <sup>(i)</sup>	833	1,766
<b>Net re-measurements included within gross profit</b>	<b>4,406</b>	<b>(3,394)</b>
Net (loss)/gain arising on re-measurement of certain associates' contracts (net of taxation)	(1)	1
<b>Net re-measurements included within Group operating profit</b>	<b>4,405</b>	<b>(3,393)</b>
<b>Taxation on certain re-measurements (note 9) <sup>(ii)</sup></b>	<b>(1,649)</b>	<b>1,000</b>
<b>Certain re-measurements after taxation</b>	<b>2,756</b>	<b>(2,393)</b>

- (i) The onerous supply contract provision represents the future costs to fulfil customer contracts on a current market price basis. During the period, this provision has been fully unwound. The associated hedging gains or losses are separately recognised within the gains/losses arising on market price movements and new contracts. The movement in the onerous provision is detailed in note 3(b).
- (ii) Taxation on onerous energy supply contracts amounted to a £196 million debit (2022: £295 million debit) and taxation on other certain re-measurements amounted to £1,453 million debit (2022: £1,295 million credit).

Year ended 31 December	2023 £m	2022 £m
Total re-measurement and settlement of derivative energy contracts excluding:	(6,175)	(8,484)
IFRS 9 business performance revenue	(6,916)	(9,896)
IFRS 9 business performance cost of sales	16,664	13,220
<b>Unrealised certain re-measurements recognised in relation to energy contracts included in gross profit</b>	<b>3,573</b>	<b>(5,160)</b>
Onerous contract provision movement (cost of sales)	833	1,766
<b>Total certain re-measurements</b>	<b>4,406</b>	<b>(3,394)</b>

The table below reflects the certain re-measurement derivative movements by business segment:

Year ended 31 December	2023 £m	2022 £m
UK Energy Supply (British Gas Energy and Centrica Business Solutions)	506	(6,364)
Upstream/Centrica Energy/Bord Gáis	3,067	1,204
<b>Unrealised certain re-measurements recognised in relation to energy contracts included in gross profit</b>	<b>3,573</b>	<b>(5,160)</b>



## 7. EXCEPTIONAL ITEMS AND CERTAIN RE-MEASUREMENTS

### (b) Exceptional items

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

Year ended 31 December	2023 £m	2022 £m
Loss on disposal of E&P Norway	—	(362)
Impairment of gas storage asset <sup>(i)</sup>	(82)	—
(Impairment)/write-back of power assets <sup>(ii)</sup>	(563)	207
<b>Exceptional items included within Group operating profit <sup>(iii)</sup></b>	<b>(645)</b>	<b>(155)</b>
Net exceptional item taxation (note 9) <sup>(iv)</sup>	54	(207)
<b>Total exceptional items recognised after taxation</b>	<b>(591)</b>	<b>(362)</b>

(i) In the Upstream segment, an impairment of the Rough gas storage asset of £82 million (post-tax £59 million) has been recorded as a result of a reduction in both forecast gas prices and forecast summer/winter gas price spreads.

(ii) In the Upstream segment, an impairment of the Nuclear investment of £549 million (post-tax £549 million) (2022: write-back of £195 million (post-tax £195 million)) has been recorded predominantly as a result of the decrease in forecast power prices offset by the positive effect of life extensions at Heysham and Hartlepool. In the Centrica Business Solutions segment, an impairment of £14 million (post-tax £11 million) (2022: write-back of £12 million (post-tax £9 million)) has been recorded, predominantly related to a battery storage asset and a gas engine, also following lower forecast commodity prices. See note 7(c).

(iii) Exceptional items for 2023 are non-cash. The cash flows recorded as payments relating to exceptional charges of £6 million (2022: £24 million) in the Group Cash Flow Statement relate to previous year exceptional restructuring costs.

(iv) Exceptional item taxation includes a credit of £28 million associated with net deferred tax asset recognition predominantly related to exploration and production PRT carry-back, offset by a reduction in the expected recovery of tax losses and investment allowance, due to the reduction in forecast commodity prices. This item is unrelated to the other exceptional items.

## 7. EXCEPTIONAL ITEMS AND CERTAIN RE-MEASUREMENTS

### (c) Impairment accounting policy, process and sensitivities

The information provided below relates to the assets and CGUs (or groups of CGUs) that have been subject to impairment during the year.

#### Exceptional impairment assessments of assets measured on a value-in-use (VIU) basis

Segment	Asset/CGU	Basis for impairment assessment	Recoverable amount £m	Impairment £m
Upstream	Nuclear <sup>(i)</sup>	The decrease in short-term baseload power prices has more than offset the impact of life extensions at Heysham 1 and Hartlepool stations	903	549

(i) During the year ended 31 December 2022, an impairment write-back of £195 million was booked in relation to the Nuclear investment. The recoverable amount at the end of 2022 was £1,560 million.

#### Nuclear

A VIU calculation has been used to determine the recoverable amount of the Group's investment in Nuclear. The cash flows incorporated in the valuation are based on detailed business forecasts in the short term, extrapolated to future years to account for the expected generation profile of the fleet for its remaining life. Assumptions include forward commodity prices, capacity rates, fuel and network costs, and operating and capital expenditure requirements. Price assumptions are based on liquid market prices for 2024 to 2027 which are then blended over a one-year period to long-term price forecasts. Long-term price assumptions derived from third-party market comparator median curves are used due to alignment with pricing that a reasonable market participant would use.

The Electricity Generator Levy, applying a 45% tax rate to revenues generated over £75/MWh until 31 March 2028, based on the above price assumptions, has also been included in the assessment. See notes 1 and 3.

In March 2023, the Nuclear business announced that estimated operating lifetimes at the Heysham 1 and Hartlepool stations would be extended by two years to March 2026, with a range of plus or minus one year. Based on prices at 31 December 2023, the lifetime extensions increase the value of the Group's investment in Nuclear by £131 million. The plus/minus one-year range would impact value by an increase of £48 million or a decrease of £53 million.

The VIU calculation assumes that the Sizewell plant operates until 2055, reflecting a 20-year extension beyond its original design life. In the absence of this extension, the carrying value of the Group's investment in Nuclear would be reduced by £98 million. All other stations' life assumptions are aligned to lifetime closure dates announced by the operator (being between March 2026 and March 2028).

The VIU calculation is also sensitive to changes in outage assumptions, and the base level generation volumes assumed for the fleet were decreased during the period based on a review of planned and unplanned outages. A reduction of 5% in the unplanned outage rate applied to volumes across the Nuclear fleet would lead to a write-back movement of £125 million.

The future pre-tax cash flows generated by the investment in the associate are discounted using a pre-tax nominal discount rate of 17.3% (2022: 24.8%). This equated to a post-tax rate of 8.5% (2022: 8.0%). The post-tax discount rate is initially derived from the Group weighted average cost of capital as adjusted for the risks associated with the asset and with reference to comparator companies. The pre-tax rate is then back-calculated by removing tax cash flows and assessing the rate that would give the same result as the post-tax rate. As baseload power prices for the liquid period remain higher than longer-term forecast prices, the near-term cash flows are elevated, which caused the pre-tax discount rate to remain high. A 2% increase in the post-tax discount rate would lead to an impairment of £56 million (when compared with the closing year-end carrying value). Similarly, a 2% reduction in the post-tax discount rate would lead to a write-back of £73 million.

The asset is particularly sensitive to changes in commodity price and the table below details average prices for the first 5- and 10-year periods and associated sensitivities. Note that the asset is valued for its entire economic life and not just this 15-year period.

	Five-year liquid and blended-period price <sup>(i)</sup>		Ten-year long-term average price <sup>(i)</sup>		Change in pre/post-tax write-back/(impairment) <sup>(ii)</sup>			
					+10%		-10%	
	2024-2028	2023-2027	2029-2038	2028-2037				
	31 December 2023	31 December 2022	31 December 2023	31 December 2022	31 December 2023	31 December 2022	31 December 2023	31 December 2022
	£/MWh	£/MWh	£/MWh	£/MWh	£m	£m	£m	£m
Baseload power	71	164	56	68	148	198	(191)	(198)
					+50% Five-year liquid and blended-period only		-50% Five-year liquid and blended-period only	
					325		(672)	

(i) Prices are shown in 2022 real terms.

(ii) A 10% change was historically deemed to represent a reasonably possible variation across the entire period covered by the liquid market and comparator curves used in the nuclear impairment test. Given the volatility in commodity prices during recent years, a further sensitivity has been included based on a 50% change in liquid and blend-period commodity prices only. 31 December 2023 sensitivities are impacted by the effect of the Electricity Generator Levy threshold of £75/MWh.

Furthermore, there is also uncertainty due to climate change and international governmental intervention to reduce CO<sub>2</sub> emissions and the likely impact this will have on both power demand and forecast prices. As a result, a further sensitivity is disclosed below based on the average forecast prices aligned to the net zero price curves issued by Aurora and Baringa (power analytics providers), which assumes governmental policies are put in place to achieve the temperature and net zero goals by 2050. This sensitivity retains the prices for the liquid period (four years) but replaces the longer term thereafter with the average of Aurora and Baringa's forecast prices for net zero.

## 7. EXCEPTIONAL ITEMS AND CERTAIN RE-MEASUREMENTS

	Ten-year long-term average price <sup>(i)</sup>	Change in pre/post-tax impairment <sup>(ii)</sup>
	2029-2038	
	2023	£m
Baseload power (£/MWh)	56	(15)

(i) Prices shown in 2022 real terms. The ten-year long-term average net zero price is the same as the Group's base case but the annual price profiles differ.

(ii) Change would lead to a small further write-off of the carrying value.

### Exceptional impairment assessments of assets measured on a FVLCD basis

Segment	Asset/CGU (or group of CGUs)	Basis for impairment assessment	Recoverable amount <sup>(i)</sup> £m	FV hierarchy	Impairment £m
Upstream	Rough gas storage asset	The reduction in both forecast NBP gas prices and forecast summer/winter NBP gas price spreads	(183)	L3	82

(i) Recoverable amount includes the decommissioning costs associated with the gas field, together with related tax impacts. The decommissioning provision for Rough at the year-end is £319 million.

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

An exceptional impairment has been recorded in 2023 for the Rough gas storage asset measured on a FVLCD basis. No other Upstream gas assets have been impaired during the year but they still have a significant carrying value on the balance sheet and accordingly further sensitivities (including for the Rough gas storage asset) are provided in the paragraph below:

#### Upstream gas assets (including Rough gas storage asset)

For Upstream gas assets post-tax cash flows are derived from projected production profiles of each field, taking into account forward prices for gas and liquids over the relevant period. Where forward market prices are not available (i.e. outside the active period for each commodity), prices are determined based on the median of third-party market comparator curves. The date of cessation of production depends on the interaction of a number of variables, such as the recoverable quantities of hydrocarbons, production costs, the contractual duration of the licence area and the selling price of the gas and liquids produced. As each field has specific reservoir characteristics and economic circumstances, the post-tax cash flows for each field are computed using individual economic models. Price assumptions are critical and use liquid market prices for 2024 to 2027, blended over a one-year period to long-term price forecasts. Long-term price assumptions derived from third-party market comparator median curves are deemed best aligned with pricing that a reasonable market participant would use. Following the implementation of the Energy Profits Levy, the increased tax rates have been included in the FVLCD calculations until the sunset date of 31 March 2028. For the Rough gas storage asset, in addition to the above process associated with its cushion gas production, an assessment is also made of value to be derived from cycling gas in and out of the reservoir (predominantly from summer/winter NBP gas spreads). This assessment utilises the forward market prices noted above and is also used to calculate the optimum cushion gas production date to maximise the recoverable amount of the asset.

The future post-tax cash flows are discounted using a post-tax nominal discount rate of 11.0% (2022: 10.5%).

As forward commodity prices are a key assumption in these valuations, average prices and associated impairment sensitivities for the Group's upstream gas assets are shown below. Note that the fields are valued over their respective economic lives and the 5- and 10-year pricing information shown below is just to provide context. Note that the asset portfolio reserves are predominantly gas (rather than liquids) and therefore only NBP figures have been shown below.

	Five-year liquid and blended-period price <sup>(i)</sup>		Ten-year long-term average price <sup>(i)</sup>		Change in post-tax write-back/(impairment) <sup>(ii)</sup>			
					+10%		-10%	
	2024-2028	2023-2027	2029-2038	2028-2037				
	31 December 2023	31 December 2022	31 December 2023	31 December 2022	31 December 2023	31 December 2022	31 December 2023	31 December 2022
					£m	£m	£m	£m
NBP (p/th)	71	155	61	75	6	—	(5)	—
					+50% Five-year liquid and blended-period only		-50% Five-year liquid and blended-period only	
					32		(269)	

(i) Prices are shown in 2022 real terms.

(ii) Sensitivity relates to Upstream exploration and production assets and CGUs (including gas storage assets). A 10% change was historically deemed to represent a reasonably possible variation across the entire period covered by both the liquid market and longer-term comparator curves used in upstream gas impairment tests. Given the significant movements in commodity prices during the last few years, a further sensitivity has been included based on a 50% change in liquid and blend-period commodity prices only. The changes shown relate to further write-backs or impairments and are restricted because the most material fields have already been written back to their depreciated historic cost and have excess impairment headroom.

## 7. EXCEPTIONAL ITEMS AND CERTAIN RE-MEASUREMENTS

Furthermore, there is also uncertainty due to climate change and international governmental intervention to reduce CO<sub>2</sub> emissions and the likely impact this will have on gas demand and forecast prices. As a result, a further sensitivity is disclosed below based on forecast prices aligned to an average of the International Energy Agency's (IEA), Aurora and Baringa's net zero emissions by 2050, which assumes governmental policies are put in place to achieve the temperature and net zero goals by 2050. This sensitivity retains the prices for the liquid period (four years) but replaces the longer term thereafter with the average of these forecast prices for net zero emissions by 2050.

	Ten-year long-term average price <sup>(i)</sup>	Change in post-tax write-back/ (impairment) <sup>(ii)</sup>
	2029-2038	
	2023	£m
NBP (p/th)	57	—

(i) Prices shown in 2022 real terms.

(ii) Change in impairment restricted due to the most material fields having already been written back to their depreciated historic cost and having excess impairment headroom, as well as most hydrocarbon production being in the liquid period and hence unaffected by net zero pricing.

## 8. NET FINANCE COST

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

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

Year ended 31 December	2023			2022		
	Financing costs £m	Investment income £m	Total £m	Financing costs £m	Investment income £m	Total £m
Cost of servicing net debt:						
Interest income	—	269	269	—	52	52
Interest cost on bonds, bank loans and overdrafts	(262)	—	(262)	(184)	—	(184)
Interest cost on lease liabilities	(12)	—	(12)	(6)	—	(6)
	(274)	269	(5)	(190)	52	(138)
Net (losses)/gains on revaluation	(2)	—	(2)	—	22	22
Notional interest arising from discounting	(14)	—	(14)	(3)	3	—
	(290)	269	(21)	(193)	77	(116)
Other interest charges <sup>(i)</sup>	(20)	—	(20)	(31)	—	(31)
Capitalised borrowing costs <sup>(ii)</sup>	2	—	2	4	—	4
<b>Financing (cost)/income <sup>(iii)</sup></b>	<b>(308)</b>	<b>269</b>	<b>(39)</b>	<b>(220)</b>	<b>77</b>	<b>(143)</b>

(i) Other interest charges includes interest charged on cash collateral, and fees for letters of credit. The cash flow associated is £20 million (2022: £30 million).

(ii) Borrowing costs have been capitalised using an average rate of 8.39% (2022: 5.57%). The capitalised borrowing costs in 2022 relate entirely to the Norwegian assets held for sale, and subsequently disposed of.

(iii) Investment income has increased significantly during 2023, and as a result we have amended our Group Income Statement presentation to disclose investment income and financing costs separately.

## 9. TAXATION

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

### (a) Analysis of tax charge

Year ended 31 December	2023			2022		
	Business performance £m	Exceptional items and certain re-measurements £m	Results for the year £m	Business performance £m	Exceptional items and certain re-measurements £m	Results for the year £m
<b>Current tax</b>						
UK corporation tax	(535)	105	(430)	(331)	(262)	(593)
UK energy profits levy	(160)	11	(149)	(54)	21	(33)
UK petroleum revenue tax	1	—	1	2	—	2
Non-UK tax	(100)	—	(100)	(477)	32	(445)
Adjustments in respect of prior years – UK	3	(26)	(23)	(47)	24	(23)
Adjustments in respect of prior years – non-UK	2	—	2	(8)	—	(8)
<b>Total current tax</b>	<b>(789)</b>	<b>90</b>	<b>(699)</b>	<b>(915)</b>	<b>(185)</b>	<b>(1,100)</b>
<b>Deferred tax</b>						
Origination and reversal of temporary differences – UK	(92)	(1,312)	(1,404)	(128)	840	712
UK energy profits levy	34	(376)	(342)	23	(85)	(62)
Change in UK tax rate	(2)	(3)	(5)	(7)	242	235
UK petroleum revenue tax	—	52	52	6	(19)	(13)
Origination and reversal of temporary differences – non-UK	4	(20)	(16)	(89)	32	(57)
Adjustments in respect of prior years – UK	7	(26)	(19)	49	(27)	22
Adjustments in respect of prior years – non-UK	—	—	—	15	(5)	10
<b>Total deferred tax</b>	<b>(49)</b>	<b>(1,685)</b>	<b>(1,734)</b>	<b>(131)</b>	<b>978</b>	<b>847</b>
<b>Total UK tax</b>	<b>(744)</b>	<b>(1,575)</b>	<b>(2,319)</b>	<b>(487)</b>	<b>734</b>	<b>247</b>
<b>Total non-UK tax</b>	<b>(94)</b>	<b>(20)</b>	<b>(114)</b>	<b>(559)</b>	<b>59</b>	<b>(500)</b>
<b>Total taxation on profit/(loss) for the year <sup>(i)</sup></b>	<b>(838)</b>	<b>(1,595)</b>	<b>(2,433)</b>	<b>(1,046)</b>	<b>793</b>	<b>(253)</b>

(i) Total taxation on profit/(loss) excludes taxation on the Group's share of profits of joint ventures and associates.

#### UK tax rates

Most activities in the UK are subject to the standard rate for UK corporation tax of 23.5% (2022: 19%). Upstream gas production activities are taxed at a rate of 30% (2022: 30%), a supplementary charge of 10% (2022: 10%), plus the energy profits levy of 35% (2022: 25%) to give an overall tax rate of 75% (2022: 65%). Certain upstream gas production assets in the UK are subject to the UK petroleum revenue tax (PRT) regime at the current tax rate of 0% (2022: 0%).

The UK corporation tax rate increased to 25% effective 1 April 2023, giving an overall rate of 23.5% for the year (being the average of 19% in the period to 31 March 2023 and 25% thereafter).

#### Non-UK tax rates

Taxation in non-UK jurisdictions, where the Group has a substantial presence, is calculated at the rate prevailing in those respective jurisdictions.

The main non-UK rates of corporation tax are 12.5% (2022: 12.5%) in the Republic of Ireland, 22% (2022: 22%) in Denmark and 17% (2022: 17%) in Singapore.

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

Movements in deferred tax liabilities and assets are disclosed in note 16. Tax on items taken directly to equity is disclosed in note S4.



## 9. TAXATION

### (b) Factors affecting the tax charge

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

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

Year ended 31 December	2023			2022		
	Business performance £m	Exceptional items and certain re-measurements £m	Results for the year £m	Business performance £m	Exceptional items and certain re-measurements £m	Results for the year £m
Profit/(loss) before taxation	2,713	3,760	6,473	3,165	(3,548)	(383)
(Deduct)/add back share of (profits)/losses of joint ventures and associates, net of interest and taxation	(209)	1	(208)	(92)	(1)	(93)
	2,504	3,761	6,265	3,073	(3,549)	(476)
Tax on profit/(loss) at standard UK corporation tax rate of 23.5% (2022: 19%)	(588)	(884)	(1,472)	(584)	674	90
Effects of:						
Depreciation/impairment on non-qualifying assets	(1)	(129)	(130)	1	37	38
Other permanent differences	(16)	1	(15)	—	—	—
Electricity Generator Levy	(67)	—	(67)	—	—	—
Higher rates applicable to Upstream profits/losses	(44)	(180)	(224)	(429)	(112)	(541)
Energy profits levy charge for the year	(133)	(395)	(528)	(31)	(212)	(243)
Energy profits levy re-measurement of deferred tax balances	7	30	37	—	148	148
Upstream investment incentives	—	—	—	32	—	32
Petroleum revenue tax	—	52	52	1	—	1
Non-UK tax rates (excluding Upstream)	6	17	23	(28)	(32)	(60)
Movements in uncertain tax provisions	(1)	—	(1)	(13)	—	(13)
(Impairment)/write-back of deferred tax assets relating to Upstream losses and decommissioning	—	(55)	(55)	(1)	121	120
Changes in UK tax rate	(2)	(3)	(5)	(7)	242	235
Disposal of Norway business	—	—	—	—	(69)	(69)
Prior year adjustment	12	(52)	(40)	9	(8)	1
Other (non-tax deductible)/non-taxable items	(11)	3	(8)	4	4	8
<b>Taxation on profit/(loss)</b>	<b>(838)</b>	<b>(1,595)</b>	<b>(2,433)</b>	<b>(1,046)</b>	<b>793</b>	<b>(253)</b>
Less: movement in deferred tax	49	1,685	1,734	131	(978)	(847)
<b>Total current tax</b>	<b>(789)</b>	<b>90</b>	<b>(699)</b>	<b>(915)</b>	<b>(185)</b>	<b>(1,100)</b>

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

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

The Group's uncertain tax provision relates to differences in the interpretation of tax legislation in the UK and Canada. Due to the uncertainty associated with such tax items, there is a possibility that, on conclusion of open tax matters at a future date, the final outcome may differ. The uncertain tax provision represents management's assessment of the likely outcome of each issue.

At 31 December 2023 the provision for uncertain tax items was £43 million (2022: £42 million). The Group provided an indemnity to Sval Energi following the sale of Spirit Energy's Norwegian business and the transfer of the legal liabilities in respect of open tax disputes. Any movement in the underlying indemnity (excluding movements attributable to foreign exchange rates) will be recorded through the profit before tax of the Group. As at 31 December 2023 the indemnity in respect of the tax disputes was £123 million (2022: £129 million).

## 9. TAXATION

### (c) Factors that may affect future tax charges

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

The Group's effective tax rate is dependent on the proportion of Group profits and losses arising from its UK upstream and nuclear activities relative to lower taxed UK and other jurisdictions' profits and losses.

The headline rate of tax on ring fence profits from gas production in the UK was 75% (consisting of ring fence corporation tax of 30%, supplementary charge of 10%, and the Energy Profits Levy of 35%) versus 23.5% UK statutory corporation tax rate.

The Energy Profits Levy is a temporary measure and will apply to gas production profits until 31 March 2028. However, on 9 June 2023 the UK Government announced the Energy Security Investment Mechanism. As a result, the Energy Profits Levy will cease to apply if average oil and gas prices fall to historically normal levels for two consecutive quarters. Based on 20-year averages, normal levels would be achieved where both average oil and gas prices fall to, or below, US\$71.40 per barrel for oil and £0.54 per therm for gas. If the Energy Profits Levy ceases to apply, the headline rate on ring fence profits will reduce to 40%. Based on the independent Office for Budget Responsibility's forecast, the Energy Security Investment Mechanism is not expected to be triggered before the planned end date for Energy Profits Levy of 31 March 2028.

PRT is set at 0% but may still give rise to historic refunds from the carry-back of excess reliefs (for example, from decommissioning).

The Electricity Generator Levy applies from 1 January 2023 to 31 March 2028 at the tax rate of 45% to electricity generation revenues, which will be determined by reference to revenue from sales exceeding a benchmark price of £75/MWh. The benchmark price is indexed on 1 April each year by reference to Consumer Price Index for the previous December.

The Electricity Generator Levy is not an income tax for accounting purposes and therefore is included in the Group's cost of sales and our share of the results of joint ventures and associates operating profits and is not deductible for the purposes of UK corporation tax. The Electricity Generator Levy is a wholly new type of levy and there remains some uncertainty over how the provisions are to be applied and consequently the amount of levy payable. See note 1(b) for details of the uncertainties regarding the application of the Electricity Generator Levy to the Group's revenues.

The Group monitors income tax developments in all the jurisdictions in which the Group operates, including the OECD Base Erosion and Profit Shifting (BEPS) initiative (Pillar 2), which may affect the Group's tax liabilities. On 8 October 2022, more than 135 countries of the OECD Inclusive Framework on BEPS committed to fundamental changes to the international corporate tax system. This includes a proposed global minimum corporation tax rate set at 15% for financial years beginning in 2024. Steps to introduce a global minimum corporation tax have been enacted in 2023 in the jurisdictions in which the Group operates.

The Group does not expect its tax liabilities to be materially increased as a result of the implementation of the Pillar 2 rules. The Group is currently assessing their detailed impact, but the Republic of Ireland is the only jurisdiction that is likely to be affected. The Republic of Ireland has enacted a minimum corporate tax rate of 15% with effect from 1 January 2024, increasing the rate from its current 12.5%. The impact on the Group's effective tax rate based on 2023 profits is less than 1%.

### (d) Relationship between current tax charge and taxes paid

Year ended 31 December	2023			2022		
	UK £m	Non-UK £m	Total £m	UK £m	Non-UK £m	Total £m
Current tax charge/(credit):						
Corporation tax	602	98	700	649	453	1,102
Petroleum revenue tax	(1)	—	(1)	(2)	—	(2)
Total tax on results for the year (per note 9(b))	601	98	699	647	453	1,100
Current tax included in other comprehensive income <sup>(i)</sup>	(29)	—	(29)	(29)	—	(29)
Total tax charge	572	98	670	618	453	1,071
Taxes paid/(refunded):						
Corporation tax	690	116	806	261	331	592
Petroleum revenue tax	(3)	—	(3)	(18)	—	(18)
	687	116	803	243	331	574
Included in the following lines of the Group Cash Flow Statement:						
Taxes paid in net cash flows			803			574

(i) Current tax movements relating to pension deficit payments are reported in other comprehensive income.

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

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

## 10. EARNINGS PER ORDINARY SHARE

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

Basic earnings per ordinary share has been calculated by dividing the profit attributable to equity holders of the Company for the year of £3,929 million (2022: loss of £782 million) by the weighted average number of ordinary shares in issue during the year of 5,569 million (2022: 5,869 million). The number of shares excludes 339 million ordinary shares (2022: 32 million), being the weighted average number of the Company's own shares held in the employee share trust and treasury shares repurchased during the year by the Group as part of the share buyback programme. These 339 million shares do not include shares expected to be repurchased as part of the Group's share buyback programme during 2024. See note S4.

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

Information presented for diluted and adjusted diluted earnings per ordinary share uses the weighted average number of ordinary shares as adjusted for 91 million (2022: 68 million) potentially dilutive ordinary shares as the denominator, unless it has the effect of increasing the profit or decreasing the loss attributable to each ordinary share.

### Basic to basic adjusted earnings per ordinary share reconciliation

Year ended 31 December	2023		2022	
	£m	Pence per ordinary share	£m	Pence per ordinary share
Earnings – basic	3,929	70.6	(782)	(13.3)
Net exceptional items after taxation (notes 2 and 7) <sup>(i)</sup>	600	10.8	279	4.8
Certain re-measurement (gains)/losses after taxation (notes 2 and 7) <sup>(i)</sup>	(2,670)	(48.0)	2,553	43.4
Earnings – adjusted basic	1,859	33.4	2,050	34.9
Earnings – diluted <sup>(ii)</sup>	3,929	69.4	(782)	(13.3)
Earnings – adjusted diluted	1,859	32.8	2,050	34.5

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

(ii) Potential ordinary shares are not treated as dilutive when they would decrease a loss per share.

## 11. DIVIDENDS

**Dividends represent the return of profits to shareholders. Dividends are paid as an amount per ordinary share held. The Group retains part of the profits generated to meet future investment plans or to fund share buyback programmes.**

	2023			2022		
	£m	Pence per ordinary share	Date of payment	£m	Pence per ordinary share	Date of payment
Prior year final dividend	113	2.00	20 Jul 2023	—	—	—
Interim dividend	73	1.33	16 Nov 2023	59	1.00	17 Nov 2022
	186			59		

The Directors propose a final dividend of 2.67 pence per ordinary share for the year ended 31 December 2023 (which would total £144 million based on shareholding at that date). The dividend will be paid on 11 July 2024 to those shareholders registered on 31 May 2024.

The Company has sufficient distributable reserves to pay dividends to its ultimate shareholders. Distributable reserves are calculated on an individual legal entity basis and the ultimate parent company, Centrica plc, currently has adequate levels of realised profits within its retained earnings to support dividend payments. Refer to the Centrica plc Company Balance Sheet on page 230. At 31 December 2023, Centrica plc's Company-only distributable reserves were c.£4.5 billion (2022: c.£2.9 billion). On an annual basis, the distributable reserve levels of the Group's subsidiary undertakings are reviewed and dividends paid up to Centrica plc as appropriate to replenish its reserves.

## 12. ACQUISITIONS AND DISPOSALS

**This section details business combinations, asset acquisitions and disposals made by the Group.**

During the year, Centrica Business Solutions acquired a number of companies with existing grid connections for the purpose of building power assets in line with the Group's strategy of being a flexible energy provider. The total consideration was £34 million with one transaction being accounted for as a business combination and the remainder as asset acquisitions. There have been no other material acquisitions or disposals either individually or in aggregate. There have been no material updates to the fair value of assets and liabilities recognised for businesses acquired in 2022.

During the year, the Group increased its equity holding in Greener Ideas Limited from 50% to 80% for consideration of £nil at which point it obtained control and started acquisition accounting. Property, plant and equipment of £44 million was acquired as part of this acquisition alongside debt which meant that no goodwill arose.

During the period, deferred consideration of £55 million was received in respect of the Spirit Norway disposal in 2022 and £17 million was distributed to SWM Bayerische E&P Beteiligungsgesellschaft mbH.

### 13. PROPERTY, PLANT AND EQUIPMENT

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

#### (a) Carrying amounts

	2023					2022				
	Land and buildings £m	Plant, equipment and vehicles £m	Power generation £m	Gas production and storage £m	Total £m	Land and buildings £m	Plant, equipment and vehicles £m	Power generation £m	Gas production and storage £m	Total £m
<b>Cost</b>										
1 January	235	691	199	11,517	12,642	259	575	205	11,339	12,378
Acquisitions <sup>(i)</sup>	1	7	70	—	78	—	—	—	—	—
Additions and capitalised borrowing costs	53	123	108	89	373	—	117	12	123	252
Disposals/retirements	(8)	(33)	(3)	—	(44)	(33)	(21)	(27)	(29)	(110)
Write-downs	—	—	—	—	—	—	—	—	(64)	(64)
Decommissioning liability and dilapidations revisions and additions (note 21)	4	—	2	92	98	1	—	—	67	68
Lease modifications and re-measurements	12	50	—	8	70	—	(7)	—	—	(7)
Exchange adjustments	(3)	(13)	(4)	(32)	(52)	8	27	9	81	125
<b>31 December</b>	<b>294</b>	<b>825</b>	<b>372</b>	<b>11,674</b>	<b>13,165</b>	<b>235</b>	<b>691</b>	<b>199</b>	<b>11,517</b>	<b>12,642</b>
<b>Accumulated depreciation and impairment</b>										
1 January	131	396	45	10,322	10,894	131	329	63	9,870	10,393
Charge for the year <sup>(ii)</sup>	24	85	12	274	395	22	81	15	392	510
Impairments/(write-backs)	3	18	2	82	105	4	(2)	(10)	20	12
Disposals/retirements	(8)	(32)	(3)	—	(43)	(28)	(19)	(25)	(29)	(101)
Exchange adjustments	(1)	(3)	(1)	(27)	(32)	2	7	2	69	80
<b>31 December</b>	<b>149</b>	<b>464</b>	<b>55</b>	<b>10,651</b>	<b>11,319</b>	<b>131</b>	<b>396</b>	<b>45</b>	<b>10,322</b>	<b>10,894</b>
<b>NBV at 31 December</b>	<b>145</b>	<b>361</b>	<b>317</b>	<b>1,023</b>	<b>1,846</b>	<b>104</b>	<b>295</b>	<b>154</b>	<b>1,195</b>	<b>1,748</b>

(i) Acquisitions includes £44 million relating to the step-up of the investment in Greener Ideas Limited from joint venture to subsidiary during the year. See note 12 for further details.

(ii) Depreciation of £324 million (2022: £441 million) has been recognised in cost of sales, and £71 million (2022: £69 million) in operating costs before exceptional items.



### 13. PROPERTY, PLANT AND EQUIPMENT

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

31 December	2023 £m	2022 £m
Plant, equipment and vehicles	99	33
Gas production and storage	29	61
Power generation	166	27

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

	2023					2022				
	Land and buildings £m	Plant, equipment and vehicles £m	Power generation £m	Gas production and storage £m	Total £m	Land and buildings £m	Plant, equipment and vehicles £m	Power generation £m	Gas production and storage £m	Total £m
Additions	47	41	—	—	88	—	54	—	—	54
Depreciation charge for the year	(23)	(65)	—	(10)	(98)	(21)	(66)	—	(12)	(99)
NBV at 31 December	123	223	—	14	360	86	207	—	16	309

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

## 14. INTERESTS IN JOINT VENTURES AND ASSOCIATES

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

### (a) Interests in joint ventures and associates

	2023	2022
	Investments in joint ventures and associates £m	Investments in joint ventures and associates £m
1 January	1,580	1,628
Additions <sup>(i)</sup>	9	18
(Impairments)/write-backs <sup>(ii)</sup>	(549)	195
Share of profit for the year	208	93
Share of other comprehensive loss <sup>(iii)</sup>	(95)	(293)
Dividends	(220)	(60)
Disposals <sup>(iv)</sup>	(28)	—
Other movements	(2)	(1)
<b>31 December</b>	<b>903</b>	<b>1,580</b>

(i) The £9 million in 2023 relates to cash injections into Greener Ideas Limited.

(ii) The £549 million in 2023 relates to nuclear investment impairment (2022: £195 million write-back). See note 7 for further details.

(iii) Share of other comprehensive loss mainly relates to actuarial changes on pension schemes within the nuclear investment.

(iv) In 2023, the Group increased its equity interest in Greener Ideas Limited and obtained control of the entity from that point.

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

	2023			2022
	Associates Nuclear £m	Other £m	Total £m	Total £m
31 December				
Share of non-current assets	3,888	—	3,888	4,196
Share of current assets	780	—	780	842
	4,668	—	4,668	5,038
Share of current liabilities	(270)	—	(270)	(348)
Share of non-current liabilities	(2,449)	—	(2,449)	(2,613)
	(2,719)	—	(2,719)	(2,961)
Cumulative impairment	(1,046)	—	(1,046)	(497)
<b>Interests in joint ventures and associates</b>	<b>903</b>	<b>—</b>	<b>903</b>	<b>1,580</b>
<b>Net cash included in share of net assets</b>	<b>99</b>	<b>—</b>	<b>99</b>	<b>112</b>

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

## 15. OTHER INTANGIBLE ASSETS AND GOODWILL

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

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

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

### (a) Carrying amounts

	2023						2022					
	Customer relationships and brands £m	Application software (iii) £m	EUA/ROC/REC (iii) £m	Exploration and evaluation expenditure £m	Goodwill £m	Total £m	Customer relationships and brands £m	Application software (iii) £m	EUA/ROC/REC £m	Exploration and evaluation expenditure £m	Goodwill £m	Total £m
<b>Cost</b>												
1 January	208	1,510	280	121	680	2,799	201	1,584	213	121	665	2,784
Additions and capitalised borrowing costs	—	49	780	—	—	829	—	44	799	—	—	843
Acquisitions	4	—	—	—	—	4	11	—	—	—	—	11
Disposals/retirements and surrenders	(46)	(38)	(767)	(121)	—	(972)	(9)	(129)	(732)	—	—	(870)
Exchange adjustments	(2)	(6)	—	—	(7)	(15)	5	11	—	—	15	31
<b>31 December</b>	<b>164</b>	<b>1,515</b>	<b>293</b>	<b>—</b>	<b>673</b>	<b>2,645</b>	<b>208</b>	<b>1,510</b>	<b>280</b>	<b>121</b>	<b>680</b>	<b>2,799</b>
<b>Accumulated amortisation and impairment</b>												
1 January	111	1,180	—	121	271	1,683	95	1,143	—	121	264	1,623
Amortisation (iv)	16	107	—	—	—	123	17	142	—	—	—	159
Disposals/retirements and surrenders	(46)	(38)	—	(121)	—	(205)	(9)	(129)	—	—	—	(138)
Impairments	5	10	—	—	—	15	5	15	—	—	—	20
Exchange adjustments	(2)	(4)	—	—	(3)	(9)	3	9	—	—	7	19
<b>31 December</b>	<b>84</b>	<b>1,255</b>	<b>—</b>	<b>—</b>	<b>268</b>	<b>1,607</b>	<b>111</b>	<b>1,180</b>	<b>—</b>	<b>121</b>	<b>271</b>	<b>1,683</b>
<b>NBV at 31 December</b>	<b>80</b>	<b>260</b>	<b>293</b>	<b>—</b>	<b>405</b>	<b>1,038</b>	<b>97</b>	<b>330</b>	<b>280</b>	<b>—</b>	<b>409</b>	<b>1,116</b>

(i) Application software includes assets under construction with a cost of £110 million (2022: £83 million).

(ii) The remaining amortisation period of individually material application software assets, which had a carrying value of £65 million (2022: £100 million), is between 0 and 5 years. Additionally, there is £82 million (2022: £61 million) of individually material software assets under construction.

(iii) The Group has assessed the expected submission dates of EUA/ROC/RECs currently held and where they are expected to be surrendered within a year of purchase, they are presented within current assets, otherwise as non-current. At 31 December 2023, £293 million is presented within current assets. See note 1 for further details.

(iv) Amortisation of £123 million (2022: £159 million) has been recognised in operating costs before exceptional items.

## 15. OTHER INTANGIBLE ASSETS AND GOODWILL

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

Goodwill acquired through business combinations, and indefinite-lived intangible assets, have been allocated for impairment testing purposes to individual CGUs or groups of CGUs, each representing the lowest level within the Group at which the goodwill or indefinite-lived intangible asset is monitored for internal management purposes. See note S2 for further details on impairment assumptions.

		2023			2022		
		Carrying amount of goodwill £m	Carrying amount of indefinite-lived intangible assets <sup>(i)</sup> £m	Total £m	Carrying amount of goodwill £m	Carrying amount of indefinite-lived intangible assets <sup>(i)</sup> £m	Total £m
31 December	Principal acquisitions to which goodwill and intangibles with indefinite useful lives relate						
<b>CGUs</b>							
British Gas Services & Solutions	AlertMe/Dyno-Rod	63	57	120	63	57	120
British Gas Energy	Enron Direct/Electricity Direct	121	—	121	121	—	121
Centrica Business Solutions							
– Energy supply	Enron Direct/Electricity Direct	60	—	60	60	—	60
Bord Gáis Energy	Bord Gáis Energy	16	—	16	16	—	16
Centrica Energy	Neas Energy	145	—	145	149	—	149
		405	57	462	409	57	466

(i) The indefinite-lived intangible assets relate mainly to the Dyno-Rod brand.

The Group has considered the impact of climate change on the carrying value of goodwill, including the impact of the risks and opportunities. See note 3(c).

## 16. DEFERRED TAX LIABILITIES AND ASSETS

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

	Accelerated tax depreciation (corporation tax) £m	Net decommissioning <sup>(i)</sup> £m	Losses carried forward <sup>(ii)</sup> £m	Other timing differences £m	Marked-to-market positions £m	Net deferred PRT <sup>(iii)</sup> £m	Retirement benefit obligation and other provisions £m	Total £m
1 January 2022	(458)	556	187	31	545	42	(116)	787
(Charge)/credit to income	(136)	(101)	29	(93)	1,160	(13)	1	847
Credit/(charge) to equity	—	—	—	—	8	—	(6)	2
Transferred within held for sale	—	—	—	70	—	—	—	70
Exchange and other adjustments	(1)	—	—	(4)	—	—	—	(5)
31 December 2022	(595)	455	216	4	1,713	29	(121)	<b>1,701</b>
Credit/(charge) to income	115	(13)	(122)	(6)	(1,738)	52	(22)	<b>(1,734)</b>
Credit to equity	—	—	—	6	—	—	64	<b>70</b>
Exchange and other adjustments	—	—	—	(5)	—	—	—	<b>(5)</b>
<b>31 December 2023</b>	<b>(480)</b>	<b>442</b>	<b>94</b>	<b>(1)</b>	<b>(25)</b>	<b>81</b>	<b>(79)</b>	<b>32</b>

(i) Net decommissioning includes deferred tax assets of £617 million (2022: £596 million) in respect of decommissioning provisions.

(ii) The losses arise principally from accelerated allowances for upstream investment expenditure, for which equivalent deferred tax liabilities are included under accelerated tax depreciation.

(iii) The deferred PRT amounts include the effect of deferred corporation tax as PRT is chargeable to corporation tax.

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

	2023		2022	
	Assets £m	Liabilities £m	Assets £m	Liabilities £m
31 December				
Gross deferred tax balances	<b>1,007</b>	<b>(975)</b>	2,481	(780)
Offsetting deferred tax balances	<b>(551)</b>	<b>551</b>	(772)	772
<b>Net deferred tax balances (after offsetting for financial reporting purposes)</b>	<b>456</b>	<b>(424)</b>	1,709	(8)

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

The UK upstream deferred tax assets and liabilities were measured at the headline rate of tax of 75% applicable to the UK gas profits, consisting of 30% ring fence corporation tax, 10% supplementary charge and 35% energy profits levy.

At the balance sheet date, the Group had £1,402 million (2022 revised: £939 million) unrecognised deductible temporary differences related to carried forward tax losses and other temporary differences available for utilisation against future taxable profits.

At the balance sheet date, no taxable temporary differences existed in respect of the Group's overseas investments (2022: £nil).

We have applied the mandatory exception to recognising and disclosing information about the deferred tax assets and liabilities related to Pillar 2 income taxes in accordance with the amendments to IAS 12 adopted by the UK Endorsement Board on 19 July 2023.



## 17. TRADE AND OTHER RECEIVABLES AND CONTRACT-RELATED ASSETS

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

31 December	2023		2022	
	Current £m	Non-current £m	Current £m	Non-current £m
Financial assets:				
Trade receivables	2,991	—	2,207	—
Unbilled downstream energy income	1,065	—	1,281	—
Trading and energy procurement accrued income <sup>(i)</sup>	1,782	—	3,179	—
Other accrued income	76	—	324	—
Cash collateral posted	260	—	1,154	—
Supplier of Last Resort receivables	45	3	253	22
Government scheme receivables	—	—	284	—
Other receivables (including contract assets)	176	101	346	24
	6,395	104	9,028	46
Less: provision for credit losses	(1,309)	—	(872)	—
	5,086	104	8,156	46
Non-financial assets: prepayments, other receivables and costs to obtain a contract with a customer <sup>(ii)</sup>	323	106	294	83
	5,409	210	8,450	129

(i) Trading and energy procurement counterparty receivables are typically with customers with external, published credit ratings. Such receivables have typically much lower credit risk than downstream counterparties, are settled in a short period of time and expected credit losses are not significant.

(ii) Includes costs of £10 million (2022: £14 million) incurred to obtain contracts with customers in the British Gas Energy and British Gas Services & Solutions segments. Costs are amortised over the expected tenure of the customer contract. See note S2.

The amounts above include gross amounts receivable arising from the Group's IFRS 15 contracts with customers of £2,782 million (2022: £2,325 million). Additionally, accrued income of £1,115 million (2022: £1,371 million) arising under IFRS 15 contracts is included.

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

31 December	2023		2022	
	Current £m	Non-current £m	Current £m	Non-current £m
Financial assets by business type:				
Residential customers <sup>(i)</sup>	2,725	3	2,755	22
Business customers	1,516	98	1,750	22
Treasury, trading and energy procurement counterparties	2,154	3	4,523	2
	6,395	104	9,028	46
Less: provision for credit losses	(1,309)	—	(872)	—
	5,086	104	8,156	46

(i) Residential customers include current other receivables of £45 million (2022: £253 million) and non-current other receivables of £3 million (2022: £22 million) in relation to SoLR claims, see note 3(a) for further details.

## 17. TRADE AND OTHER RECEIVABLES AND CONTRACT-RELATED ASSETS

### Credit loss charge for trade and other receivables

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

	2023				2022			
	Residential customers £m	Business customers £m	Treasury, trading and energy procurement counterparties £m	Total £m	Residential customers £m	Business customers £m	Treasury, trading and energy procurement counterparties £m	Total £m
1 January	(567)	(305)	—	(872)	(426)	(207)	—	(633)
Increase in impairment of trade receivables (predominantly related to credit impaired trade receivables) <sup>(i) (ii) (iii)</sup>	(396)	(198)	(16)	(610)	(234)	(124)	—	(358)
Receivables written off <sup>(iv)</sup>	113	60	—	173	93	26	—	119
<b>31 December</b>	<b>(850)</b>	<b>(443)</b>	<b>(16)</b>	<b>(1,309)</b>	<b>(567)</b>	<b>(305)</b>	<b>—</b>	<b>(872)</b>

(i) Includes £587 million (2022: £348 million) of credit losses related to trade receivables resulting from contracts in the scope of IFRS 15.

(ii) All loss allowances reflect the lifetime expected credit losses on trade receivables and contract assets.

(iii) Excludes recovery of previously written-off receivables of £8 million (2022: £7 million). Due to the large number of individual receivables and the matrix approach employed, any reduction in provision is reflected in a reduced charge for the relevant period, rather than in separately identifiable reversals of previous provisions.

(iv) Materially all write-offs relate to trade receivables where enforcement activity is ongoing. The gross carrying value of write-offs related to trade receivables where enforcement activity is ongoing was £142 million (2022: £105 million).

Year ended 31 December	2023 £m	2022 £m
Increase in impairment provision for trade receivables (per above)	(610)	(358)
Less recovery of previously written-off receivables	8	7
Credit losses on financial assets (per Group Income Statement)	(602)	(351)

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

## 17. TRADE AND OTHER RECEIVABLES AND CONTRACT-RELATED ASSETS

### Credit loss charge for trade and other receivables

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

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

#### Gross trade and other receivables

31 December	2023 £m	2022 £m
Balances that are not past due	4,403	7,414
Balances that are past due <sup>(i)</sup>	1,992	1,614
	6,395	9,028

(i) The majority of balances that are past due relate to residential and business customers, ageing of these receivables is included in the credit risk tables in the sections below.

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

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

### Concentration of credit risk in trade and other receivables

Treasury, trading and energy procurement counterparty receivables are typically with customers with external, published credit ratings. Such receivables have typically much lower credit risk than downstream counterparties, and that risk is assessed primarily by reference to the credit ratings rather than to the ageing of the relevant balance. Counterparty credit rating information is given in note S3.

The Group continues to recover amounts receivable under the Last Resort Supplier Payment mechanism which was triggered when the Group was appointed as a Supplier of Last Resort to a number of energy suppliers who ceased to trade during 2021 and 2022. In accordance with Ofgem licence conditions, the Group submitted two claims for incremental costs reasonably incurred to supply affected customers. The first of these claims has now been settled, and the second is being settled in twelve monthly payments ending in April 2024. A further smaller claim is in process and expected to be settled by April 2025. The receivable outstanding at 31 December 2023 is £48 million (31 December 2022: £275 million). The claims are settled by network operators, to whom the Group separately pays transmission and distribution charges. The risk of default is considered low. In addition, Ofgem has the power under licensing conditions to take enforcement action against default in accordance with its statutory duties and its enforcement guidelines.

The Group's cash collateral balance has decreased to £260 million in 2023 (2022: £1,154 million) as a result of lower commodity prices. Collateral counterparties typically have strong credit ratings and accordingly have low credit risk; the Group does not expect credit losses to arise on these balances. See note S3.

The majority of the Group's credit exposure arises in the British Gas Energy and Centrica Business Solutions segments and relates to residential and business energy customers. The credit risk associated with these customers is assessed as described above, using a combination of the age of the receivable in question, internal ratings based on a customer's payment history, and external data from credit rating agencies and wider macroeconomic information. The disclosures below reflect the information that is reported internally for credit risk management purposes in these segments.

## 17. TRADE AND OTHER RECEIVABLES AND CONTRACT-RELATED ASSETS

### British Gas Energy credit risk

Of the Group total of £2,991 million (2022: £2,207 million) billed trade receivables, the British Gas Energy reporting segment contributes £2,380 million (2022: £1,531 million). British Gas Energy includes small business customers on the basis that their profile closely matches those of residential customers. As described above, credit risk is concentrated in receivables from energy customers who pay in arrears. Gross receivables from British Gas Energy residential customers amount to £1,651 million (2022: £992 million) and are analysed below.

#### Trade receivables due from British Gas residential energy customers as at 31 December <sup>(i)</sup>

Days beyond invoice date <sup>(i)</sup>	2023					2022				
	<30 days £m	30-90 days £m	>90 days £m	Total £m	Percentage of credit risk	<30 days £m	30-90 days £m	>90 days £m	Total £m	Percentage of credit risk
<b>Risk profile</b>										
<b>Direct debits <sup>(iii)</sup></b>										
Gross receivables	310	55	171	536		216	51	66	333	
Provision	—	—	(7)	(7)		—	—	(23)	(23)	
Net	310	55	164	529	1%	216	51	43	310	7%
<b>Payment on receipt of bill <sup>(iii)</sup></b>										
Gross receivables	114	71	650	835		118	54	286	458	
Provision	(4)	(9)	(412)	(425)		(4)	(7)	(180)	(191)	
Net	110	62	238	410	51%	114	47	106	267	42%
<b>Final bills <sup>(iv)</sup></b>										
Gross receivables	21	27	232	280		12	13	176	201	
Provision	(4)	(12)	(199)	(215)		(3)	(6)	(140)	(149)	
Net	17	15	33	65	77%	9	7	36	52	74%
<b>Total net British Gas residential energy customers trade receivables</b>	<b>437</b>	<b>132</b>	<b>435</b>	<b>1,004</b>	<b>39%</b>	<b>339</b>	<b>105</b>	<b>185</b>	<b>629</b>	<b>37%</b>

(i) The receivables information presented in this table relates to downstream customers who pay energy bills using the methods presented. It excludes low residual credit risk amounts, such as balances in the process of recovery through pay-as-you-go energy (PAYGE) arrangements and amounts receivable from PAYGE energy vendors. Gross amounts in the process of recovery through PAYGE arrangements at 31 December 2023 are £154 million (2022: £203 million), against which a provision of £117 million is held (2022: £138 million).

(ii) This ageing analysis is presented relative to invoicing date and presents receivables according to the oldest invoice outstanding with the customer. There are a range of payment terms extended to residential energy customers. Amounts paid on receipt of a bill (PORB), which are settled using bank transfers, cash or cheques are typically due within fourteen days of invoicing. Direct debit customers typically pay in equal instalments over a twelve-month period.

(iii) Receivables settled by direct debit are deemed to present a lower credit risk than PORB amounts. This is reflected in the relative level of provision held for these types of receivables.

(iv) Final bill customers are those who are no longer customers of the Group and have switched energy supplier. These balances are deemed to have the highest credit risk.

## 17. TRADE AND OTHER RECEIVABLES AND CONTRACT-RELATED ASSETS

Gross receivables from British Gas Energy small business customers amount to £575 million (2022: £336 million) and are analysed below.

### Trade receivables due from British Gas small business energy customers as at 31 December

Days beyond invoice date <sup>(i)</sup>	2023					2022				
	<30 days £m	30-90 days £m	>90 days £m	Total £m	Percentage of credit risk	<30 days £m	30-90 days £m	>90 days £m	Total £m	Percentage of credit risk
Risk profile										
Small businesses										
Gross receivables	115	53	407	575		64	21	251	336	
Provision	(3)	(8)	(302)	(313)		(1)	(2)	(191)	(194)	
<b>Total net British Gas small business energy customers trade receivables</b>	<b>112</b>	<b>45</b>	<b>105</b>	<b>262</b>	<b>54%</b>	<b>63</b>	<b>19</b>	<b>60</b>	<b>142</b>	<b>58%</b>

(i) This ageing analysis is presented relative to invoicing date and presents receivables according to the oldest invoice outstanding with the customer. There are a range of payment terms extended to business energy customers. Standard credit terms for small business customers are ten working days.

Unbilled downstream energy income at 31 December 2023 includes gross balances of £693 million in respect of British Gas energy customers (2022: £880 million), against which a provision of £56 million is held (2022: £36 million).

### Centrica Business Solutions energy credit risk

Of the Group total of £2,991 million (2022: £2,207 million) billed trade receivables, the Centrica Business Solutions reporting segment contributes £313 million (2022: £390 million). As described above, credit risk is concentrated in receivables from business energy customers who pay in arrears, the remaining balances being immaterial in disaggregation. Gross receivables from these customers amount to £269 million (2022: £346 million) and are analysed below.

### Trade receivables due from Centrica Business Solutions business energy customers as at 31 December

Days beyond invoice date <sup>(i)</sup>	2023					2022				
	<30 days £m	30-90 days £m	>90 days £m	Total £m	Percentage of credit risk	<30 days £m	30-90 days £m	>90 days £m	Total £m	Percentage of credit risk
Risk profile										
Commercial and industrial <sup>(ii)</sup>										
Gross receivables	75	9	26	110		170	9	31	210	
Provision	—	—	(13)	(13)		—	—	(15)	(15)	
Net	75	9	13	97	12%	170	9	16	195	7%
Medium-sized entities										
Gross receivables	50	19	90	159		47	15	74	136	
Provision	—	(1)	(57)	(58)		—	—	(49)	(49)	
Net	50	18	33	101	36%	47	15	25	87	36%
<b>Total net Centrica Business Solutions business energy customers trade receivables</b>	<b>125</b>	<b>27</b>	<b>46</b>	<b>198</b>	<b>26%</b>	<b>217</b>	<b>24</b>	<b>41</b>	<b>282</b>	<b>18%</b>

(i) This ageing analysis is presented relative to invoicing date and presents receivables according to the oldest invoice outstanding with the customer. There are a range of payment terms extended to business energy customers. Standard credit terms for medium-sized entity customers are ten working days. Credit terms for Commercial and Industrial customers are bespoke and are set based on the commercial agreement with each customer.

(ii) This category includes low credit risk receivables, including those from public sector and customers with high turnover (greater than £100 million).

Unbilled downstream energy income at 31 December 2023 includes gross balances of £239 million in respect of Centrica Business Solutions business energy customers (2022: £349 million), against which a provision of £14 million is held (2022: £14 million).

The remaining reporting segments which are not shown above are not considered to have material credit risk.



## 17. TRADE AND OTHER RECEIVABLES AND CONTRACT-RELATED ASSETS

### Sensitivity to changes in assumptions

Typically, the most significant assumption included within the expected credit loss provisioning model that gives rise to estimation uncertainty is that future performance will be reflective of past performance and that there will be no significant change in the payment profile or recovery rates within each identified group of receivables. To address this risk, the Group reviews and updates default rates, by group, on a regular basis to ensure they incorporate the most up to date assumptions along with forward-looking information where available and relevant. The Group also considers regulatory changes and customer segment specific factors that may have an impact, now or in the future, on the recoverability of the balance.

The specific consideration of forward-looking information in the impairment model does not usually give rise to significant changes in the levels of credit losses. However, inflationary pressures and high wholesale gas and electricity costs continue to cause uncertainty in economic outlook. The economic recovery remains vulnerable and there remains a level of estimation uncertainty inherent in determining credit loss provisions for the Group's trade receivables.

Where customers experience difficulties in settling balances, the increased ageing of these amounts results in an increase in provisions held in respect of them under the provision matrix approach employed. The Group has also considered changes in customer payment patterns, the specific circumstances of the customers and the economic impacts of the factors identified above, on the sectors in which they operate. Whilst economic recovery is expected, a level of unpredictability remains apparent.

Customers are facing increases in their cost of living, including increased energy bills, higher inflation and higher interest rates. The Group has considered macroeconomic forecasts and sensitivities, as well as disposable income analysis from a credit rating agency, to model and determine the level of provisions for credit losses.

During 2023 the Group recognised credit losses of £602 million (2022: £351 million) in respect of financial assets, representing 2.3% of total Group revenue (2022: 1.5%) and 1.8% of total Group revenue from business performance (2022: 1.0%). As described above, the majority of the Group's credit exposure arises in respect of downstream energy receivables in British Gas Energy and Centrica Business Solutions. Credit losses in respect of these assets amounted to £554 million (2022: £331 million). This represents 2.6% (2022: 2.1%) of total UK downstream energy supply revenue from these segments of £21,046 million (2022: £15,814 million). Further details of segmental revenue are provided in note 4.

Due to the different level of risks presented by billed and unbilled receivables, these asset groups are considered separately in the analysis below.

### Billed trade receivables

	31 December 2023 £m	31 December 2022 £m
Trade receivables <sup>(i)</sup>	2,991	2,207
Provision	(1,240)	(822)
Net balance	1,751	1,385
	31 December 2023 %	31 December 2022 %
Provision coverage	41	37
Sensitivity	£m	£m
Impact on billed receivables/operating profit from 1 percentage point (increase)/decrease in provision coverage <sup>(ii)</sup>	(30)/30	(22)/22

(i) Excludes the Government receivables under the Energy Price Guarantee (EPG) and Energy Bill Relief Scheme (EBRS) schemes of £nil (2022: £284 million) which are not provided for.

(ii) Credit risk in the Group is impacted by a large number of interacting factors.

## 17. TRADE AND OTHER RECEIVABLES AND CONTRACT-RELATED ASSETS

Overall billed debt levels have increased significantly. Credit provisions have accordingly increased, primarily caused by the declining levels of cash collection performance. This has resulted in decreased recovery rates and increased provision rates for customers in the Group's downstream operations. Within this portfolio, the continued deterioration seen in the payment on receipt of bill collections performance, coupled with a change in the mix of debt within the portfolio, has particularly driven the increase in provision rates.

The macroeconomic environment remains challenging with higher inflation, higher interest rates, lower growth projections and more limited government support measures. The collection performance in relation to customers who pay on receipt of bill has declined steadily, with more customers being unable to pay their energy bills due to the cost of living crisis. The impact has been further exacerbated by the suspension of all field activity since January 2023, following the investigation into certain prepayment meter installation activity.

There remains significant uncertainty around the persistent impact of these factors on bad debt. Leading debt indicators including the number of customers going into debt, insolvency volumes in business and direct debit cancellation rates in residential have continued to deteriorate during 2023. High commodity prices and the delayed impact on customer payments have not yet been fully reflected in the underlying matrix output model used to record provision coverage, partly due to the continued inclusion of Government support measures which only ended in June 2023. Therefore, as part of management's assessment of adequacy of bad debt provisions, a £50 million increase to the macroeconomic provision has been recorded, the provision now totals £175 million across billed and unbilled debt and is included in the tables both above and below (2022: £125 million). Management considers the impact of specific cohorts of customers referenced in the previous tables when making this assessment, recognising the different credit terms and different risk profiles that exist. This assessment also utilises a range of factors, both internal and external, historic and forward-looking, and considers the sensitivities of these to help management estimate the likely recovery of debt.

It remains uncertain as to when and how these factors will reduce the collectability of debt and at what scale. The impact of future changes in commodity prices may also impact this. The table above and the unbilled section below provide details of the sensitivity of moving the debt provision by a further 1%.

The Group's services, upstream and trading operations are less susceptible to credit risk. No significant deterioration of credit risk has been experienced or is expected in the relevant segments in respect of billed trade receivables recognised at 31 December 2023, taking into account cash collection cycles in those areas of the Group and credit rating information (see note S3).

### Unbilled downstream energy income

The table below shows the IFRS 15 unbilled downstream energy income for the Group as a whole.

	31 December 2023 £m	31 December 2022 £m
Gross unbilled receivables	1,065	1,281
Provision	(69)	(50)
Net balance	996	1,231

	31 December 2023 %	31 December 2022 %
Provision coverage	6	4
Sensitivity	£m	£m
Impact on unbilled receivables/operating profit from 1 percentage point (increase)/decrease in provision coverage <sup>(i)</sup>	(11)/11	(13)/13

(i) Credit risk in the Group is impacted by a large number of interacting factors.

Unbilled downstream energy income is typically provided at a significantly lower rate than billed debt. This is because a large proportion of this debt once billed will be subject to the very short cash collection cycles of the Group's downstream energy supply businesses.

## 18. INVENTORIES

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

31 December	2023 £m	2022 £m
Gas in storage and transportation <sup>(i)</sup>	824	1,076
Other raw materials and consumables	120	114
Finished goods and goods for resale	135	79
	1,079	1,269

(i) Includes gas in storage held at fair value of £263 million (2022: £539 million).

The Group consumed £1,912 million of inventories (2022: £3,508 million) during the year. Write-downs amounting to £5 million (2022: £6 million) were charged to the Group Income Statement in the year. Reversals of write-downs amounted to £nil (2022: £9 million) during the year.

## 19. DERIVATIVE FINANCIAL INSTRUMENTS

The Group generally uses derivative financial instruments to manage the risk arising from fluctuations in the value of certain assets or liabilities associated with treasury management and energy sales and procurement, and for proprietary energy trading purposes. The Group also uses derivatives to hedge exchange risk.

For accounting purposes, derivatives are either classified as held for trading, in which case changes in their fair value are recognised in the Group Income Statement, or they are designated in hedging relationships. Where derivatives are in hedging relationships, the treatment of changes in their fair value depends on the nature of that relationship, and whether it represents a fair value hedge or a cash flow hedge. Note S5 provides further detail on the Group's hedge accounting. The table below gives a high-level summary of the Group's accounting for its derivative contracts.

Purpose	Classification	Accounting treatment
Proprietary energy trading and treasury management.	Held for trading and fair value hedges.	Changes in fair value recognised in the Group's business performance results for the year.
Treasury management.	Cash flow hedges.	Effective portion of hedge initially recognised in the Group Statement of Other Comprehensive Income. Gains and losses are recycled to the Group Income Statement when the hedged item impacts profit or loss. Ineffective portions of the hedge are recognised immediately in the Group's business performance results for the year.
Energy procurement and optimisation.	Held for trading.	Changes in fair value recognised in the Group's exceptional items and certain re-measurements results for the year.

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

31 December	2023		2022	
	Assets £m	Liabilities £m	Assets £m	Liabilities £m
Derivative financial instruments – held for trading under IFRS 9:				
Energy derivatives – for procurement/optimisation	1,733	(1,715)	1,723	(5,400)
Energy derivatives – for proprietary trading	1,418	(993)	5,355	(4,256)
Foreign exchange derivatives	85	(144)	275	(268)
Derivative financial instruments in hedge accounting relationships:				
Interest rate derivatives	—	(136)	37	(221)
Foreign exchange derivatives	36	(18)	37	(6)
<b>Total derivative financial instruments</b>	<b>3,272</b>	<b>(3,006)</b>	<b>7,427</b>	<b>(10,151)</b>
Included within:				
Derivative financial instruments – current	2,373	(2,391)	6,034	(8,841)
Derivative financial instruments – non-current	899	(615)	1,393	(1,310)

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

31 December	2023 £m	2022 £m
Short-term forward market purchases and sales of gas and electricity:		
UK and Europe	1,163	(214)
Other derivative contracts including structured gas sale and purchase arrangements	(720)	(2,364)
<b>Net total</b>	<b>443</b>	<b>(2,578)</b>

### Net gains/(losses) on derivative financial instruments due to change in fair value

31 December	2023		2022	
	Income Statement £m	Equity £m	Income Statement £m	Equity £m
Financial assets and liabilities measured at fair value:				
Derivative financial instruments – held for trading	3,024	—	(4,568)	—
Derivative financial instruments in hedge accounting relationships	48	(13)	(228)	(10)
	<b>3,072</b>	<b>(13)</b>	<b>(4,796)</b>	<b>(10)</b>

## 20. TRADE AND OTHER PAYABLES AND CONTRACT LIABILITIES

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

31 December	2023		2022	
	Current £m	Non-current £m	Current £m	Non-current £m
Financial liabilities:				
Trade payables	(474)	(4)	(481)	(4)
Deferred income <sup>(i)</sup>	(1,178)	—	(538)	—
Capital payables	(152)	—	(158)	—
Cash collateral received	(184)	—	(601)	—
Other payables <sup>(ii)</sup>	(389)	(197)	(479)	(150)
Accruals:				
Commodity costs	(2,464)	—	(5,371)	—
Transportation, distribution and metering costs	(319)	—	(377)	—
Operating and other accruals	(942)	—	(765)	—
	(3,725)	—	(6,513)	—
	(6,102)	(201)	(8,770)	(154)
Non-financial liabilities:				
Other payables and accruals <sup>(iii)</sup>	(761)	—	(701)	(1)
Contract liabilities	(30)	(3)	(37)	(7)
Deferred income <sup>(iv)</sup>	(107)	(3)	(508)	(3)
	(7,000)	(207)	(10,016)	(165)

(i) Includes downstream customer credit balances for amounts billed in advance of energy supply. The amount naturally peaks over summer as customers consume less and will unwind as consumption of gas and electricity increases over winter.

(ii) Other payables includes share buyback liability of £94 million (2022: £207 million). See note S4 for further details.

(iii) Other non-financial payables and accruals includes ROCs creditors of £600 million (2022: £588 million).

(iv) Deferred income includes £nil (2022: £440 million) from the Energy Bill Support Scheme which finished in 2023.

### Maturity profile of financial liabilities within current trade and other payables

31 December	2023 £m	2022 £m
Less than 90 days	(5,653)	(8,383)
90 to 182 days	(194)	(217)
183 to 365 days	(255)	(170)
	(6,102)	(8,770)

## 21. PROVISIONS FOR LIABILITIES AND CHARGES

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

	1 January 2023 £m	Charged in the year £m	Notional interest £m	Unused and reversed in the year £m	Utilised £m	Revisions and additions £m	Transfers <sup>(v)</sup> £m	Exchange adjustments £m	31 December 2023 £m
<b>Current</b>									
Restructuring costs	(15)	(6)	—	6	3	—	(1)	2	(11)
Decommissioning costs <sup>(i) (ii)</sup>	(216)	—	—	—	173	—	(89)	—	(132)
Onerous contracts provision <sup>(iii)</sup>	(937)	(19)	—	359	568	—	—	(1)	(30)
Other <sup>(iv)</sup>	(45)	(89)	—	7	26	—	(4)	(1)	(106)
<b>Total</b>	<b>(1,213)</b>	<b>(114)</b>	<b>—</b>	<b>372</b>	<b>770</b>	<b>—</b>	<b>(94)</b>	<b>—</b>	<b>(279)</b>

	1 January 2023 £m	Charged in the year £m	Notional interest £m	Unused and reversed in the year £m	Revisions and additions £m	Transfers <sup>(v)</sup> £m	Exchange adjustments £m	31 December 2023 £m
<b>Non-current</b>								
Restructuring costs	(5)	—	—	—	—	1	—	(4)
Decommissioning costs <sup>(i) (ii)</sup>	(1,298)	(80)	(21)	7	(94)	89	2	(1,395)
Onerous contracts provision <sup>(iii)</sup>	(99)	(2)	—	75	—	—	1	(25)
Other <sup>(iv)</sup>	(44)	(7)	—	5	(4)	4	1	(45)
<b>Total</b>	<b>(1,446)</b>	<b>(89)</b>	<b>(21)</b>	<b>87</b>	<b>(98)</b>	<b>94</b>	<b>4</b>	<b>(1,469)</b>

Included within the above liabilities are the following financial liabilities:

	2023		2022	
	Current £m	Non-current £m	Current £m	Non-current £m
31 December				
Restructuring costs	(11)	(4)	(15)	(5)
Provisions other than restructuring costs	(123)	(60)	(973)	(132)
	<b>(134)</b>	<b>(64)</b>	<b>(988)</b>	<b>(137)</b>

### Maturity profile of decommissioning provisions

31 December	2023 £m
2024-2028	(445)
2029-2033	(908)
2034-2038	(162)
2039-2043	(10)
2044-2048	(1)
2049-2053	(1)
	<b>(1,527)</b>

(i) Provision has been made for the estimated net present cost of decommissioning gas production facilities at the end of their useful lives. The estimate has been based on 2P reserves, price levels and technology at the balance sheet date. The payment dates of decommissioning costs are dependent on the lives of the facilities, but utilisation of the provision is expected to occur until the 2040s. The maturity profile of total decommissioning provisions is analysed above. The rate used to discount decommissioning provisions is 1% (2022: 1%). See note 3.

(ii) Included in the provision balance as at 31 December 2023 is £1,191 million held in Spirit Energy, £319 million in relation to the Rough field, and £17 million in the remainder of the business.

(iii) The provision balance at 31 December 2022 primarily comprised the onerous supply contract provision of £999 million. This provision has been fully unwound during 2023, see note 3(b).

(iv) Other provisions have been made for dilapidations, insurance, legal, warranty and various other claims.

(v) Relates to amounts transferred between current and non-current provisions.



## 22. POST-RETIREMENT BENEFITS

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

### (a) Summary of main post-retirement benefit schemes

Name of scheme	Type of benefit	Status	Country	Number of active members as at 31 December 2023	Total membership as at 31 December 2023
Centrica Engineers Pension Scheme	Defined benefit final salary pension	Closed to new members in 2006	UK	1,483	8,402
	Defined benefit career average pension	Closed to new members in 2022	UK	2,761	7,179
Centrica Pension Plan	Defined benefit final salary pension	Closed to new members in 2003	UK	1,400	8,408
Centrica Pension Scheme	Defined benefit final salary pension	Closed to new members in 2003	UK	1	10,120
	Defined benefit career average pension	Closed to new members in 2008	UK	734	4,191
	Defined contribution pension	Open to new members	UK	11,409	22,848
Bord Gáis Energy Company Defined Benefit Pension Scheme	Defined benefit final salary pension	Closed to new members in 2014	Republic of Ireland	89	169
Bord Gáis Energy Company Defined Contribution Pension Plan	Defined contribution pension	Open to new members	Republic of Ireland	317	455

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

#### Independent valuations

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

The latest full actuarial valuations agreed and finalised with the Pension Trustees were carried out at the following dates: the Registered Pension Schemes at 31 March 2021 and the Bord Gáis Energy Company Defined Benefit Pension Scheme at 1 January 2023. These valuations have been updated to 31 December 2023 for the purpose of meeting the requirements of IAS 19. Investments held in all schemes have been valued for this purpose at market value.

#### Governance

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

Under the terms of the Pensions Act 2004, Centrica plc and each trustee board must agree the funding rate for its defined benefit pension scheme and a recovery plan to fund any deficit against the scheme-specific statutory funding objective. This approach was first adopted for the triennial valuations completed at 31 March 2006, and has been reflected in subsequent valuations, including the 31 March 2021 valuation.

## 22. POST-RETIREMENT BENEFITS

### (b) Risks

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

#### Asset volatility

The pension liabilities are calculated using a discount rate set with reference to AA corporate bond yields. If the growth in plan assets is lower than this, this will create an actuarial loss within other equity. The CCCIF is responsible for managing the assets of each scheme in line with the risk tolerances that have been set by the trustees of the schemes, and invests in a diversified portfolio of assets. The schemes are relatively young in nature (the schemes opened in 1997 on the formation of Centrica plc on demerger from BG plc (formerly British Gas plc)), and only took on past service liabilities in respect of active employees.

The trustees significantly reduced their tolerance to scheme valuation risk in 2019, increasing inflation and interest rate hedges from one third to two thirds, and further de-risked thereafter such that there was an 85% hedge level (in relation to assets) at 2021 year-end. This de-risking included the use of collateralised gilt holdings in the Schemes' Liability-Driven Investment (LDI) portfolio (shown in the Pension scheme asset table in section (f) of this note within Liability matching assets).

Throughout 2022 and in particular during September, there were significant increases and volatility in gilt yields. This led to a significant fall in the value of assets invested in the UK Registered Pension Schemes' LDI funds, thereby driving collateral calls and temporarily reducing the hedge position. All liquid credit mandates were placed into redemption with proceeds directed to the LDI portfolio to increase collateral and reduce leverage.

In October 2022, the Group agreed to provide the Schemes with a £400 million two-year revolving, unsecured, interest-bearing credit facility, and a short-term £150 million loan. This money was immediately drawn down to purchase physical gilts to reduce the extent of interest rate and inflation risk. The short-term loan was repaid in December 2022 and the remaining £400 million credit facility is scheduled for repayment in October 2024. At the 2023 year-end, the £400 million loan (together with unpaid interest) is recorded in Securities from a Centrica plc Group perspective and as a reduction to scheme assets for the UK Registered Pension Schemes. The Securities balance is included within the Group's Adjusted net cash/(debt). See note 24(c).

The above events resulted in a reduction of both return-seeking and liquid assets within the portfolio, as well as a higher weighting to assets that are expected to better manage downside risk. At the 2023 year-end, the LDI and gilts portfolio provides a level of hedging against movements in long-term interest rates and inflation expectations at around 80% as a proportion of scheme assets. The schemes also benefit from further hedging arising from the other long-dated income unquoted asset portfolio.

#### Interest rate

A decrease in bond interest rates will increase the net present value of the pension liabilities. The relative immaturity of the schemes means that the duration of the liabilities is longer than average for typical UK pension schemes, resulting in a relatively higher exposure to interest rate risk. This risk is reduced via the hedging referred to in the Asset volatility section.

#### Inflation

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

#### Longevity

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

#### Salary

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

#### High Court ruling

In June 2023, the UK High Court issued a ruling in the case of Virgin Media Limited v NTL Pension Trustees II Limited and others relating to the validity of certain historical pension changes. This case may have implications for other defined benefit schemes in the UK, although is subject to possible appeal in 2024. The Group is aware of this legal ruling and is assessing whether there is any potential impact upon the Group, although currently no conclusion has been reached therefore no quantification of any potential impact has been determined.

#### Foreign exchange

Certain assets held by the CCCIF are denominated in foreign currencies, and hence their values are subject to exchange rate risk. The CCCIF has long-term hedging policies in place to manage interest rate, inflation and foreign exchange risks. The table below analyses the total liabilities of the Registered Pension Schemes, calculated in accordance with accounting principles, by type of liability, as at 31 December 2023.

## 22. POST-RETIREMENT BENEFITS

### Total liabilities of the Registered Pension Schemes

31 December	2023 %
Actives – final salary – capped	11
Actives – final salary – uncapped and crystallised benefits	5
Actives – career average	4
Deferred pensioners	38
Pensioners	42
	100

### (c) Accounting assumptions

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

#### Major assumptions used for the actuarial valuation

31 December	2023 %	2022 %
Rate of increase in employee earnings:		
Subject to 2% cap	1.6	1.5
Other not subject to cap	2.6	2.9
Rate of increase in pensions in payment	3.0	3.3
Rate of increase in deferred pensions:		
In line with CPI capped at 2.5%	2.3	2.5
In line with RPI	2.9	3.0
Discount rate	4.6	4.7

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

#### Life expectancy at age 65 for a member

31 December	2023		2022	
	Male Years	Female Years	Male Years	Female Years
Currently aged 65	22.0	23.5	22.4	23.9
Currently aged 45	23.2	24.6	23.6	25.0

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

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

#### Impact of changing material assumptions

31 December	2023		2022	
	Increase/ decrease in assumption	Indicative effect on scheme liabilities %	Increase/ decrease in assumption	Indicative effect on scheme liabilities %
Rate of increase in employee earnings subject to 2% cap	1.00%	+/-1	1.00%	+1/-2
Rate of increase in pensions in payment and deferred pensions	1.00%	+15/-12	1.00%	+14/-12
Discount rate	1.00%	-16/+20	1.00%	-15/+19
Inflation assumption	1.00%	+15/-12	1.00%	+15/-12
Longevity assumption	1 year	+/-3	1 year	+/-2

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

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

## 22. POST-RETIREMENT BENEFITS

### (d) Amounts included in the Group Balance Sheet

31 December	2023 £m	2022 £m
Fair value of plan assets	6,143	6,312
Present value of defined benefit obligation	(6,260)	(6,272)
Recognised in the Group Balance Sheet	(117)	40
Presented in the Group Balance Sheet as:		
Retirement benefit assets	64	150
Retirement benefit liabilities	(181)	(110)

The Trust Deed and Rules for the Registered Pension Schemes provide the Group with a right to a refund of surplus assets assuming the full settlement of scheme liabilities. The Trustees do not have the unilateral right to wind-up the schemes and cannot unilaterally enhance member benefits. The Group has not recognised any liability in relation to future contributions under its minimum funding agreement with the Trustees. No asset ceiling restrictions have been applied in the consolidated Financial Statements.

### (e) Movements in the year

	2023		2022	
	Pension liabilities £m	Pension assets £m	Pension liabilities £m	Pension assets £m
1 January	(6,272)	6,312	(10,666)	10,666
Items included in the Group Income Statement:				
Current service cost	(22)	—	(84)	—
Contributions by employer in respect of employee salary sacrifice arrangements <sup>(i)</sup>	(24)	—	(21)	—
Total current service cost	(46)	—	(105)	—
Interest (expense)/income	(291)	300	(193)	196
Termination benefit	1	—	4	—
Items included in the Group Statement of Comprehensive Income:				
Returns on plan assets, excluding interest income	—	(474)	—	(4,559)
Actuarial gain from changes to demographic assumptions	357	—	34	—
Actuarial (loss)/gain from changes in financial assumptions	(49)	—	4,803	—
Actuarial loss from experience adjustments	(215)	—	(425)	—
Items included in the Group Cash Flow Statement:				
Employer contributions	—	236	—	264
Contributions by employer in respect of employee salary sacrifice arrangements	—	24	—	21
Other movements:				
Benefits paid from schemes	257	(257)	278	(278)
Other	(2)	2	(2)	2
<b>31 December</b>	<b>(6,260)</b>	<b>6,143</b>	<b>(6,272)</b>	<b>6,312</b>

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

In addition to current service cost on the Group's defined benefit pension schemes, the Group also charged £72 million (2022: £66 million) to operating profit in respect of defined contribution pension schemes. This included contributions of £25 million (2022: £20 million) paid via a salary sacrifice arrangement.

## 22. POST-RETIREMENT BENEFITS

### (f) Pension scheme assets

The market values of plan assets were:

31 December	2023			2022		
	Quoted £m	Unquoted £m	Total £m	Quoted £m	Unquoted £m	Total £m
Equities	23	503	526	19	486	505
Corporate bonds	6	—	6	24	—	24
High-yield debt	18	1,238	1,256	106	1,331	1,437
Liability matching assets	2,860	—	2,860	2,835	—	2,835
Other long-dated income assets	—	1,204	1,204	—	1,343	1,343
Property	—	305	305	—	366	366
Cash pending investment	391	—	391	205	—	205
Loan and interest	—	(405)	(405)	—	(403)	(403)
	3,298	2,845	6,143	3,189	3,123	6,312

Unquoted private equity, other long-dated income assets and debt funds are valued at fair value as calculated by the investment manager at the latest valuation date in accordance with generally accepted guidelines, adjusted for cash flow in the intervening period. Investment properties are valued in accordance with guidelines by independent valuers. These valuations are reviewed annually as part of the CCCIF audit and receive greater scrutiny now that unquoted assets make up a greater proportion of the scheme portfolio. Included within equities are £nil of ordinary shares of Centrica plc (2022: £nil) via pooled funds that include a benchmark allocation to UK equities. Included within corporate bonds are £nil (2022: £nil) of bonds issued by Centrica plc, albeit minor exposure may be held within pooled funds over which the CCCIF has no ability to direct investment decisions. Apart from the investment in the Scottish Limited Partnerships which form part of the asset-backed contribution arrangements described in section (g) of this note, no direct investments are made in securities issued by Centrica plc or any of its subsidiaries or property leased to or owned by Centrica plc or any of its subsidiaries. The corporate bond, high-yield debt and liability matching asset categories headings above have segregated portfolio mandates which include the cash, cash funds and derivatives associated with the mandates.

The liability matching assets in the table above relate to the quoted LDI and gilts portfolio used to hedge against movements in interest rates and inflation. The other long-dated income assets are unquoted investments in infrastructure and similar assets.

At 31 December 2023, the aggregate LDI and gilts portfolio was approximately 1.4 times leveraged (1 times being unleveraged) (2022: 1.3 times leveraged).

Included within the Group Balance Sheet within non-current securities are £104 million (2022: £95 million) of investments, held in trust on behalf of the Group, as security in respect of the Centrica Unapproved Pension Scheme. Of the pension scheme liabilities above, £49 million (2022: £49 million) relate to this scheme. More information on the Centrica Unapproved Pension Scheme is included in the Remuneration Report on pages 84 to 109.

### (g) Pension scheme contributions

The Group estimates that it will pay £53 million of ordinary employer contributions during 2024 for its defined benefit schemes, at an average rate of 21% of pensionable pay, together with £27 million of contributions paid via a salary sacrifice arrangement.

For the Registered Pension Schemes the last actuarial valuation was as at 31 March 2021. As at that date, the weighted average duration of the liabilities of the Registered Pension Schemes was 22 years and the technical provisions deficit (funding basis) was £944 million. The Group committed to additional annual cash contributions to fund this pension deficit. The overall deficit contributions, including the previously disclosed asset-backed contribution arrangements, totalled £175 million in 2021 (of which £99 million was after 31 March 2021), £204 million in 2022, £175 million in 2023; and will amount to £175 million per annum in 2024 and 2025, with a balancing payment of £116 million in 2026. Separately, a pension strain payment of £5 million associated with employee redundancies was also contributed in 2023 (2022: £10 million).

On a pure roll-forward basis, from 31 March 2021, using the same methodology and consequent assumptions, the technical provisions deficit (funding basis) would be around £900 million on 31 December 2023. Note that the valuation methodology and assumptions used for future assessments may differ from those previously used.

At the beginning of 2022, the Group had provided security of £745 million of letters of credit and £250 million cash in escrow to the Registered Pension Schemes. In October 2022, as part of the £400 million loan arrangement from Centrica plc to the Registered Pension Schemes (described in part (b) above), this security was reduced by £545 million, so that only £450 million of letters of credit remained. When this loan is repaid, currently due in October 2024, replacement security may be required (dependent on the funding position) and the form of security will be at the Group's discretion.



## 23. LEASES, COMMITMENTS AND CONTINGENCIES

### (a) Commitments and leases

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

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

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

The Group's 20-year agreement with Cheniere to purchase 89bcf per annum of LNG volumes for export from the Sabine Pass liquefaction plant in the US commits the Group to capacity payments of £3.4 billion (included in 'LNG capacity' below) between 2023 and 2039. It also allows the Group to make up to £4.9 billion of commodity purchases based on market gas prices and foreign exchange rates as at the reporting date.

During 2019, the Group signed a 20-year agreement to purchase LNG volumes from Mozambique LNG1 Company. The commercial start date is 2025 and under this agreement the Group is committed to make commodity purchases expected to amount to £7.9 billion based on market gas and oil prices at the reporting date.

During 2023, the Group signed a 15-year agreement to purchase LNG volumes from Delfin LNG. The provisional commencement date is 2029 and under this agreement the Group is committed to make commodity purchases expected to amount to £4.2 billion based on market gas prices at the reporting date.

These LNG contracts are deemed to be own use and therefore are accounted for on an accruals basis. Based on forecast gas spreads, they are predicted to be profitable but due to their duration are exposed over a long period of time to the impact of governmental policy decisions in relation to climate change.

The Group has numerous renewable power purchase arrangements where renewable obligation certificates are purchased as power is produced. This gives rise to the commitments below.

31 December	2023 £m	2022 £m
<b>Commitments in relation to the acquisition of PP&amp;E</b>	<b>56</b>	<b>75</b>
<b>Commitments in relation to the acquisition of intangible assets:</b>		
Renewable obligation certificates	3,369	3,642
Other intangible assets	323	194
<b>Other commitments:</b>		
Commodity purchase contracts	40,908	69,824
LNG capacity	4,230	3,894
Transportation capacity	266	320
Other long-term commitments <sup>(i)</sup>	414	459

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

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

31 December	Commodity purchase contract commitments			
	Fixed price commodity commitments		Commodity commitments that float with indices	
	2023 £bn	2022 £bn	2023 £bn	2022 £bn
<1 year	5.9	13.0	6.3	15.4
1–2 years	1.3	2.3	5.0	10.9
2–3 years	0.2	0.9	1.9	7.5
3–4 years	0.2	0.1	1.6	2.3
4–5 years	—	—	1.2	1.8
>5 years	0.1	0.1	17.2	15.5
	7.7	16.4	33.2	53.4

## 23. LEASES, COMMITMENTS AND CONTINGENCIES

The Group enters into lease arrangements for assets including property, vehicles, vessels and assets used within the exploration and production business.

The carrying amount, additions and depreciation charge associated with right-of-use assets is disclosed in note 13 and the interest expense arising on the Group's lease liability is disclosed in note 8. The total Group cash outflow in the year for capital and interest from lease arrangements was £105 million (2022: £107 million), and the maturity analysis of cash flows associated with the Group's lease liability at the reporting date is shown in note S3.

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

Year ended 31 December	2023 £m	2022 £m
Expense related to short-term leases	71	82
Expense related to variable lease payments	9	9

During the year, the Group's expense related to short-term lease commitments predominantly related to the hire of LNG vessels and exploration and production drilling rigs. The commitment at the balance sheet date also relates to assets of a similar nature. The Group has £31 million of operating sub-lease arrangements mainly for LNG vessels. The Group does not have any material arrangements in which it acts as a lessor.

### (b) Guarantees and indemnities

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

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

As at 31 December 2023, £279 million (2022: £84 million) of letters of credit and on-demand payment bonds have been issued in respect of decommissioning obligations included in the Group Balance Sheet.

### (c) Contingent liabilities

The Group has no material contingent liabilities.

## 24. SOURCES OF FINANCE

### (a) Capital structure

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

31 December	2023 £m	2022 £m
Gross debt	3,408	3,570
Shareholders' equity	3,877	1,017
<b>Capital</b>	<b>7,285</b>	<b>4,587</b>

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

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

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

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

## 24. SOURCES OF FINANCE

### (b) Liquidity risk management and going concern

The Group has a number of treasury and risk policies to monitor and manage liquidity risk. Cash forecasts identifying the Group's liquidity requirements are produced regularly and are stress tested for different scenarios, including, but not limited to, reasonably possible increases or decreases in commodity prices and the potential cash implications of a credit rating downgrade. The Group seeks to ensure that sufficient financial headroom exists for at least a twelve month period to safeguard the Group's ability to continue as a going concern, and as at the reporting date, the analysis performed by the Group extends to 31 December 2025. It is the Group's policy to maintain committed facilities and/or available surplus cash resources of at least £1,500 million, raise at least 75% of its gross debt (excluding non-recourse debt) in the capital market and to maintain an average term to maturity in the recourse long-term debt portfolio greater than five years.

At 31 December 2023 the Group had undrawn committed credit facilities of £3,784 million (2022: £3,951 million) and £5,525 million (2022: £3,687 million) of unrestricted cash and cash equivalents, net of outstanding overdrafts. 80% (2022: 82%) of the Group's gross debt has been raised in the long-term debt market and the average term to maturity of the long-term debt portfolio was 10.5 years (2022: 9.9 years).

The Group's liquidity is impacted by the cash posted or received under margin and collateral agreements. The terms and conditions of these agreements depend on the counterparty and the specific details of the transaction. Margin/collateral is generally posted or received to support energy trading and procurement activities. It is posted when contracts with marginable counterparties are out of the money and received when contracts are in the money. Cash is generally returned to the Group or by the Group within two days of trade settlement.

At 31 December 2023 the collateral position was as follows:

31 December	2023 £m	2022 £m
Collateral (received)/posted included within:		
Trade and other payables	(184)	(601)
Trade and other receivables	260	1,154
Collateral posted extinguishing:		
Net derivative liabilities <sup>(i)</sup>	164	270
<b>Net collateral posted <sup>(ii)</sup></b>	<b>240</b>	<b>823</b>

(i) Variation margin on daily settled derivatives results in the extinguishment of the net derivative asset/liability. These contracts remain outstanding until a future delivery date, and therefore the cumulative daily settlement is considered collateral until that fulfilment date.

(ii) In-year movements of net collateral posted include exchange adjustments of £2 million (2022: £61 million).

The Group utilises initial margin waiver facilities to help manage its liquidity and working capital position in relation to derivative trading. For certain types of trade, initial margin is a requirement before entering into a transaction, as it provides credit assurance for the exchange. As initial margin is not a liability of the Group and is refundable, it is reflected as a margin asset on the Group's balance sheet. Accordingly, where counterparties waive any requirement to post initial margin, the Group has no liability.

The level of undrawn committed bank facilities and available cash resources has enabled the Directors to conclude that the Group has sufficient headroom to continue as a going concern. The statement of going concern is included in the Governance section – Other Statutory Information, on page 112.

## 24. SOURCES OF FINANCE

### (c) Adjusted net cash/(debt) summary

**Adjusted net cash/(debt) predominantly includes capital market borrowings offset by cash, securities and certain hedging financial instruments used to manage interest rate and foreign exchange movements on borrowings.**

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

	Current and non-current borrowings, leases and interest accruals £m	Derivatives £m	Gross debt £m	Other assets and liabilities			
				Cash and cash equivalents, net of bank overdrafts <sup>(i)</sup> £m	Current and non-current securities <sup>(ii)</sup> £m	Sub-lease assets £m	Adjusted net (debt)/cash £m
Group adjusted net (debt)/cash at 1 January 2022	(3,899)	93	(3,806)	4,328	156	2	680
Disposal of business	6	—	6	(30)	(21)	—	(45)
Cash outflow from settlement and purchase of securities	—	—	—	(398)	398	—	—
Cash outflow for payment of capital element of leases	103	—	103	(103)	—	—	—
Cash outflow for repayment of borrowings <sup>(vi)</sup>	1,482	—	1,482	(1,482)	—	—	—
Cash inflow from short-term borrowings <sup>(vi)</sup>	(1,220)	—	(1,220)	1,220	—	—	—
Remaining cash inflow	—	—	—	796	—	—	796
Revaluation/interest receivable on securities	240	(238)	2	—	(11)	—	(9)
Financing interest paid	179	(8)	171	(172)	—	—	(1)
Increase in interest payable and amortisation of borrowings	(181)	—	(181)	—	—	—	(181)
New lease agreements and re-measurement of existing lease liabilities	(42)	—	(42)	—	—	—	(42)
Exchange adjustments	(85)	—	(85)	83	3	—	1
Group adjusted net (debt)/cash at 31 December 2022	(3,417)	(153)	(3,570)	4,242	525	2	1,199
Transfer of other investments from net debt <sup>(iv)</sup>	—	—	—	—	(27)	—	(27)
Acquisition of businesses <sup>(v)</sup>	(13)	—	(13)	—	—	—	(13)
Cash outflow from net purchase of securities	—	—	—	(12)	12	—	—
Cash outflow for payment of capital element of leases	93	—	93	(93)	—	—	—
Cash outflow for repayment of borrowings <sup>(vi)</sup>	1,155	—	1,155	(1,155)	—	—	—
Cash inflow from borrowings <sup>(vi)</sup>	(930)	—	(930)	930	—	—	—
Cash inflow from operating activities	—	—	—	2,752	—	—	2,752
Cash inflow from other investing activities <sup>(vii)</sup>	—	—	—	106	—	—	106
Cash outflow from other financing activities <sup>(viii)</sup>	—	—	—	(810)	—	—	(810)
Revaluation	(59)	44	(15)	—	9	—	(6)
Interest receivable on securities	—	—	—	—	23	—	23
Interest received on securities	—	—	—	21	(21)	—	—
Financing interest paid	177	41	218	(286)	—	—	(68)
Increase in interest payable and amortisation of borrowings, and impact of associated interest rate swaps	(186)	(51)	(237)	—	—	—	(237)
New lease agreements and re-measurement of existing lease liabilities	(158)	—	(158)	—	—	—	(158)
Exchange adjustments	49	—	49	(66)	—	—	(17)
<b>Group adjusted net (debt)/cash at 31 December 2023</b>	<b>(3,289)</b>	<b>(119)</b>	<b>(3,408)</b>	<b>5,629</b>	<b>521</b>	<b>2</b>	<b>2,744</b>

(i) Cash and cash equivalents includes £104 million (2022: £555 million) of restricted cash, of which £nil (2022: £440 million) relates to cash received from the Energy Bill Support Scheme, this scheme concluded in 2023. This includes cash totalling £2 million (2022: £6 million) within the Spirit Energy business that is not restricted by regulation but is managed by Spirit Energy's own treasury department.

(ii) Cash and cash equivalents are net of £814 million bank overdrafts (2022: £600 million).

(iii) Securities balances includes £405 million (2022: £403 million) of loans to the pension schemes and £12 million (2022: £nil) of other loans receivable, both measured at amortised cost, as well as £72 million (2022: £67 million) other debt instruments and £32 million (2022: £55 million) equity instruments, both measured at fair value. See note 22 for further details on pension loans provided.

(iv) Transfer of other investments represents the reclassification of certain minority investments to Other investments from Securities in the Group Balance Sheet. Cash outflows from these securities in 2022 were £2 million. See note S2.

(v) Acquisition of business relates to the recognition of a £12 million external loan due to the step-up of the investment in Greener Ideas Limited from joint venture to subsidiary during the year, and the recognition of a £1 million lease liability acquired by Centrica Business Solutions during the year.

(vi) Repayment of borrowings comprises the repayment of £20 million short-term borrowing obtained during December 2022, £886 million repayment of commercial paper taken out during the period and a scheduled £249 million repayment of a 4.00% USD bond repaid on 16 October 2023. During the year other borrowings of £44 million were obtained. Bond repayment in 2022 comprises £36 million repayment of a 3.68% HKD bond repaid on 22 February 2022, and £246 million repayment of a 6.375% GBP bond repaid on 10 March 2022. In August 2022 the Group borrowed £1,200 million, which was repaid in September 2022.

(vii) Cash inflow from other investing activities excludes purchase of securities of £12 million, and interest received on securities of £21 million during the year.

(viii) Cash outflows from other financing activities comprise £17 million (2022: £273 million) of distributions to non-controlling interests (see note 12), proceeds of £6 million from exercise of share options (2022: £5 million payments for own shares), cash outflow of £186 million (2022: £59 million) for equity dividends and cash outflow of £613 million (2022: £43 million) related to the share buyback programme. There is a liability of £94 million (2022: £207 million) recognised at 31 December 2023 related to this programme. See note S4 for further details on the share buyback programme.



## 24. SOURCES OF FINANCE

### (d) Borrowings, leases and interest accruals summary

31 December	Coupon rate %	Principal m	2023			2022		
			Current £m	Non-current £m	Total £m	Current £m	Non-current £m	Total £m
Bank overdrafts			(814)	—	(814)	(600)	—	(600)
Bank loans (> 5 year maturity)			—	(130)	(130)	—	(143)	(143)
Other borrowings			(37)	(20)	(57)	(20)	—	(20)
Bonds (by maturity date):								
16 October 2023	4.000	US\$302	—	—	—	(246)	—	(246)
4 September 2026 <sup>(i)</sup>	6.400	£52	—	(50)	(50)	—	(49)	(49)
16 April 2027	5.900	US\$70	—	(55)	(55)	—	(58)	(58)
13 March 2029 <sup>(i)</sup>	4.375	£552	—	(497)	(497)	—	(471)	(471)
5 January 2032 <sup>(ii)</sup>	Zero	€50	—	(71)	(71)	—	(69)	(69)
19 September 2033 <sup>(i)</sup>	7.000	£770	—	(703)	(703)	—	(684)	(684)
16 October 2043	5.375	US\$367	—	(284)	(284)	—	(299)	(299)
12 September 2044	4.250	£550	—	(539)	(539)	—	(539)	(539)
25 September 2045	5.250	US\$50	—	(38)	(38)	—	(41)	(41)
10 April 2075 <sup>(i) (iii)</sup>	5.250	£450	—	(428)	(428)	—	(418)	(418)
			—	(2,665)	(2,665)	(246)	(2,628)	(2,874)
Obligations under lease arrangements			(98)	(286)	(384)	(88)	(237)	(325)
Interest accruals			(53)	—	(53)	(55)	—	(55)
			(1,002)	(3,101)	(4,103)	(1,009)	(3,008)	(4,017)

(i) Bonds or portions of bonds maturing in 2026, 2029, 2033 and 2075 have been designated in a fair value hedge relationship. See note S5 for details of hedge relationships.

(ii) €50 million of zero coupon notes have an accrual yield of 4.2%, which will result in a €114 million repayment on maturity.

(iii) The Group has the right to repay at par on 10 April 2025 and every interest payment date thereafter.

## 25. SHARE CAPITAL

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

### Allotted and fully paid share capital of the Company

31 December	2023 £m	2022 £m
5,907,846,138 ordinary shares of 6 <sup>14/81</sup> pence each (2022: 5,907,846,138)	365	365

The closing price of one Centrica ordinary share on 31 December 2023 was 140.7 pence (2022: 96.5 pence). Centrica employee share ownership trusts purchase Centrica ordinary shares from the open market and receive treasury shares to satisfy future obligations of certain employee share schemes. The movements in own and treasury shares during the year are shown below:

	Own shares <sup>(i)</sup>		Treasury shares <sup>(i)</sup>	
	2023 million shares	2022 million shares	2023 million shares	2022 million shares
1 January	30.4	33.8	45.7	—
Shares purchased	1.4	6.5	—	—
Shares issued and placed into trust	—	8.4	—	—
Shares transferred from treasury and placed into trust	34.3	—	(34.3)	—
Shares released to employees on vesting	(19.3)	(18.3)	(31.7)	—
Share buyback programme <sup>(ii)</sup>	—	—	512.3	45.7
<b>31 December <sup>(i)</sup></b>	<b>46.8</b>	<b>30.4</b>	<b>492.0</b>	<b>45.7</b>

(i) Own shares are shares held in trusts to meet employee share awards. Treasury shares are shares that have been purchased from the open market and have not been cancelled. The closing balance in the treasury and own shares reserves of own shares was £44 million (2022: £20 million) and treasury shares was £606 million (2022: £43 million), these are both held at weighted average cost.

(ii) See note S4 for further details of the share buyback programme.

## 26. EVENTS AFTER THE BALANCE SHEET DATE

The Group updates disclosures in light of new information being received, or a significant event occurring, in the period between 31 December 2023 and the date of this report.

The Directors propose a final dividend of 2.67 pence per ordinary share for the year ended 31 December 2023 (which would total £144 million based on shareholding at that date). The dividend will be submitted for formal approval at the Annual General Meeting to be held on 5 June 2024 and, subject to approval, will be paid on 11 July 2024 to those shareholders registered on 31 May 2024.

## Supplementary Information

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

### **S1. GENERAL INFORMATION**

Centrica plc (the 'Company') is a public company limited by shares, domiciled and incorporated in the UK, and registered in England and Wales. The address of the registered office is Millstream, Maidenhead Road, Windsor, Berkshire, SL4 5GD. The Company, together with its subsidiaries, comprise the 'Group'. The nature of the Group's operations and principal activities are set out in note 4(a) and on pages 1 to 55.

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

## S2. SUMMARY OF MATERIAL ACCOUNTING POLICIES

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

### Basis of consolidation

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

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

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

### Segmental reporting

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

### Revenue

#### Energy supply to business and residential customers

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

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

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

## S2. SUMMARY OF MATERIAL ACCOUNTING POLICIES

### Energy services provided to business and residential customers

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

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

### Costs to obtain or fulfil a contract

Under IFRS 15 'Revenue from contracts with customers', the incremental costs of obtaining a contract are recognised as an asset if they are expected to be recovered. These costs include expenditures that would not have been incurred if the contract had not been secured and typically relate to sales commissions payable in relation to both Energy supply and Energy service contracts.

Costs to fulfil a contract are recognised as an asset where they are directly related to a contract and where they generate or enhance resources of the entity that will be used in satisfying the performance obligations. Costs must be expected to be recoverable. Assets relating to costs to obtain or fulfil a contract are amortised over the period of the contract. See note 17.

### Sales of LNG

Revenue arising from sales of LNG is recognised when control of the commodity passes to the counterparty, with each cargo representing a separate performance obligation satisfied at a point in time.

### Sales of own gas and liquid production

Revenue arising from the sale of produced gas is recognised in a manner consistent with energy supply contracts with the revenue recognition profile reflecting the supply of gas to the customer.

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

### Energy sales to trading and energy procurement counterparties

Revenue arising from the sale of energy procured from generation asset owners to trading and energy procurement counterparties is also recognised in a manner consistent with energy supply contracts. There is a single performance obligation being the supply of energy over the contractual term at spot prices and revenue is recognised at the point at which energy is supplied to the counterparty in accordance with the contractual terms.

### Revenue arising from contracts outside the scope of IFRS 15

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

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

Power generation: revenue is recognised under IFRS 9 where contracts to supply power are measured at fair value.

### Cost of sales

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

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

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

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

### Re-measurement and settlement of energy contracts

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

### Financing costs

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

## S2. SUMMARY OF MATERIAL ACCOUNTING POLICIES

### Foreign currencies

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

Monetary assets and liabilities denominated in foreign currencies are retranslated to the functional currency of the relevant entity at the rate of exchange ruling at the balance sheet date and exchange movements included in the Group Income Statement for the period.

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

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

Exchange rate per pounds sterling (£)	Closing rate at 31 December		Average rate for the year ended 31 December	
	2023	2022	2023	2022
US dollars	1.27	1.20	1.24	1.24
Canadian dollars	1.68	1.63	1.68	1.61
Euro	1.15	1.14	1.15	1.17
Norwegian krone	12.90	11.89	13.14	11.84
Danish krone	8.59	8.51	8.58	8.73

Exchange adjustments arising from the retranslation of the opening net assets and results of non-sterling functional currency operations are transferred to the Group's foreign currency translation reserve, a separate component of equity, and are reported in other comprehensive income. In the event of the disposal of a non-sterling functional currency subsidiary, the cumulative translation difference arising in the foreign currency translation reserve is charged or credited to the Group Income Statement on disposal. Where the Group utilises net investment hedging, changes in the fair value of the hedging instrument are recognised in equity and remain there until the disposal of the specific, related investments, at which point the gains and losses are recycled to profit or loss.

### Employee share schemes

The Group operates a number of employee share schemes, detailed in the Remuneration Report on pages 84 to 86, under which it makes equity-settled share-based payments to certain employees. Equity-settled share-based payments are measured at fair value at the date of grant (excluding the effect of non-market-based vesting conditions). The fair value determined at the grant date is expensed on a straight-line basis together with a corresponding increase in equity over the vesting period, based on the Group's estimate of the number of awards that will vest, and adjusted for the effect of non-market-based vesting conditions.

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

More information is included in the Remuneration Report on pages 84 to 86.



## S2. SUMMARY OF MATERIAL ACCOUNTING POLICIES

### Business combinations and goodwill

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

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

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

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

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

### Other intangible assets

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

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

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

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

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

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

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

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

### Cloud computing arrangements

The Group has a number of contracts for Software as a Service (SaaS) and Platform as a Service (PaaS) Cloud Computing Arrangements. These contracts permit the Group to access vendor-hosted software and platform services over the term of the arrangement. The Group does not control the underlying assets in these arrangements and costs are expensed as incurred.

The Group also incurs implementation costs in respect of these contracts. Implementation costs are capitalised as intangible assets where costs meet the definition and recognition criteria of an intangible asset under IAS 38. Such costs typically relate to software coding which is capable of providing benefit to the Group on a standalone basis. Other implementation costs, primarily relating to the configuration and customisation of the Cloud software solution, are assessed to determine whether the implementation activity relating to these costs is distinct from the Cloud Arrangement, in which case costs are expensed as the activity occurs. If the configuration and customisation costs relate to activity which is integral to the Cloud Arrangement such that the activity is received over the term of the Cloud Arrangement, costs are recognised as a prepayment and expensed over the term of the Cloud Arrangement.

## S2. SUMMARY OF MATERIAL ACCOUNTING POLICIES

### UK & EU Emissions Trading Scheme

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

Forward contracts for the purchase or sale of carbon dioxide emissions allowances are measured at fair value with gains and losses arising from changes in fair value recognised in the Group Income Statement. The intangible asset is surrendered and the liability is extinguished at the end of the compliance period. No amortisation is charged up to the date of surrender as the cost and residual value of the intangible asset are deemed to be the same with no consumption of economic benefit.

### Renewable certificates

The Group purchases renewable certificates both on a standalone basis, and through Power Purchase Agreements. The main types of renewable certificates acquired are Renewable Energy Guarantees of Origin (REGOs) which are certificates issued by Ofgem certifying that electricity has been produced from renewable sources, Renewable Obligation Certificates (ROCs) which are issued to accredited generators for the eligible renewable electricity they generate and Guarantees of Origin (GoOs) which are the EU equivalent of REGOs. The Group uses renewable certificates to meet its obligations under a number of Ofgem schemes, namely the Feed-in Tariff (FIT), the Contracts for Difference (CFD), the Fuel Mix Disclosure (FMD) and the Renewables Obligation (RO) scheme.

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

The intangible asset is surrendered and the liability is extinguished at the end of the compliance period to reflect the consumption of economic benefits. Any recycling benefit related to the submission of renewable obligation certificates is recognised in the Group Income Statement when received. The Group also recognises supplier obligations for CFD and FIT schemes; renewable certificates are used to offset these liabilities.

Cash flows relating to renewable obligation certificates and similar schemes are recognised within cash flows from operating activities.

### Exploration, evaluation, development and production assets

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

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

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

### Interests in joint arrangements and associates

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

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

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

### Property, plant and equipment

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

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

## S2. SUMMARY OF MATERIAL ACCOUNTING POLICIES

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

Freehold and leasehold buildings	Up to 50 years
Plant	5 to 20 years
Equipment and vehicles	3 to 10 years
Power generation assets	Up to 30 years

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

### Impairment assumptions

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

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

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

### VIU – Key assumptions used

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

#### (a) VIU – Growth rates and discount rates

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

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

	British Gas Services & Solutions %	British Gas Energy %	Centrica Business Solutions Energy Supply %	Bord Gáis Energy %	Centrica Business Solutions (turbines/ engines/ battery/solar) <sup>(i)</sup> %	Centrica Energy %	Nuclear <sup>(i)</sup> %
<b>2023</b>							
Growth rate to perpetuity (including inflation)	2.1	2.1	2.1	1.6	N/A	2.1	N/A
Pre-tax discount rate	10.0	10.7	12.0	10.7	10.0/8.0 <sup>(ii)</sup>	12.0	17.3
<b>2022</b>							
Growth rate to perpetuity (including inflation)	2.0	2.0	2.0	1.9	N/A	2.0	N/A
Pre-tax discount rate	9.3	10.0	11.3	8.1	9.3/8.0 <sup>(ii)</sup>	11.3	24.8

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

(ii) Flexible assets (turbines, engines, battery) and solar discount rates respectively.

## S2. SUMMARY OF MATERIAL ACCOUNTING POLICIES

### (b) VIU – Inflation rates

Inflation rates used in the business plan were based on a blend of publicly available inflation forecasts and range from 1.6% to 7.5%.

### (c) Key operating assumptions by CGUs using VIU

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

CGU	Gross margin	Revenues	Operating costs
<b>All – base assumptions</b>	Existing customers: based on contractual terms. Losses are forecast based on historic data and future expectations of the market. New customers and renewals: based on gross margins achieved in the period leading up to the date of the business plan. Both adjusted for current market conditions and cost of goods inflation. For the Services business, future sales and related gross margins are based on planned future product sales and contract losses based upon past performance and future expectations of the competitive environment.	Existing customers: based on contractual terms. Losses are forecast based on historic data and future expectations of the market. Adjusted for: growth forecasts which are based on sales and marketing activity, recent customer acquisitions and the current economic environment in the relevant geography. Gas and electricity revenues based on forward market prices. Market share: percentage immediately prior to business plan.	Wages: projected headcount in line with expected efficiency programme. Salary increases based on inflation expectations. Credit losses: historical assumptions regarding realised cash losses have been updated to reflect the current environment.
<b>Centrica Energy</b>	Existing and new markets: management's estimate of future trading performance.	As above.	Future development: increase in costs to support growth forecasts, adjusted for planned business process efficiencies.
<b>Centrica Business Solutions (turbines/ engines/battery/solar)</b>	Based on forecast revenues, operations and maintenance costs, grid network and balancing system charges for the asset life.	Based on forward and contracted prices for commodity, capacity market and grid ancillary service contracts for the asset life.	Based on run-rate and forecast changes, including expected inflation for the asset life.

### Overlift and underlift

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

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

## S2. SUMMARY OF MATERIAL ACCOUNTING POLICIES

### Leases

The Group assesses its contractual arrangements to determine whether they are or contain leases based on whether they convey the right to control the use of an identified asset for a period of time in exchange for consideration.

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

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

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the Group's incremental borrowing rate. The liabilities for the majority of the Group's lease portfolio are calculated using the incremental borrowing rate. This rate is calculated on a lease-by-lease basis, taking into account the credit rating of the Group at the inception of the lease and the lease term. The credit adjustment used in this calculation is modified to reflect the security implicit in a lease arrangement based on the specific class of asset being leased.

Lease payments included in the measurement of the lease liability comprise: fixed payments (including in-substance fixed payments), variable lease payments that depend on an index or a rate (initially measured using the index or rate as at the commencement date), amounts expected to be payable under a residual value guarantee, the exercise price under a purchase option that the Group is reasonably certain to exercise, lease payments in an optional renewal period if the Group is reasonably certain to exercise an extension option, and penalties for early termination of a lease unless the Group is reasonably certain not to terminate early. When considering whether the Group is reasonably certain to exercise extension or termination options, various factors are considered, such as the level of lease payments relative to the market rate, the importance of the specific asset to the Group's operations and the period remaining until the option becomes exercisable. Such judgements are reconsidered when there is a significant event or change of circumstances that is within the control of the Group. Variable lease payments that do not depend on an index or rate are recognised in profit or loss in the period in which the event or condition that triggers those payments occurs.

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

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

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

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

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

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

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

## S2. SUMMARY OF MATERIAL ACCOUNTING POLICIES

### Inventories

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

Inventory of gas in storage held for the purpose of the Group's own use is measured on a weighted-average cost basis, whilst gas used for trading purposes is measured at fair value less any costs to sell. Changes in fair value less costs to sell are recognised in the Group Income Statement.

### Government grants

Government grants are transfers of resources to the Group in return for past or future compliance with certain conditions relating to the operating activities of the entity. Government assistance is designed to provide an economic benefit that is specific to an entity qualifying under certain criteria. The Group recognises government grants only when there is reasonable assurance that the Group will comply with the conditions attached to them and the grant will be received. Government grants are recognised in profit and loss on a systematic basis over the periods in which the Group recognises as expenses the related costs for which the grants are intended to compensate. Government grants related to assets are deducted from the carrying amount of the asset.

In 2022 and 2023 the Group recognised a Supplier of Last Resort (SoLR) receivable in relation to amounts recoverable under the Last Resort Supplier Payment (LRSP) mechanism administered by Ofgem, a government body, which is detailed in note 3. This process allows suppliers, appointed as Supplier of Last Resort, to recover costs reasonably incurred in supplying affected customers. The receivable recognised reflects amounts incurred primarily on commodity costs up to the reporting date which are recoverable under the LRSP claim. The associated credit has been recognised in cost of sales and operating costs.

### Decommissioning costs

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

When this provision relates to an asset with sufficient future economic benefits, a decommissioning asset is recognised and included as part of the associated PP&E and depreciated accordingly. The asset is subject to impairment review as detailed above. Changes in estimates and discount rates are dealt with prospectively and reflected as an adjustment to the provision and corresponding decommissioning asset included within PP&E. The discount rate used to calculate the provision is 1% as discussed in note 3.

The unwinding of the discount on the provision is included in the Group Income Statement within financing costs.

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

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

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

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

### Pensions and other post-employment benefits

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

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

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

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

In 2022 the Group provided a loan facility to the Group's three defined benefit pension schemes. The Group recognised the loan as a financial asset under IFRS 9 'Financial instruments' measured at amortised cost and classified as a receivable within Securities on the Group's balance sheet. The loan liability has been deducted from plan assets on the basis that the loan does not relate to employee benefits in accordance with IAS 19.



## S2. SUMMARY OF MATERIAL ACCOUNTING POLICIES

### Provisions

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

Where discounting is used, the increase in the provision due to the passage of time is recognised in the Group Income Statement within interest expense. Onerous contract provisions are recognised where the unavoidable costs of meeting the obligations under a contract exceed the economic benefits expected to be received under it. Contracts to purchase or sell energy are reviewed on a portfolio basis given the fungible nature of energy, whereby it is assumed that the highest priced purchase contract supplies the highest priced sales contract and the lowest priced sales contract is supplied by the lowest priced purchase contract. Since 2021, the Group recognises a material onerous supply contract provision where the future costs to fulfil customer contracts on a current market price basis exceed the charges recoverable from customers because the associated hedging gains have already been recognised in the Group Income Statement. Further detail relating to the key assumptions and sources of estimation uncertainty are provided in note 3.

### Taxation

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

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

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

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

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

## S2. SUMMARY OF MATERIAL ACCOUNTING POLICIES

### Financial instruments

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

#### (a) Trade receivables

Trade receivables are initially recognised at a value based on their transaction price, and are subsequently held at amortised cost using the effective interest method (taking into account the Group's business model, which is to collect the contractual cash flows owing) less an allowance for impairment losses. Balances are written off when recoverability is assessed as being remote. If collection is expected in one year or less, receivables are classified as current assets. If not, they are presented as non-current assets.

#### (b) Trade payables

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

#### (c) Share capital

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

#### (d) Cash and cash equivalents

Cash and cash equivalents comprise cash in hand and current balances with banks and similar institutions and money market deposits, which are readily convertible to known amounts of cash and which are subject to insignificant risk of changes in value and have an original maturity of three months or less. Money market funds are also included in cash and cash equivalents, and are required to be measured at fair value through profit or loss under IFRS 9, as noted in section (g) below. Cash and cash equivalents are presented net of outstanding bank overdrafts where there is a legal right of set off and, for the Group's cash pooling arrangements, to the extent the Group expects to settle its subsidiaries' year-end account balances on a net basis.

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

#### (e) Interest-bearing loans and other borrowings

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

#### (f) Financial instruments at fair value through other comprehensive income

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

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

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

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

#### (h) Securities

The Group holds debt and equity securities predominantly in respect of the Centrica Unapproved Pension Scheme (see note 22). Debt securities are required to be measured at fair value through profit or loss under IFRS 9, as the contractual terms of these assets do not give rise to cash flows that are solely payments of principal and interest on the principal amounts outstanding. The Group has elected to recognise the changes in fair value of the equity securities in other comprehensive income.

The Group classifies the loan facility provided to the Group's defined benefit pension schemes within Securities. It is recognised as a financial asset under IFRS 9 'Financial instruments' and measured at amortised cost. Correspondingly, the loan liability is deducted from plan assets on the basis the loan does not relate to employee benefits (scheme liabilities) in accordance with IAS 19.

Securities also includes a loan made to the minority shareholder in the Group's Greener Ideas Limited subsidiary which is similarly recognised as a financial asset under IFRS 9 and measured at amortised cost.

#### (i) Other investments

Other investments include minority interest equity investments which the Group accounts for under IFRS 9, because it does not have the ability to control, or significantly influence the investment. According to the requirements of IFRS 9, the Group may either measure these investments at fair value with value changes recognised in profit or loss, or it may elect to recognise those value changes in other comprehensive income. For the majority of the Group's other investments, fair value movements are recognised in other comprehensive income; this election is made separately for each investment made.

## S2. SUMMARY OF MATERIAL ACCOUNTING POLICIES

### (j) Derivative financial instruments

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

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

The Group uses a range of derivatives for both trading and to hedge exposures to financial risks, such as interest rates, foreign exchange and energy price risks, arising in the normal course of business. Where considered appropriate, the Group may use weather derivatives to protect against earnings volatility arising from unseasonal weather variations. The use of such derivatives did not have a material financial statement impact in 2023 or 2022. The use of derivative financial instruments is governed by the Group's policies which are approved by the Board of Directors. Further detail on the Group's risk management policies is included within the Strategic Report – Principal Risks and Uncertainties on pages 28 to 34 and in note S3.

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

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

The Group enters into certain energy derivative contracts covering periods for which observable market data does not exist. The fair value of such derivatives is estimated by reference in part to published price quotations from active markets, to the extent that such observable market data exists, and in part by using valuation techniques, the inputs to which include data that is not based on or derived from observable markets. Where the fair value at initial recognition for such contracts differs from the transaction price, a fair value gain or fair value loss will arise. This is referred to as a day-one gain or day-one loss. Such gains and losses are deferred (not recognised) and amortised to the Group Income Statement based on volumes purchased or delivered over the contractual period until such time as observable market data becomes available. When observable market data becomes available, any remaining deferred day-one gains or losses are recognised within the Group Income Statement.

Recognition of the gains or losses resulting from changes in fair value depends on the purpose for issuing or holding the derivative. For derivatives that do not qualify for cash flow or net investment hedge accounting, any gains or losses arising from changes in fair value are taken directly to the Group Income Statement and are included within gross profit or investment income and financing costs. Where derivatives qualify for cash flow or net investment hedging, changes in fair value arising from the effective element of the hedge are recognised initially in the Group Statement of Comprehensive Income and are recycled to the Group Income Statement when the hedged item impacts profit or loss. Further details on the treatment of energy derivatives in the Group Income Statement is provided in note 2. Further detail on the treatment of derivatives in hedging relationships is provided in note S5.

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

## S2. SUMMARY OF MATERIAL ACCOUNTING POLICIES

### (k) Hedge accounting

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

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

### (l) Financial guarantees

Financial guarantees are contracts that require the Group to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payment when due in accordance with the terms of a debt instrument. The Group accounts for financial guarantee contracts under IFRS 9.

### (m) Impairment of financial assets

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

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

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

### Nuclear activity

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

#### (a) Fuel costs – nuclear front end

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

#### (b) Fuel costs – nuclear back end

*Advanced gas-cooled reactors (AGR)*

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

*Pressurised water reactor (PWR)*

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

#### (c) Nuclear PP&E – depreciation

The majority of the cost of the nuclear fleet is depreciated from the date of the Group acquiring its share of the fleet on a straight-line basis, with remaining depreciable periods currently of up to 32 years.

Other expenditure including amounts spent on major inspections and overhauls of production plant is depreciated over the period until the next outage which for AGR power stations is 2 to 3 years and for the PWR power station is 18 months.

#### (d) Nuclear Liabilities Fund (NLF) funding arrangements

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

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

#### (e) NLF and nuclear liabilities receivables

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

#### (f) Nuclear liabilities

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

#### (g) Unburnt fuels at shutdown

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

### S3. FINANCIAL RISK MANAGEMENT

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

Further detail on the Group's overall risk management processes is included within the Strategic Report – Principal Risks and Uncertainties on pages 28 to 34.

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

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

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

#### **Market risk management**

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

#### **(a) Commodity price risk management**

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

#### **(i) Energy price exposed business activities**

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

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

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

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

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

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

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

### S3. FINANCIAL RISK MANAGEMENT

#### **(ii) Proprietary energy trading**

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

The Group sets volumetric and VaR limits to manage the commodity price risk exposure associated with the Group's proprietary energy trading activities. VaR measures the estimated potential loss at a 95% confidence level over a one-day holding period. The carrying value of energy contracts used in proprietary energy trading activities at 31 December 2023 is disclosed in note 19.

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

#### **(b) Currency risk management**

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

##### **(i) Transactional currency risk**

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

It is the Group's policy to hedge material transactional exposures using derivatives (either applying formal hedge accounting or economic hedge relationships) to fix the functional currency value of non-functional currency cash flows, except where there is an economic hedge inherent in the transaction. At 31 December 2023, there were no material unhedged non-functional currency monetary assets or liabilities, firm commitments or probable forecast transactions (2022: £nil), other than transactions which have an inherent economic hedge and foreign currency borrowings used to hedge translational exposures.

##### **(ii) Translational currency risk**

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

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

#### **(c) Interest rate risk management**

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

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



### S3. FINANCIAL RISK MANAGEMENT

#### (d) Sensitivity analysis

IFRS 7 requires disclosure of a sensitivity analysis that is intended to illustrate the sensitivity of the Group's financial position and performance to changes in market variables (commodity prices, foreign exchange rates and interest rates) as a result of changes in the fair value or cash flows associated with the Group's financial instruments. The sensitivity analysis provided discloses the effect on profit or loss and equity at 31 December 2023, assuming that a reasonably possible change in the relevant risk variable had occurred at 31 December 2023, and has been applied to the risk exposures in existence at that date to show the effects of reasonably possible changes in price on profit or loss and equity. Reasonably possible changes in market variables used in the sensitivity analysis are based on implied volatilities, where available, or historical data for energy prices and foreign exchange rates. Reasonably possible changes in interest rates are based on management judgement and historical experience.

The sensitivity analysis has been prepared based on 31 December 2023 balances and on the basis that the balances, the ratio of fixed to floating rates of debt and derivatives, the proportion of energy contracts that are financial instruments, the proportion of financial instruments in foreign currencies and the hedge designations in place at 31 December 2023 are all constant. Excluded from this analysis are all non-financial assets and liabilities and energy contracts that are not financial instruments under IFRS 9. The sensitivity to foreign exchange rates relates only to monetary assets and liabilities denominated in a currency other than the functional currency of the commercial operation transacting, and excludes the translation of the net assets of foreign operations to pounds sterling.

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

#### (i) Transactional currency risk

The Group has performed an analysis of the sensitivity of the Group's financial position and performance to changes in foreign exchange rates. The Group deems 10% movements to US dollar and euro currency rates relative to pounds sterling to be reasonably possible.

The material impact of such movements on profit and equity, both before and after taxation, are as follows:

	2023 Impact on profit £m	2022 Impact on profit £m
<b>Incremental profit/(loss)</b>		
US dollar – increase/(decrease)	102/(54)	139/(180)
Euro – increase/(decrease)	(56)/128	36/(38)

All other currency sensitivities are not material.

#### (ii) Interest rate risk

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

#### (iii) Commodity price risk – non-proprietary

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

	2023		2022	
	Base price <sup>(i)</sup>	Reasonably possible change in variable <sup>(ii)</sup> %	Base price <sup>(i)</sup>	Reasonably possible change in variable <sup>(ii)</sup> %
<b>Energy prices</b>				
UK gas (p/therm)	86	+/-54	184	+/-47
European gas (€/MWh)	33	+/-54	71	+/-47
UK power (£/MWh)	85	+/-13	189	+/-26
UK emissions (€/tonne)	80	+/-7	86	+/-7
UK oil (US\$/bbl)	73	+/-10	84	+/-19
North American gas (US cents/therm)	34	+/-11	44	+/-25
Japan Korea Marker (JKM) gas price (US\$/MMBtu)	12	+/-9	21	+/-10

### S3. FINANCIAL RISK MANAGEMENT

	2023 Impact on profit <sup>(i)</sup> £m	2022 Impact on profit <sup>(i)</sup> £m
<b>Incremental profit/(loss)</b>		
UK gas price – increase/(decrease)	218/(218)	365/(374)
UK power price – increase/(decrease)	84/(83)	540/(544)
European gas price – (decrease)/increase	(167)/167	(171)/171
Other UK energy prices (oil and emissions) – (decrease)/increase	(2)/2	(32)/32
<b>UK and European energy prices (combined) – increase/(decrease)</b>	<b>133/(132)</b>	<b>702/(715)</b>
North American energy prices (combined) – increase/(decrease)	35/(35)	60/(60)
JKM gas price – increase/(decrease)	60/(60)	294/(294)

(i) The base price represents the average forward market price over the duration of the active market curve used in the sensitivity analysis provided.

(ii) The reasonably possible change in variable and the impact on profit are calculated using both the active and inactive market curves for energy prices.

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

#### (iv) Commodity price risk – proprietary trades

As at 31 December 2023 the VaR associated with proprietary trading was £4 million (2022: £5 million). This represents the statistical downside risk associated with the proprietary trade and associated hedging positions. The changes in the year only relate to changes in commodity prices. Intra-day trading positions are monitored using a live time risk management system.

The impacts of reasonably possible changes using probability-based high and low price curves applied to level 3 proprietary trades are as follows:

	2023 Impact on profit <sup>(i)</sup> £m	2022 Impact on profit <sup>(i)</sup> £m
<b>Incremental profit/(loss)</b>		
Level 3 proprietary trades – increase/(decrease) <sup>(ii)</sup>	24/(24)	891/(877)

(i) The reasonably possible change in variable and the impact on profit are calculated using both the active and inactive market curves for energy prices, see note 7(c) for detail on market curves.

(ii) The level 3 proprietary financial instruments' sensitivity has been valued in Secure Environment and excludes associated hedges which would mitigate this impact.

### S3. FINANCIAL RISK MANAGEMENT

#### Credit risk management

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

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

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

	2023						
	Financial assets at amortised cost			Financial assets at fair value			
	Receivables including treasury, trading and energy procurement counterparties <sup>(i)</sup>	Securities <sup>(ii)</sup>	Cash and cash equivalents	Cash and cash equivalents	Derivative financial instruments with positive fair values	Securities	Other investments
	£m	£m	£m	£m	£m	£m	£m
31 December							
AAA to AA	65	—	—	4,859	—	104	—
AA- to A-	605	—	1,459	—	819	—	—
BBB+ to BBB-	1,054	—	41	—	1,646	—	—
BB+ to BB-	164	—	5	—	438	—	—
B+ or lower	58	—	8	—	45	—	—
Unrated <sup>(iii)</sup>	4,553	417	71	—	324	—	61
	6,499	417	1,584	4,859	3,272	104	61

	2022						
	Financial assets at amortised cost			Financial assets at fair value			
	Receivables including treasury, trading and energy procurement counterparties <sup>(i)</sup>	Securities <sup>(ii)</sup>	Cash and cash equivalents <sup>(iv)</sup>	Cash and cash equivalents	Derivative financial instruments with positive fair values	Securities	Other investments
	£m <sup>(i)</sup>	£m	£m	£m	£m	£m	£m
31 December							
AAA to AA	245	—	—	2,800	19	95	—
AA- to A-	914	—	1,844	178	1,271	—	—
BBB+ to BBB-	2,727	—	20	—	4,459	—	—
BB+ to BB-	542	—	—	—	724	—	—
B+ or lower	112	—	—	—	235	—	—
Unrated <sup>(iii)</sup>	4,534	403	—	—	719	27	—
	9,074	403	1,864	2,978	7,427	122	—

(i) The Group holds a provision of £1,309 million (2022: £872 million) against receivables. The significant majority of this provision is held against amounts due from unrated counterparties. Further analysis of past due trade receivables may be found at note 17.

(ii) Securities held at amortised cost consist of loans to the pension schemes of £405 million (2022: £403 million) and other loans receivable of £12 million (2022: £nil) – see note 24.

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

(iv) Cash and cash equivalents measured at amortised cost in 2022 have been restated following re-analysis of counterparty credit rating.

### S3. FINANCIAL RISK MANAGEMENT

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

#### (a) Treasury, trading and energy procurement activities

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

The vast majority of Group credit risk associated with its treasury, trading and energy procurement activities is with counterparties in related energy industries or financial institutions together with smaller exposures to commodity traders and small independent renewable producers. The impairment considerations of IFRS 9 are applicable to financial assets arising from treasury, trading and energy procurement activities that are carried at amortised cost and debt instruments that are carried at fair value through other comprehensive income (FVOCI). Debt instruments measured at FVOCI are not material for further disclosure.

Included in the table above within receivables including treasury, trading and energy procurement counterparties is £2,155 million (2022: £4,525 million) of treasury, trading and energy procurement assets. The Group's risk assessment procedures and counterparty selection process ensure that the credit risk on this type of financial asset is always low at initial recognition.

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

#### (b) Trade receivables and contract assets

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

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

#### Liquidity risk management and going concern

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

### S3. FINANCIAL RISK MANAGEMENT

#### Maturity profiles

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

	<1 year £m	1 to 2 years £m	2 to 3 years £m	3 to 4 years £m	4 to 5 years £m	>5 years £m
<b>Due for payment 2023</b>						
Energy and interest derivatives in a loss position that will be settled on a net basis <sup>(i)</sup>	(300)	(80)	(30)	(21)	(17)	(47)
Gross energy procurement contracts and other derivative buy trades carried at fair value	(4,541)	(2,423)	(78)	(35)	(32)	(82)
Foreign exchange derivatives that will be settled on a gross basis:						
Outflow	(7,783)	(1,367)	(570)	(298)	—	—
Inflow	7,732	1,360	570	296	—	—
Trade and other payables and contract liabilities	(6,267)	(130)	(41)	(20)	(2)	(8)
Borrowings (bank loans, bonds, overdrafts and interest)	(924)	(593)	(183)	(182)	(125)	(3,397)
	(12,083)	(3,233)	(332)	(260)	(176)	(3,534)
<b>Leases: <sup>(ii)</sup></b>						
Minimum lease payments	(99)	(91)	(78)	(44)	(25)	(99)
Capital elements of leases	(98)	(80)	(68)	(38)	(21)	(79)
<b>Due for payment 2022</b>						
Energy and interest derivatives in a loss position that will be settled on a net basis <sup>(i)</sup>	(1,159)	(146)	(47)	(28)	(18)	(80)
Gross energy procurement contracts and other derivative buy trades carried at fair value	(10,490)	(8,525)	(4,580)	(67)	(47)	(116)
Foreign exchange derivatives that will be settled on a gross basis:						
Outflow	(7,748)	(1,244)	(73)	—	—	—
Inflow	8,027	1,207	239	20	1	—
Trade and other payables and contract liabilities	(8,930)	(113)	(24)	(17)	—	—
Borrowings (bank loans, bonds, overdrafts and interest)	(1,016)	(157)	(595)	(185)	(186)	(3,575)
	(21,316)	(8,978)	(5,080)	(277)	(250)	(3,771)
<b>Leases: <sup>(ii)</sup></b>						
Minimum lease payments	(89)	(79)	(70)	(55)	(26)	(29)
Capital elements of leases	(88)	(69)	(67)	(51)	(24)	(26)

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

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

## S4. OTHER EQUITY

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

	Cash flow hedging reserve £m	Foreign currency translation reserve £m	Actuarial gains and losses reserve £m	Financial asset at FVOCI reserve £m	Treasury and own shares reserve £m	Share- based payments reserve £m	Merger, capital redemption and other reserves £m	Total £m
1 January 2022	10	(304)	(1,012)	3	(18)	42	527	(752)
Actuarial loss	—	—	(147)	—	—	—	—	(147)
Employee share schemes:								
Exercise of awards	—	—	—	—	10	(22)	—	(12)
Value of services provided	—	—	—	—	—	10	—	10
Purchase of own shares	—	—	—	—	(5)	—	—	(5)
Issue of shares	—	—	—	—	(7)	—	—	(7)
Share buyback programme:								
Purchase of Treasury shares	—	—	—	—	(43)	—	—	(43)
Accrual for committed share purchases	—	—	—	—	—	—	(207)	(207)
Impact of cash flow hedging	(28)	—	—	—	—	—	—	(28)
Taxation on above items	8	—	23	—	—	—	—	31
Share of other comprehensive loss of joint ventures and associates, net of taxation	—	—	(293)	—	—	—	—	(293)
Exchange differences on translation of foreign operations	—	(95)	—	—	—	—	—	(95)
Exchange differences reclassified to Group Income Statement on disposal	—	272	—	—	—	—	—	272
31 December 2022	(10)	(127)	(1,429)	3	(63)	30	320	(1,276)
Actuarial loss	—	—	(381)	—	—	—	—	(381)
Employee share schemes:								
Exercise of awards	—	—	—	—	22	(20)	—	2
Value of services provided	—	—	—	—	—	31	—	31
Proceeds from exercise of share options	—	—	—	—	6	—	—	6
Share buyback programme:								
Purchase of Treasury shares	—	—	—	—	(615)	—	—	(615)
Movement on accrual for committed share purchases	—	—	—	—	—	—	115	115
Impact of cash flow hedging	(3)	—	—	—	—	—	—	(3)
Share of other comprehensive loss of joint ventures and associates, net of taxation	—	—	(95)	—	—	—	—	(95)
Exchange differences on translation of foreign operations	—	(43)	—	—	—	—	—	(43)
Revaluation of FVOCI securities	—	—	—	4	—	—	—	4
Taxation on above items	1	—	93	(1)	—	6	—	99
31 December 2023	(12)	(170)	(1,812)	6	(650)	47	435	(2,156)

### Merger, capital redemption and other reserves

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

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

In accordance with the Companies Act, the Company has transferred to the capital redemption reserve an amount equal to the nominal value of shares repurchased and subsequently cancelled. As at 31 December 2023 the cumulative nominal value of shares repurchased and subsequently cancelled was £28 million (2022: £28 million).

At the year-end, the Group has recognised a financial liability of £94 million relating to the share buyback programme. See Treasury and own shares reserve section for more details.



## S4. OTHER EQUITY

### Treasury and own shares reserve

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

Treasury shares are acquired equity instruments of the Company.

On 10 November 2022, the Group announced an intention to undertake a share buyback of £250 million and the Group entered into contracts with third parties to undertake this repurchase programme which has now completed. During 2023, the Group firstly increased the share buyback by an additional £300 million which completed during the second half of the year.

Subsequently, in July 2023, the Group announced a further £450 million extension to the share buyback programme and as a result, the Group signed an agreement with a third party to undertake the repurchase of £200 million of shares which is expected to complete by March 2024. The repurchase of the remaining £250 million of shares is expected to commence in the first half of 2024. See note 3 for further details.

During the year ended 31 December 2023, the Group purchased 512 million ordinary shares, representing approximately 8.7% of the issued ordinary share capital at an average price of 120.1 pence per share, and an aggregate cost of £615 million under the share buyback programme. Of this £615 million, £613 million has been paid and £2 million relates to shares committed to being purchased at 31 December 2023 but not yet settled.

A financial liability of £94 million was recognised at 31 December 2023, representing the difference between purchases paid for to date under the current tranche, and the maximum potential repurchase under the contract of £200 million.

The monthly breakdown of all shares purchased and the average price paid per share (excluding expenses) in relation to the financial liability of £207 million recognised at 31 December 2022 were as follows:

Period	Number of shares purchased under share buyback programme	Average price paid Pence	Total cost £m	Authorised purchases unutilised at month end £m
January 2023	44,926,039	95.4	43	164
February 2023	51,825,628	100.7	52	112
March 2023	108,017,252	103.7	112	—
<b>Total</b>	<b>204,768,919</b>	<b>101.1</b>	<b>207</b>	<b>—</b>

The monthly breakdown of all shares purchased and the average price paid per share (excluding expenses) in relation to the additional £300 million programme for the year ended 31 December 2023 were as follows:

Period	Number of shares purchased under share buyback programme	Average price paid Pence	Total cost £m	Authorised purchases unutilised at month end £m
April 2023	43,184,077	112.7	49	251
May 2023	29,309,742	116.5	34	217
June 2023	42,623,172	118.4	50	167
July 2023	54,532,501	119.7	65	102
August 2023	22,378,746	142.3	32	70
September 2023	30,685,854	163.6	50	20
October 2023	12,740,987	153.1	20	—
<b>Total</b>	<b>235,455,079</b>	<b>127.4</b>	<b>300</b>	<b>—</b>

The monthly breakdown of all shares purchased and the average price paid per share (excluding expenses) in relation to the further £200 million programme for the year ended 31 December 2023 were as follows. This includes £2 million relating to shares committed to being purchased at 31 December 2023 but not yet settled.

Period	Number of shares purchased under share buyback programme	Average price paid Pence	Total cost £m	Authorised purchases unutilised at month end £m
October 2023	17,642,000	155.8	27	173
November 2023	27,672,575	151.5	42	131
December 2023	26,734,872	145.4	39	92
<b>Total</b>	<b>72,049,447</b>	<b>150.6</b>	<b>108</b>	<b>92</b>

## S5. HEDGE ACCOUNTING

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

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

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

31 December	Hedge	2023			2022		
		Assets £m	Liabilities £m	Change in fair value £m	Assets £m	Liabilities £m	Change in fair value £m
Interest rate risk	Fair value	—	(136)	48	37	(221)	(228)
Foreign exchange risk	Cash flow hedge	36	(18)	(13)	37	(6)	(10)

2023	Hedge	Timing of nominal amount	Average rate	Nominal value	Hedged item	Change in fair value of hedged item in year £m	Cumulative amount of fair value hedge adjustments on hedged item £m	Accumulated (losses)/gains in equity <sup>(i)</sup> £m
Interest rate risk	Fair value	2025-2033	Fixed to floating at Fallback LIBOR + 2%-5%	£50 million- £550 million	Bonds <sup>(ii)</sup>	(59)	138	N/A
Foreign exchange risk	Cash flow hedge	2032	GBP to euro at 1.171	€50 million	Euro bonds	(1)	N/A	3
	Cash flow hedge	2036-2038	GBP to yen at 158.87	¥20 billion	Yen bank loans	7	N/A	(21)

2022	Hedge	Timing of nominal amount	Average rate	Nominal value	Hedged item	Change in fair value of hedged item in year £m	Cumulative amount of fair value hedge adjustments on hedged item £m	Accumulated gains/(losses) in equity <sup>(i)</sup> £m
Interest rate risk	Fair value	2022-2033	Fixed to floating at LIBOR/US IBOR + 1%-5%	£50 million- £550 million, \$250 million	Bonds <sup>(ii)</sup>	228	158	N/A
Foreign exchange risk	Cash flow hedge	2032	GBP to euro at 1.171	€50 million	Euro bonds	7	N/A	26
	Cash flow hedge	2036-2038	GBP to yen at 157.33	¥20 billion	Yen bank loans	3	N/A	(23)

(i) In the years presented all amounts related to continuing cash flow hedge relationships.

(ii) The carrying amount of bonds designated as hedged items in hedging relationships is disclosed in note 24.

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

### Fair value hedges

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

## Cash flow hedges

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

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

The portion of the gain or loss on the hedging instrument which is effective is recognised directly in equity while any ineffectiveness is recognised in the Group Income Statement. The Group does not have any material sources of ineffectiveness. The gains or losses that are initially recognised in the cash flow hedging reserve through other comprehensive income are transferred to the Group Income Statement in the period in which the hedged item affects profit or loss. Hedge accounting is discontinued when the hedging instrument expires or is sold, terminated or exercised without replacement or rollover, no longer qualifies for hedge accounting or the Group revokes the designation. At that point in time, any cumulative gain or loss on the hedging instrument recognised in equity remains in equity until the hedged transaction occurs. If the transaction is no longer expected to occur, the cumulative gain or loss recognised in equity is recognised in the Group Income Statement. Note S4 details movements in the cash flow hedging reserve.

## S6. FAIR VALUE OF FINANCIAL INSTRUMENTS

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

### (a) Fair value hierarchy

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

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

31 December	2023				2022			
	Level 1 £m	Level 2 £m	Level 3 £m	Total £m	Level 1 £m	Level 2 £m	Level 3 £m	Total £m
<b>Financial assets</b>								
Derivative financial instruments:								
Energy derivatives	—	2,995	156	<b>3,151</b>	—	6,486	592	7,078
Interest rate derivatives	—	—	—	—	—	37	—	37
Foreign exchange derivatives	—	121	—	<b>121</b>	—	312	—	312
Debt instruments	72	—	1	<b>73</b>	66	—	1	67
Equity instruments	32	—	60	<b>92</b>	29	9	17	55
Contingent consideration receivable	—	—	—	—	—	26	—	26
Cash and cash equivalents	—	4,859	—	<b>4,859</b>	—	2,978	—	2,978
<b>Total financial assets at fair value</b>	<b>104</b>	<b>7,975</b>	<b>217</b>	<b>8,296</b>	<b>95</b>	<b>9,848</b>	<b>610</b>	<b>10,553</b>
<b>Financial liabilities</b>								
Derivative financial instruments:								
Energy derivatives	—	(2,436)	(272)	<b>(2,708)</b>	—	(8,806)	(850)	(9,656)
Interest rate derivatives	—	(136)	—	<b>(136)</b>	—	(221)	—	(221)
Foreign exchange derivatives	—	(162)	—	<b>(162)</b>	—	(274)	—	(274)
Contingent consideration payable	—	—	(123)	<b>(123)</b>	—	—	(96)	(96)
<b>Total financial liabilities at fair value</b>	<b>—</b>	<b>(2,734)</b>	<b>(395)</b>	<b>(3,129)</b>	<b>—</b>	<b>(9,301)</b>	<b>(946)</b>	<b>(10,247)</b>

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

	2023		2022	
	Financial assets £m	Financial liabilities £m	Financial assets £m	Financial liabilities £m
<b>Level 3 financial instruments</b>				
1 January	<b>610</b>	<b>(946)</b>	501	(290)
Total realised and unrealised (losses)/gains:				
Recognised in Group Income Statement	<b>(297)</b>	<b>252</b>	10	(784)
Recognised in Other Comprehensive Income	<b>(1)</b>	—	—	—
Net movement in contingent consideration liability	—	<b>(27)</b>	—	(96)
Purchases, sales, issuances and settlements (net)	<b>2</b>	<b>194</b>	(4)	—
Transfers between Level 3 and Level 2 <sup>(i)</sup>	<b>(96)</b>	<b>131</b>	101	224
Foreign exchange movements	<b>(1)</b>	<b>1</b>	2	—
<b>31 December</b>	<b>217</b>	<b>(395)</b>	610	(946)
<b>Total (losses)/gains for the year for Level 3 financial instruments held at the end of the reporting period</b>	<b>(297)</b>	<b>252</b>	10	(784)

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

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

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

Level 2 energy derivatives are fair valued by comparing and discounting the difference between the expected contractual cash flows for the relevant commodities and the quoted prices for those commodities in an active market. The average discount rate applied to value this type of contract during the year was 5% per annum (2022: average discount rate of 5% per annum).

For Level 3 energy derivatives, the main input used by the Group pertains to deriving expected future commodity prices in markets that are not active as far into the future as some of our contractual terms. This applies to certain contracts within Europe and North America. Fair values are then calculated by comparing and discounting the difference between the expected contractual cash flows and these derived future prices using an average discount rate of 5% (Europe) and 5% (North America) per annum (2022: average discount rate of 5% (Europe) and 5% (North America) per annum).

Active period of markets	Gas	Power	Coal	Emissions	Oil
UK (years)	4	4	3	3	3

Because the Level 3 energy derivative valuations involve the prediction of future commodity market prices, sometimes a long way into the future, reasonably possible alternative assumptions for gas, power, coal, emissions or oil prices may result in a higher or lower fair value for Level 3 financial instruments. The impact of reasonably possible changes in commodity prices on profit and loss are included in note S3. Other than commodity prices there are no other unobservable inputs which would have a material impact.

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

The Group's valuation process includes specific teams of individuals that perform valuations of the Group's derivatives for financial reporting purposes, including Level 3 valuations. The Group has an independent team that derives future commodity price curves based on available external data and these prices feed into the energy derivative valuations, subject to adjustments to ensure they are compliant with IFRS 13 'Fair Value Measurement'. The price curves are subject to review and approval by the Group's Executive Committee and valuations of all derivatives, together with other contracts that are not within the scope of IFRS 9, are also reviewed regularly as part of the overall risk management process. The Group adjusts the market value of derivative instruments to account for counterparty credit risk and corresponding possibility of a counterparty default preventing full realisation of the risk-free market value of the derivative. The Group estimates Credit Valuation Adjustments by computing an expected evolution of the market value of a counterpart's derivatives portfolio over the life of the contracts weighted by the probability of a default and an assumption of the market value recoverable in the event of a default. The default probability is calibrated to the price of Credit Default Swaps – a debt instrument reflecting the insurance premium payable to protect against a debtor's default. Debit valuation adjustments are the amount added back to the derivative value to account for the expected gain from the Group's own default and are calculated using a similar methodology with reference to the Group's own probability of default.

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

	2023 £m	2022 £m
Day-one gains deferred		
1 January	304	90
Net gains deferred on transactions in the year	98	401
Net amounts recognised in Group Income Statement	(254)	(195)
Exchange differences	(6)	8
31 December	142	304

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

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

			2023			2022		
			Carrying value £m	Fair value £m	Fair value hierarchy	Carrying value £m	Fair value £m	Fair value hierarchy
31 December		Notes						
Bonds	Level 1	24	(2,594)	(2,769)	Level 1	(2,805)	(2,840)	Level 1
	Level 2	24	(71)	(79)	Level 2	(69)	(79)	Level 2

### Bank borrowings

The fair values of bonds classified as Level 1 within the fair value hierarchy are calculated using quoted market prices. The fair values of Level 2 bonds have been determined by discounting cash flows with reference to relevant market rates of interest. The fair values of overdrafts and bank loans are assumed to materially equal their carrying values.

### Other financial instruments

Due to their nature and/or short-term maturity, the fair values of trade and other receivables, cash and cash equivalents, trade and other payables, other borrowings and securities held at amortised cost are estimated to approximate their carrying values.

## S6. FAIR VALUE OF FINANCIAL INSTRUMENTS

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

	Gross amounts of recognised financial instruments £m	Gross amounts of recognised financial instruments offset in the Group Balance Sheet £m	Net amounts presented in the Group Balance Sheet £m	Related amounts not offset in the Group Balance Sheet <sup>(i)</sup>		
				Financial instruments £m	Collateral £m	Net amount £m
31 December 2023						
Derivative financial assets	9,883	(6,611)	3,272	(77)	(184)	3,011
Derivative financial liabilities	(9,617)	6,611	(3,006)	77	260	(2,669)
			266			342
Balances arising from commodity contracts:						
Accrued and unbilled downstream and energy income	7,067	(4,220)	2,847	(2)	—	2,845
Accruals for commodity costs	(6,684)	4,220	(2,464)	2	—	(2,462)
Cash and financing arrangements:						
Cash and cash equivalents	6,443	—	6,443	(814)	—	5,629
Bank loans and overdrafts	(944)	—	(944)	814	—	(130)
	Gross amounts of recognised financial instruments £m	Gross amounts of recognised financial instruments offset in the Group Balance Sheet £m	Net amounts presented in the Group Balance Sheet £m	Related amounts not offset in the Group Balance Sheet <sup>(i)</sup>		
				Financial instruments £m	Collateral £m	Net amount £m
31 December 2022						
Derivative financial assets	28,019	(20,592)	7,427	(956)	(601)	5,870
Derivative financial liabilities	(30,743)	20,592	(10,151)	956	1,154	(8,041)
			(2,724)			(2,171)
Balances arising from commodity contracts:						
Accrued and unbilled downstream and energy income	12,751	(8,057)	4,694	(622)	—	4,072
Accruals for commodity costs	(13,428)	8,057	(5,371)	622	—	(4,749)
Cash and financing arrangements:						
Cash and cash equivalents	4,842	—	4,842	(600)	—	4,242
Bank loans and overdrafts	(743)	—	(743)	600	—	(143)

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



## S7. FIXED-FEE SERVICE AND INSURANCE CONTRACTS

**This section includes fixed-fee service (FFS) and insurance contract disclosures for services related to British Gas.**

FFS non-insurance contracts in the UK are entered into with home services customers by British Gas Services Limited. FFS insurance contracts in the UK are entered into with home services customers by British Gas Insurance Limited, authorised by the PRA and regulated by the FCA and the PRA.

Product offerings include central heating, boiler and controls, plumbing and drains and electrical appliance insurance cover. Insurance contracts normally provide cover for twelve months with the option of renewal.

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

IFRS 17 'Insurance contracts' became effective on 1 January 2023 and replaced the existing insurance standard, IFRS 4. FFS insurance contracts fall within the scope of IFRS 17 where the Group reflects an assessment of the risk associated with an individual customer in setting the price of the contract, this captures materially all the Group's insurance contracts. The Group applies the simplified 'Premium Allocation Approach' to its contracts on the basis that the coverage period of the Group's insurance contracts is not greater than one year. The implementation of IFRS 17 has not caused any material accounting changes to the Group, see note 1.

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

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

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

Revenue is recognised over the life of contracts (usually a twelve month period) regarding the incidence of risk, in particular the seasonal propensity of claims that span the life of the contract as a result of emergency maintenance being available throughout the contract term. Costs incurred to settle claims represent principally the engineer workforce employed by the Group within home services and the cost of parts utilised in repair or maintenance. Revenue is accounted for over a twelve month period in accordance with the premium allocation approach required by IFRS 17, with adjustments made to reflect the seasonality of workload over a given year. Claims frequency is sensitive to the reliability of appliances as well as the impact of weather conditions. The contracts are not exposed to any interest rate risk or significant credit risk and do not contain any embedded derivatives.

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

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

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

The costs of FFS insurance claims was £nil (2022: £2 million) and revenue earned from FFS insurance contracts in the scope of IFRS15 was £nil (2022: £5 million). The cost of insurance claims incurred during the year was £240 million (2022: £290 million) and is included in the table below in 'Insurance services cost of sales'. Due to the short average lead time between claims occurrence and settlement, no material provisions were outstanding at the balance sheet date in 2023 or 2022.

31 December	2023 £m	2022 £m
Insurance services revenue	813	852
Insurance services cost of sales	(475)	(582)
Insurance services operating costs	(294)	(264)
Insurance contract liabilities:		
Liabilities for incurred claims (LIC)	(126)	(124)
Liability for remaining coverage (LRC)	(39)	(36)

## S8. RELATED PARTY TRANSACTIONS

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

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

	2023		2022	
	Purchase of goods and services £m	Amounts owed to £m	Purchase of goods and services £m	Amounts owed to £m
31 December				
Associates:				
Nuclear	(655)	(94)	(564)	(102)
Joint ventures	(1)	—	—	—
	(656)	(94)	(564)	(102)

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

At the balance sheet date, the Group had committed facilities to the Lake Acquisition Group totalling £120 million (2022: £120 million), although nothing has been drawn at 31 December 2023.

### Remuneration of key management personnel

Year ended 31 December	2023 £m	2022 £m
Short-term benefits	5.0	4.4
Post-employment benefits	0.2	0.1
Share-based payments	4.6	4.1
	9.8	8.6

Key management personnel comprise members of the Board and Executive Committee, a total of 14 individuals at 31 December 2023 (2022: 11).

### Remuneration of the Directors of Centrica plc

Year ended 31 December	2023 £m	2022 £m
Total emoluments <sup>(i)</sup>	4.6	3.2
Amounts receivable under long-term incentive schemes	7.7	2.3
Contributions into pension schemes	0.1	—
	12.4	5.5

(i) These emoluments were paid for services performed on behalf of the Group. No emoluments related specifically to services performed for the Company.

Directors' interests in shares are given in the Remuneration Report on pages 84 to 109.

## S9. AUDITORS' REMUNERATION

Year ended 31 December	2023 £m	2022 £m
Fees payable to the Company's auditors for:		
Audit of the Company's individual and consolidated Financial Statements	5.8	4.8
Audit of the Company's subsidiaries	2.0	1.7
Total fees related to the audit of the parent and subsidiary entities	7.8	6.5
Fees payable to the Company's auditors and its associates for other services:		
Audit-related assurance services <sup>(i)</sup>	0.7	0.9
<b>Total fees</b>	<b>8.5</b>	<b>7.4</b>
Fees in respect of pension scheme audits <sup>(ii)</sup>	0.1	0.1

(i) Predominantly relates to the review of the condensed interim Financial Statements.

(ii) The pension scheme audit continues to be performed by PricewaterhouseCoopers LLP.

## S10. RELATED UNDERTAKINGS

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

### (a) Subsidiary undertakings

#### Investments held directly by Centrica plc with 100% voting rights

31 December 2023	Principal activity	Country of incorporation/ registered address key <sup>(i)</sup>		Class of shares held
Centrica Beta Holdings Limited	Holding company	United Kingdom	A	Ordinary shares
Centrica Ireland Holdings Limited	Holding company	Republic of Ireland	B	Ordinary shares
CH4 Energy Limited <sup>(ii)</sup>	Dormant	United Kingdom	A	Ordinary shares
Rhodes Holdings HK Limited	Non-trading	Hong Kong	C	Ordinary shares

#### Investments held indirectly by Centrica plc with 100% voting rights

31 December 2023	Principal activity	Country of incorporation/ registered address key <sup>(i)</sup>		Class of shares held
Accord Energy (Trading) Limited <sup>(ii)</sup>	Dormant	United Kingdom	A	Ordinary shares
Alertme.com GmbH	In liquidation	Germany	D	Ordinary shares
Astrum Solar, Inc.	Home and/or commercial services	United States	E	Ordinary shares
Blandford Hill Eco Hub Limited <sup>(iii)</sup>	Building solar farm & connecting to grid	United Kingdom	A	Ordinary shares
Bord Gáis Energy Limited	Energy supply and power generation	Republic of Ireland	B	Ordinary shares
Bord Gáis Energy Trustees DAC	Pension trustee company	Republic of Ireland	B	Ordinary shares
British Gas Finance Limited	Vehicle leasing	United Kingdom	A	Ordinary shares
British Gas Insurance Limited	Insurance provision	United Kingdom	A	Ordinary shares
British Gas Limited	Energy supply	United Kingdom	A	Ordinary shares
British Gas New Heating Limited	Electrical and gas installations	United Kingdom	A	Ordinary shares
British Gas Services (Commercial) Limited	Non-trading	United Kingdom	A	Ordinary shares
British Gas Services Limited	Home services	United Kingdom	A	Ordinary shares
British Gas Social Housing Limited	Servicing and installation of heating systems	United Kingdom	A	Ordinary shares
British Gas Trading Limited	Energy supply	United Kingdom	A	Ordinary shares
British Gas X Limited	Dormant	United Kingdom	A	Ordinary shares
Caythorpe Gas Storage Limited	Gas storage	United Kingdom	F	Ordinary shares
CBS Energy Assets Belgium B.V.	Construction of battery storage	Belgium	G	Ordinary shares
CBS Energy Storage Assets UK Limited <sup>(iv)</sup>	Construction of battery storage	United Kingdom	A	Ordinary shares
CBS Services Holdings Limited <sup>(iv)</sup>	Holding company	United Kingdom	A	Ordinary shares
CBS Solar Assets UK Limited	Building solar farm & connecting to grid	United Kingdom	A	Ordinary shares
CEA SLH Limited <sup>(iii) (iv)</sup>	Construction of gas peaker	United Kingdom	A	Ordinary shares
Centrica (Lincs) Wind Farm Limited	Dormant	United Kingdom	A	Ordinary shares
Centrica Barry Limited	Power generation	United Kingdom	A	Ordinary shares
Centrica Business Holdings Inc.	Holding company	United States	H	Ordinary shares
Centrica Business Solutions (Generation) Limited	Power generation	United Kingdom	A	Ordinary shares
Centrica Business Solutions B.V.	Energy management products and services	Netherlands	I	Ordinary shares
Centrica Business Solutions Belgium NV	Demand response aggregation	Belgium	G	Ordinary shares
Centrica Business Solutions Canada Inc.	Energy management products and services	Canada	J	Ordinary shares
Centrica Business Solutions Deutschland GmbH	Demand response aggregation	Germany	K	Ordinary shares
Centrica Business Solutions France SASU	Demand response aggregation	France	L	Ordinary shares
Centrica Business Solutions International Limited	Dormant	United Kingdom	A	Ordinary shares
Centrica Business Solutions Ireland Limited	Energy management products and services	Republic of Ireland	B	Ordinary shares
Centrica Business Solutions Italia Srl	Energy management products and services	Italy	M	Ordinary shares
Centrica Business Solutions Management Limited	Holding company	United Kingdom	A	Ordinary shares

## S10. RELATED UNDERTAKINGS

31 December 2023	Principal activity	Country of incorporation/ registered address key <sup>(i)</sup>		Class of shares held
Centrica Business Solutions Romania Srl	Energy management products and services	Romania	N	Ordinary shares
Centrica Business Solutions Services, Inc.	Energy management products and services	United States	O	Ordinary shares
Centrica Business Solutions UK Limited	Energy management products and services	United Kingdom	A	Ordinary shares
Centrica Business Solutions UK Optimisation Limited	Demand response aggregation	United Kingdom	A	Ordinary shares
Centrica Business Solutions US, Inc.	Energy management products and services	United States	O	Ordinary shares
Centrica Business Solutions Zrt	Energy management products and services	Hungary	P	Ordinary shares
Centrica Combined Common Investment Fund Limited	Dormant	United Kingdom	A	Ordinary shares
Centrica Directors Limited	Dormant	United Kingdom	A	Ordinary shares
Centrica Distributed Generation Limited	Power generation	United Kingdom	A	Ordinary shares
Centrica Energy Assets Holdings Limited <sup>(iv)</sup>	Power generation	United Kingdom	A	Ordinary shares
Centrica Energy Limited	Wholesale energy trading	United Kingdom	A	Ordinary shares
Centrica Energy Marketing Limited	Wholesale energy trading	United Kingdom	A	Ordinary shares
Centrica Energy Renewable Investments Limited <sup>(ii)</sup>	Dormant	United Kingdom	A	Ordinary shares
Centrica Energy Storage Limited <sup>(iv)</sup>	Gas production and processing	United Kingdom	F	Ordinary shares
Centrica Energy Trading A/S	Energy services and wholesale energy trading	Denmark	Q	Ordinary shares
Centrica Energy Trading GmbH	Energy services and wholesale energy trading	Germany	R	Ordinary shares
Centrica Energy Trading Pte. Ltd	Energy services and wholesale energy trading	Singapore	S	Ordinary shares
Centrica Engineers Pension Trustees Limited	Dormant	United Kingdom	A	Ordinary shares
Centrica Finance (Scotland) Limited	Holding company	United Kingdom	T	Ordinary shares
Centrica Finance Investments Limited	Holding company	United Kingdom	A	Ordinary shares
Centrica Finance Norway Limited	Dormant	Jersey	U	Ordinary shares
Centrica Gamma Holdings Limited	Holding company	United Kingdom	A	Ordinary shares
Centrica Hive Limited	Energy management products and services	United Kingdom	A	Ordinary shares
Centrica Hive Srl	Energy management products and services	Italy	V	Ordinary shares
Centrica Holdings Limited <sup>(v)</sup>	Holding company	United Kingdom	A	Ordinary shares
Centrica Ignite GP Limited	Investment company	United Kingdom	A	Ordinary shares
Centrica Ignite LP Limited	Investment company	United Kingdom	A	Ordinary shares
Centrica India Offshore Private Limited	Business services	India	W	Ordinary shares
Centrica Innovations UK Limited	Investment company	United Kingdom	A	Ordinary shares
Centrica Innovations US, Inc.	Investment company	United States	O	Ordinary shares
Centrica Insurance Company Limited	Insurance provision	Isle of Man	X	Ordinary and preference shares
Centrica Lake Limited	Holding company	United Kingdom	A	Ordinary shares
Centrica LNG Company Limited	LNG trading	United Kingdom	A	Ordinary shares
Centrica LNG UK Limited	LNG trading	United Kingdom	A	Ordinary shares
Centrica Nederland B.V.	Holding company	Netherlands	I	Ordinary shares
Centrica Nigeria Limited	Holding company	United Kingdom	A	Ordinary shares
Centrica Nominees No.1 Limited <sup>(ii)</sup>	Dormant	United Kingdom	A	Ordinary shares
Centrica Offshore UK Limited	Gas and/or liquid exploration and production	United Kingdom	F	Ordinary shares
Centrica Onshore Processing UK Limited <sup>(ii)</sup>	Dormant	United Kingdom	F	Ordinary shares
Centrica Overseas Holdings Limited	Holding company	United Kingdom	A	Ordinary shares
Centrica Pension Plan Trustees Limited	Dormant	United Kingdom	A	Limited by guarantee
Centrica Pension Trustees Limited	Dormant	United Kingdom	A	Ordinary shares
Centrica Production Limited	Dormant	United Kingdom	T	Ordinary shares
Centrica Resources (Nigeria) Limited	Non-trading	Nigeria	Y	Ordinary shares
Centrica Secretaries Limited	Dormant	United Kingdom	A	Ordinary shares
Centrica Services Limited	Business services	United Kingdom	A	Ordinary shares
Centrica Smart Meter Assets Limited <sup>(iii)</sup>	Metering assets and services	United Kingdom	A	Ordinary shares

## S10. RELATED UNDERTAKINGS

31 December 2023	Principal activity	Country of incorporation/ registered address key (i)		Class of shares held
Centrica Storage Holdings Limited	Holding company	United Kingdom	F	Ordinary shares
Centrica Titan Limited	Dormant	United Kingdom	A	Ordinary shares
Centrica Trading Limited	Dormant	United Kingdom	A	Ordinary shares
Centrica Trinidad and Tobago Limited	Business services	Trinidad and Tobago	Z	Ordinary shares
Centrica Trust (No.1) Limited	Dormant	United Kingdom	A	Ordinary shares
DEML Investments Limited	Holding company	Canada	J	Ordinary shares
DER Development No.10 Ltd.	Holding company	Canada	J	Ordinary shares
Distributed Energy Customer Solutions Limited	Energy management products and services	United Kingdom	A	Ordinary shares
Dyno-Rod Limited	Operation of a franchise network	United Kingdom	A	Ordinary shares
ECL Contracts Limited	Dormant	United Kingdom	A	Ordinary shares
ECL Investments Limited	Dormant	United Kingdom	A	Ordinary shares
Electricity Direct (UK) Limited <sup>(ii)</sup>	Dormant	United Kingdom	A	Ordinary shares
ENER-G Nagykanizsa Kft	Energy management products and services	Hungary	P	Ordinary shares
ENER-G Rudox, LLC	Energy management products and services	United States	O	Membership interest
Energy For Tomorrow	Not-for-profit energy services	United Kingdom	A	Limited by guarantee
GB Gas Holdings Limited	Holding company	United Kingdom	A	Ordinary shares
Generation Green Solar Limited	Dormant community benefit society	United Kingdom	A	Ordinary shares
GF One Limited <sup>(vi)</sup>	In liquidation	United Kingdom	AA	Ordinary shares
GF Two Limited <sup>(vi)</sup>	In liquidation	United Kingdom	AA	Ordinary shares
Goldbrand Development Limited <sup>(ii)</sup>	Dormant	United Kingdom	A	Ordinary shares
Greener Ideas Limited <sup>(vii)</sup>	Development of flexible power generation sites	Republic of Ireland	B	Ordinary shares
Home Assistance UK Limited	Dormant	United Kingdom	A	Ordinary shares
Leicestershire Solar 1 Limited <sup>(iii)</sup>	Building solar farm and connecting to grid	United Kingdom	A	Ordinary shares
Neas Energy Limited	Energy services and wholesale energy trading	United Kingdom	A	Ordinary shares
Neas Invest A/S	Dormant	Denmark	Q	Ordinary shares
P.H Jones Group Limited	Holding company	United Kingdom	A	Ordinary shares
P&M Energy Ltd <sup>(iii)</sup>	Construction of battery storage	United Kingdom	T	Ordinary shares
Panoramic Power Ltd.	Energy management products and services	Israel	AB	Ordinary shares
Pioneer Shipping Limited	LNG vessel chartering	United Kingdom	A	Ordinary shares
SN12 6EF Limited <sup>(iii)</sup>	Power generation	United Kingdom	A	Ordinary shares
South Energy Investments, LLC	Investment company	United States	AC	Membership interest
Vista Solar, Inc.	Distributed energy and power	United States	AD	Ordinary shares



## S10. RELATED UNDERTAKINGS

### Investments held indirectly by Centrica plc with 69% voting rights

31 December 2023	Principal activity	Country of incorporation/ registered address key <sup>(i)</sup>		Class of shares held
Bowland Resources Limited	Gas and/or liquid exploration and production	United Kingdom	A	Ordinary shares
Bowland Resources (No.2) Limited	Gas and/or liquid exploration and production	United Kingdom	A	Ordinary shares
Elswick Energy Limited	Gas and/or liquid exploration and production	United Kingdom	A	Ordinary shares
Spirit Energy Hedging Holding Limited <sup>(viii)</sup>	Dormant	United Kingdom	AE	Ordinary shares
Spirit Energy Hedging Limited <sup>(viii)</sup>	Dormant	United Kingdom	AE	Ordinary shares
Spirit Energy Limited	Holding company	United Kingdom	A	Ordinary and deferred shares
Spirit Energy Nederland B.V.	Gas and/or liquid exploration and production	Netherlands	AF	Ordinary Shares
Spirit Energy North Sea Limited	Gas and/or liquid exploration and production	United Kingdom	A	Ordinary shares
Spirit Energy North Sea Oil Limited	Gas and/or liquid exploration and production	United Kingdom	AG	Ordinary shares
Spirit Energy Norway AS	Gas and/or liquid exploration and production	Norway	AH	Ordinary shares
Spirit Energy Production UK Limited	Gas and/or liquid exploration and production	United Kingdom	A	Ordinary shares
Spirit Energy Resources Limited	Gas and/or liquid exploration and production	United Kingdom	A	Ordinary shares
Spirit Energy Southern North Sea Limited	Gas and/or liquid exploration and production	United Kingdom	A	Ordinary shares
Spirit Energy Treasury Limited	Finance company	United Kingdom	A	Ordinary shares
Spirit Europe Limited	Holding company	United Kingdom	A	Ordinary shares
Spirit Infrastructure B.V.	Construction, ownership and exploitation of infrastructure	Netherlands	AF	Ordinary shares
Spirit North Sea Gas Limited	Gas and/or liquid exploration and production	United Kingdom	AG	Ordinary shares
Spirit Norway Holdings AS	Dormant	Norway	AI	Ordinary shares
Spirit Norway Limited	Gas and/or liquid exploration and production	United Kingdom	A	Ordinary shares
Spirit Production (Services) Limited	Business services	United Kingdom	AG	Ordinary shares
Spirit Resources (Armada) Limited	Gas and/or liquid exploration and production	United Kingdom	A	Ordinary shares

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

(ii) Active proposal to strike off.

(iii) Incorporated or acquired in 2023.

(iv) The following name changes were made during the year:

- Centrica Brigg Limited to CBS Energy Storage Assets UK Limited
- ENER-G Cogen International Limited to CBS Services Holdings Limited
- EL (SLH CM) Limited to CEA SLH Limited
- Centrica KPS Limited to Centrica Energy Assets Holdings Limited
- Centrica Storage Limited to Centrica Energy Storage Limited

(v) Centrica Holdings Limited moved from being a direct to indirect subsidiary during the year.

(vi) GF One Limited and GF Two Limited are 75% indirectly owned by Centrica plc.

(vii) During 2023, the voting rights for Greener Ideas Limited increased to 80%.

(viii) Dissolved in January 2024.

## S10. RELATED UNDERTAKINGS

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

31 December 2023	Principal activity	Country of incorporation/ registered address key <sup>(i)</sup>		Class of shares held
CF 2016 LLP	Group financing	United Kingdom	A	Membership interest
CFCEPS LLP	Group financing	United Kingdom	A	Membership interest
Direct Energy Resources Partnership	Holding entity	Canada	AJ	Membership interest
Finance Scotland 2016 Limited Partnership	Group financing	United Kingdom	T	Membership interest
Finance Scotland CEPS Limited Partnership	Group financing	United Kingdom	T	Membership interest
Ignite Social Enterprise LP	Social enterprise investment fund	United Kingdom	A	Membership interest

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

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

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

### (c) Joint arrangements and associates

31 December 2023	Principal activity	Country of incorporation/ registered address key <sup>(i)</sup>		Class of shares held	Indirect interest and voting rights (%)
<b>Joint ventures <sup>(ii)</sup></b>					
Allegheny Solar 1, LLC	Energy supply and/or services	United States	AK	Membership interest	40.0%
C2 Centrica MT, LLC	Energy supply and/or services	United States	AL	Membership interest	50.0%
Eurowind Polska VI Sp z.o.o.	Operation of an onshore windfarm	Poland	AM	Ordinary shares	50.0%
Three Rivers Solar 1, LLC	Energy supply and/or services	United States	AK	Membership interest	40.0%
Three Rivers Solar 2, LLC	Energy supply and/or services	United States	AK	Membership interest	40.0%
Three Rivers Solar 3, LLC	Energy supply and/or services	United States	AK	Membership interest	40.0%
Vindpark Keglów ApS	Operation of an onshore windfarm	Denmark	AN	Ordinary shares	50.0%
<b>Associates <sup>(ii)</sup></b>					
Lake Acquisitions Limited	Holding company	United Kingdom	AO	Ordinary shares	20.0%

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

(ii) Further information on the principal joint ventures and associate investments held by the Group is disclosed in notes 6 and 14.

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

## S10. RELATED UNDERTAKINGS

### (d) List of registered addresses

Registered address key	Address
A	Millstream, Maidenhead Road, Windsor, SL4 5GD, United Kingdom <sup>(i)</sup>
B	1 Warrington Place, Dublin 2, Republic of Ireland
C	5/F, Manulife Place, 348 Kwun Tong Road, Kowloon, Hong Kong <sup>(ii)</sup>
D	Thomas-Wimmer-Ring 1-3, 80539, Munich, Germany
E	2 Wisconsin Circle #700, Chevy Chase, MD 20815, United States
F	Woodland House, Woodland Park, Hessle, HU13 0FA, United Kingdom
G	Roderveldlaan 2 bus 2, 2600 Antwerp, Belgium
H	3411 Silverside Road, Rodney Building #104, Wilmington, DE 19810, United States
I	Wiegerbruinlaan 2A, 1422 CB Uithoorn, Netherlands
J	550 Burrard Street, Suite 2900, Vancouver BC V6C 0A3, Canada
K	Neuer Wall 10, 20354 Hamburg, Germany
L	60 Avenue Charles de Gaulle, Cs 60016, 92573, Neuilly sur Seine Cedex, France
M	Milan (MI), Via Emilio Cornalia 26, Italy
N	Strada Martir Colonel Ioan Uță nr.28 camera 1, Municipiul Timisoara judet Timis, Romania
O	3411 Silverside Road, Suite 104, Tatnall Building, Wilmington, DE 19810, United States
P	H-1106 Budapest Jászberényi út 24-36, Hungary
Q	Skelagervej 1, 9000 Aalborg, Denmark
R	Esplanade 40, 20354 Hamburg, Germany
S	220 Orchard Road, #05-01 Midpoint Orchard, Singapore 238852, Republic of Singapore
T	1 Waterfront Avenue, Edinburgh, Scotland EH5 1SG, United Kingdom
U	47 Esplanade, St Helier, JE1 0BD, Jersey, Channel Islands
V	Via Paleocapa Pietro 4, 20121, Milano, Italy
W	G-74, LGF, Kalkaji, New Delhi, South Delhi, 110019, India
X	3rd floor, St George's Court, Upper Church Street, Douglas, IM1 1EE, Isle of Man
Y	Sterling Towers, 20 Marina, Lagos, Nigeria
Z	48-50 Sackville Street, Port of Spain, Trinidad and Tobago
AA	1 More London Place, London, SE1 2AF, United Kingdom
AB	15 Atir Yeda Street, Kfar Saba, 44643, Israel
AC	6 Landmark Square, 4th floor, Stamford CT 06901, United States
AD	4640 Admiralty Way, 5th floor, Marina del Rey, California 90292, United States
AE	1st floor, 20 Kingston Road, Staines-upon-Thames, TW18 4LG, United Kingdom
AF	Transpolis Building, Polarisavenue 39, 2132 JH Hoofddorp, Netherlands
AG	5th floor, IQ Building, 15 Justice Mill Lane, Aberdeen, AB11 6EQ, United Kingdom
AH	Veritasvæn 29, 4007 Stavanger, Norway
AI	Lilleakerveien 8, 0283 Oslo, Norway
AJ	350 7th Avenue SW, Suite 3400, Calgary AB T2P 3N9, Canada
AK	1209 Orange Street, Wilmington, New Castle County, DE 19801, United States
AL	850 New Burton Road, Suite 201, Dover, DE 19904, United States
AM	Ul. Wysogotowska 23, 62-081 Przemierowo, Wielkopolskie, Poland
AN	Mariagervej 58B, DK 9500 Hobro, Denmark
AO	90 Whitfield Street, London, W1T 4EZ, United Kingdom

(i) The following entities changed their registered address during the year from 1st floor, 20 Kingston Road, Staines-upon-Thames, TW18 4LG, United Kingdom to the address listed above.

- Bowland Resources Limited
- Bowland Resources (No.2) Limited
- Elswick Energy Limited
- Spirit Energy Limited
- Spirit Energy North Sea Limited
- Spirit Energy Production UK Limited
- Spirit Energy Resources Limited
- Spirit Energy Southern North Sea Limited
- Spirit Energy Treasury Limited
- Spirit Europe Limited
- Spirit Norway Limited
- Spirit Resources (Armada) Limited

(ii) Rhodes Holdings HK Limited changed its registered address during the year from Level 54, Hopewell Centre, 183 Queens Road East, Hong Kong to the address listed above.

## S10. RELATED UNDERTAKINGS

### (e) Summarised financial information

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

#### Lake Acquisitions Limited

##### Summarised statement of total comprehensive income

Year ended 31 December	2023				2022			
	Associate information reported to Group £m	Unadjusted 20% share £m	Fair value and other adjustments £m	Group share £m	Associate information reported to Group £m	Unadjusted 20% share £m	Fair value and other adjustments £m	Group share £m
Revenue	3,398	680	—	680	2,960	592	—	592
Operating profit/(loss) before interest and tax	1,671	334	(52)	282	737	147	(26)	121
Profit/(loss) for the year	1,242	248	(40)	208	542	108	(15)	93
Other comprehensive (loss)/income	(477)	(95)	—	(95)	(1,467)	(293)	—	(293)
<b>Total comprehensive income/(loss)</b>	<b>765</b>	<b>153</b>	<b>(40)</b>	<b>113</b>	<b>(925)</b>	<b>(185)</b>	<b>(15)</b>	<b>(200)</b>

##### Summarised balance sheet

31 December	2023				2022			
	Associate information reported to Group £m	Unadjusted 20% share £m	Fair value and other adjustments <sup>(i)</sup> £m	Group share £m	Associate information reported to Group £m	Unadjusted 20% share £m	Fair value and other adjustments <sup>(i)</sup> £m	Group share £m
Non-current assets	15,970	3,194	694	3,888	17,121	3,424	751	4,175
Current assets	3,901	780	—	780	4,212	842	—	842
Current liabilities	(1,350)	(270)	—	(270)	(1,742)	(348)	—	(348)
Non-current liabilities	(11,675)	(2,335)	(114)	(2,449)	(12,405)	(2,481)	(131)	(2,612)
<b>Net assets</b>	<b>6,846</b>	<b>1,369</b>	<b>580</b>	<b>1,949</b>	<b>7,186</b>	<b>1,437</b>	<b>620</b>	<b>2,057</b>

(i) Before cumulative impairments of £1,046 million (2022: £497 million) of the Group's associate investment.

During the year, dividends of £220 million (2022: £60 million) were paid by the associate to the Group.

#### Joint operations - fields/assets

31 December 2023	Location	Percentage holding
Cygnus	UK North Sea	61%

## S11. NON-CONTROLLING INTERESTS

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

	2023					2022				
	Non-controlling interests %	Profit for the year £m	Total comprehensive income £m	Total equity £m	Distributions to non-controlling interests £m	Non-controlling interests %	Profit for the year £m	Total comprehensive income £m	Total equity £m	Distributions to non-controlling interests £m
Year ended 31 December										
Spirit Energy Limited	31	111	110	356	(17)	31	146	151	263	(273)

### Summarised financial information

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

### Summarised statement of total comprehensive income

Year ended 31 December	2023 £m	2022 £m
Revenue	974	1,667
Profit for the year <sup>(i)</sup>	357	371
Other comprehensive (loss)/income <sup>(i)</sup>	(1)	116
Total comprehensive income	356	487

(i) 2023 includes £nil exchange differences reclassified to the income statement on disposal not attributable to non-controlling interests (2022: £101 million).

### Summarised balance sheet

31 December	2023 £m	2022 £m
Non-current assets	1,028	1,683
Current assets	2,099	1,451
Current liabilities	(481)	(1,183)
Non-current liabilities	(1,498)	(1,104)
<b>Net assets</b>	<b>1,148</b>	<b>847</b>

### Summarised cash flow

Year ended 31 December	2023 £m	2022 £m
Net decrease in cash and cash equivalents	(13)	(73)

## COMPANY STATEMENT OF CHANGES IN EQUITY

	Share capital £m	Share premium £m	Retained earnings £m	Other equity (note 11) £m	Total equity £m
1 January 2022	363	2,377	2,590	(19)	5,311
Profit for the year <sup>(i)</sup>	—	—	719	—	719
Other comprehensive loss	—	—	—	(51)	(51)
Total comprehensive income/(loss)	—	—	719	(51)	668
Employee share schemes and other share transactions <sup>(ii)</sup>	2	17	(2)	(14)	3
Share buyback programme <sup>(iii)</sup>	—	—	—	(250)	(250)
Dividends paid to equity holders	—	—	(59)	—	(59)
31 December 2022	365	2,394	3,248	(334)	5,673
Profit for the year <sup>(i)</sup>	—	—	2,258	—	2,258
Other comprehensive loss	—	—	—	(35)	(35)
Total comprehensive income/(loss)	—	—	2,258	(35)	2,223
Employee share schemes and other share transactions <sup>(ii)</sup>	—	—	(3)	39	36
Share buyback programme <sup>(iii)</sup>	—	—	—	(500)	(500)
Dividends paid to equity holders	—	—	(186)	—	(186)
<b>31 December 2023</b>	<b>365</b>	<b>2,394</b>	<b>5,317</b>	<b>(830)</b>	<b>7,246</b>

(i) Includes inter-company dividend income of £2,635 million (2022: £1,500 million).

(ii) Includes taxation on employee share schemes and other share transactions attributable to the Company only.

(iii) See note 1 and note S4 of the Group consolidated Financial Statements for further details of the share buyback programme.

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

The Directors propose a final dividend of 2.67 pence per ordinary share for the year ended 31 December 2023 (which would total £144 million based on shareholding at that date). The dividend will be paid on 11 July 2024 to those shareholders registered on 31 May 2024.

Details of the interim and final dividends are provided in note 11 to the Group consolidated Financial Statements.

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

The notes on pages 231 to 240 form part of these Financial Statements, along with note 25 to the Group consolidated Financial Statements.



# COMPANY BALANCE SHEET

31 December	Notes	2023 £m	2022 £m
<b>Non-current assets</b>			
Property, plant and equipment	IV	11	11
Investments	V	94	949
Deferred tax assets	XII	11	1
Trade and other receivables	VI	14,274	13,089
Derivative financial instruments	VII	39	101
Retirement benefit assets	XIV	28	56
Securities	IX	104	498
		<b>14,561</b>	<b>14,705</b>
<b>Current assets</b>			
Trade and other receivables	VI	590	1,500
Derivative financial instruments	VII	66	217
Securities	IX	405	—
Cash and cash equivalents		5,482	3,395
		<b>6,543</b>	<b>5,112</b>
<b>Total assets</b>		<b>21,104</b>	<b>19,817</b>
<b>Current liabilities</b>			
Derivative financial instruments	VII	(116)	(211)
Trade and other payables	XI	(9,925)	(9,883)
Provisions for other liabilities and charges		(2)	(1)
Bank overdrafts, loans and other borrowings	XIII	(789)	(905)
		<b>(10,832)</b>	<b>(11,000)</b>
<b>Non-current liabilities</b>			
Deferred tax liabilities	XII	(3)	—
Derivative financial instruments	VII	(170)	(271)
Trade and other payables	XI	(3)	(45)
Provisions for other liabilities and charges		(1)	(1)
Retirement benefit obligations	XIV	(49)	(49)
Bank loans and other borrowings	XIII	(2,800)	(2,778)
		<b>(3,026)</b>	<b>(3,144)</b>
<b>Total liabilities</b>		<b>(13,858)</b>	<b>(14,144)</b>
<b>Net assets</b>		<b>7,246</b>	<b>5,673</b>
Share capital		365	365
Share premium		2,394	2,394
Retained earnings <sup>(i)</sup>		5,317	3,248
Other equity	II	(830)	(334)
<b>Total shareholders' equity</b>		<b>7,246</b>	<b>5,673</b>

(i) Retained earnings includes a net profit after taxation of £2,258 million (2022: £719 million) which includes inter-company dividend income of £2,635 million (2022: £1,500 million).

The Financial Statements on pages 229 to 240, of which the notes on pages 231 to 240 form part, along with note 25 to the Group consolidated Financial Statements, were approved and authorised for issue by the Board of Directors on 14 February 2024 and were signed on its behalf by:

**Chris O'Shea**  
Group Chief Executive

**Russell O'Brien**  
Group Chief Financial Officer

Centrica plc Registered No: 03033654

# NOTES TO THE COMPANY FINANCIAL STATEMENTS

## I. GENERAL INFORMATION AND MATERIAL ACCOUNTING POLICIES OF THE COMPANY

### General information

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

The Company Financial Statements are presented in pounds sterling which is the functional currency of the Company.

### (a) Basis of preparation

The separate financial statements of the Company are presented as required by the Companies Act 2006. The Company meets the definition of a qualifying entity under FRS 100 'Application of Financial Reporting Requirements' issued by the FRC. Accordingly, these financial statements are prepared in accordance with FRS 101 'Reduced Disclosure Framework'.

### (b) New accounting policies, standards, amendments and interpretations effective or adopted in 2023

From 1 January 2023, the following standards and amendments are effective in the Company's Financial Statements:

- IFRS 17 'Insurance Contracts';
- Amendments to IAS 8 'Accounting policies, Changes in Accounting Estimates and Errors', distinguishing changes in accounting estimates from changes in accounting policies;
- Amendments to IAS 1 'Presentation of Financial Statements', disclosure of accounting policies and materiality judgements;
- Amendments to IAS 12 'Income Taxes':
  - Deferred tax related to these assets and liabilities arising from a single transaction; and
  - International tax reform, pillar 2 model rules.

There has been no material impact on the Company's Financial Statements from any standards and amendments effective during the year.

### Pension Scheme Loan Arrangement

In October 2022, the Company agreed to provide the Schemes with a £400 million two-year revolving, unsecured, interest bearing credit facility, and a short-term £150 million loan. This money was immediately drawn down to purchase physical gilts to reduce the extent of interest rate and inflation risk. The short-term loan was repaid in December 2022 and the remaining £400 million credit facility is scheduled for repayment in October 2024. See note 22 of the Group consolidated Financial Statements for further details. At the 2023 year-end, the £400 million loan (together with unpaid interest) is recorded in note IX Securities on the Company's balance sheet and as a reduction to scheme assets for the UK Registered Pension Schemes.

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

At the date of authorisation of these Company Financial Statements, the Company has not applied the following new and revised standards and amendments that have been issued but are not yet effective:

- Amendments to IAS 1 'Presentation of Financial Statements':
  - Classification of liabilities as current or non-current, effective 1 January 2024; and
  - Non-current liabilities with covenants, effective 1 January 2024.
- Amendments to IFRS 16 'Leases'; effective from 1 January 2024;
  - Lease liability in a sale and leaseback;
- Amendments to IAS 7 'Statement of Cash Flows' and IFRS 7 'Financial Instruments : Disclosures'; effective from 1 January 2024:
  - Supplier finance arrangements; and
- Amendments to IAS 21 'The Effects of Changes in Foreign Exchange Rates'.

Management does not expect other issued but not effective amendments or standards, or standards not discussed above to have a material impact on the Company's Financial Statements.

As permitted by FRS 101, the Company has taken advantage of the disclosure exemptions available under that standard in relation to:

- The requirements of IAS 7 'Statement of Cash Flows';
- The statement of compliance with Adopted IFRSs;
- The effects of new but not yet effective IFRSs;
- Prior year reconciliations for property, plant and equipment and intangible assets;
- The prior year reconciliation in the number of shares outstanding at the beginning and at the end of the year for share capital;
- Disclosures in respect of related party transactions with wholly owned subsidiaries in a group;
- Disclosures in respect of the compensation of key management personnel;
- Disclosures in respect of capital management; and
- The requirements of paragraphs 45(b) and 46 to 52 of IFRS 2 'Share-based Payment'.

As the Group consolidated Financial Statements of Centrica plc, which are available from the registered office, include the equivalent disclosures, the Company has taken the exemptions available under FRS 101 in respect of certain disclosures required by IFRS 13 'Fair Value Measurement' and the disclosures required by IFRS 7 'Financial Instruments: Disclosures'. These disclosures have not been provided apart from those that are relevant for financial instruments held at fair value.

The Company has also taken the advantage of the exemption in respect of disclosures for Pillar 2 tax, as required by paragraphs 88C and 88D of IAS 12 'Income Taxes', as the equivalent disclosures are available in the notes 9(c) and 16 of the Group consolidated Financial Statements.

## **I. GENERAL INFORMATION AND MATERIAL ACCOUNTING POLICIES OF THE COMPANY**

### **Measurement convention**

The Company Financial Statements have been prepared on the historical cost basis except for: investments in subsidiaries that have been recognised at deemed cost on transition to FRS 101; derivative financial instruments, financial instruments required to be measured at fair value through profit or loss or other comprehensive income, and those financial assets so designated at initial recognition, and the assets of the defined benefit pension schemes that have been measured at fair value; the liabilities of the defined benefit pension schemes that have been measured using the projected unit credit valuation method; and the carrying values of recognised assets and liabilities qualifying as hedged items in fair value hedges that have been adjusted from cost by the changes in the fair values attributable to the risks that are being hedged.

### **Going concern**

The accounts have been prepared on a going concern basis, as described in the Directors' Report and note 24(b) of the Group consolidated Financial Statements.

### **Critical accounting judgements – share buyback programme**

On 10 November 2022, the Group announced an intention to undertake a share buyback of £250 million and the Company entered into contracts with third parties to undertake this repurchase programme which has now completed. During 2023, the Company firstly increased the share buyback by an additional £300 million which completed during the second half of the year.

Subsequently, in July 2023, the Group announced a further £450 million extension to the share buyback programme and as a result, the Company signed an agreement with a third party to undertake the repurchase of £200 million shares which is expected to complete by March 2024. The repurchase of the remaining £250 million shares is expected to commence in the first half of 2024.

The Company judges that the terms and conditions of the contracts mean that, at 31 December 2023, it was unable to cancel the obligation arising under the contract signed in the second half of 2023. Accordingly, the Company has recorded a financial liability at 31 December 2023 of £94 million (31 December 2022: £207 million) for this obligation in accordance with IAS 32 'Financial instruments: Presentation' that is subsequently measured in accordance with IFRS 9 'Financial instruments'. This liability is included within other payables, with the corresponding debit presented in the other equity reserve.

The Company has not recognised a liability relating to the further £250 million announced during 2023, as no contract has been signed and therefore no financial liability has yet arisen. The monthly breakdown of all shares purchased and the average price paid (excluding expenses) in relation to the financial liability recognised at 31 December 2023 are detailed in note S4 of the Group consolidated Financial Statements.

### **Material accounting policies**

The accounting policies set out below have, unless otherwise stated, been applied consistently to all periods presented in these Company Financial Statements.

### **Employee share schemes**

The Group has a number of employee share schemes under which it makes equity-settled share-based payments as detailed in the Remuneration Report on pages 84 to 86 and in note S2 to the Group consolidated Financial Statements. Equity-settled share-based payments are measured at fair value at the date of grant (excluding the effect of non-market-based vesting conditions). The fair value determined at the grant date is expensed on a straight-line basis together with a corresponding increase in equity over the vesting period, based on the Group's estimate of the number of awards that will vest and adjusted for the effect of non-market-based vesting conditions. The issue of share incentives by the Company to employees of its subsidiaries represents additional capital contributions. When these costs are recharged to the subsidiary undertaking, the investment balance is reduced accordingly. Fair value is measured using methods detailed in note S2 to the Group consolidated Financial Statements.

### **Foreign currencies**

The Company's functional and presentational currency is pounds sterling. Transactions in foreign currencies are translated at the rate of exchange ruling at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are translated into pounds sterling at closing rates of exchange. Exchange differences on monetary assets and liabilities are taken to the Income Statement.

## I. GENERAL INFORMATION AND MATERIAL ACCOUNTING POLICIES OF THE COMPANY

### Property, plant and equipment

PP&E is included in the Balance Sheet at cost, less accumulated depreciation and any provisions for impairment. The initial cost of an asset comprises purchase price and construction cost and any costs directly attributable to bringing the asset into operation. The purchase price or construction cost is the aggregate amount paid and the fair value of any other consideration given to acquire the asset. Depreciation is charged so as to write off the cost of assets over their estimated useful lives, on a straight-line basis, over a period of 3 to 10 years.

### Investments

Fixed asset investments in subsidiaries' shares are held at deemed cost on transition to FRS 101 and at cost in accordance with IAS 27 'Separate Financial Statements', less any provision for impairment as necessary.

### Impairment

#### Impairment of investments in subsidiaries and non-financial assets

The Company's accounting policies in respect of impairment of property, plant and equipment, and intangible assets are consistent with those of the Group.

The carrying values of investments in subsidiary undertakings are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, then the asset's recoverable amount is estimated.

The recoverable amount of an investment in a subsidiary undertaking is the greater of its value in use and its fair value less cost of disposal. In assessing a recoverable amount, the market capitalisation of the Company is taken and, following relevant adjustments, allocated to specific holding company investments. Separately, an average of third-party analysts' 'sum of the parts' valuations for the Group's business units, allocated to specific investments and assessed relative to internal forecasts, is also considered. An appropriate recoverable amount is then determined from this work and compared with the investment carrying value and net intercompany receivable held on the Company's balance sheet.

Refer to note V for more details on the impairment charge and reduction in the cost of investments in subsidiaries recognised during the year.

#### Impairment of other financial assets and credit losses for financial guarantee contracts

The Company's impairment policies in relation to financial assets are consistent with those of the Group, with additional consideration given to amounts owed by Group undertakings. Except for certain loans due in greater than one year, all outstanding receivable balances are repayable on demand and arise from funding provided by the Company to its subsidiaries. Where net receivers of funding are unable to repay loan balances in full at maturity, or if the debt was otherwise called upon, the Company expects that in such circumstances the counterparty would either negotiate extended credit terms with the Company or obtain external financing to repay the balance. As such, this is considered a significant risk of causing material adjustment to the carrying amounts of financial assets within the next financial year. A detailed review of the amounts owed by Group undertakings for the expected credit loss provision is carried out on an annual basis. The model considers whether the receivable is repayable on demand within a 12-month period and the probability of default by the counterparty. As at 31 December 2023, there was a release of cumulative provision for expected credit losses on current financial assets of £15 million (2022: £15 million expected credit losses charge) as disclosed in note VI (i) and on non-current financial assets of £217 million (2022: £872 million expected credit losses charge) as disclosed in note VI (ii). This was either due to the settlement of the loan receivable during the year or a fall in the estimate of the credit loss of the financial instrument when measured in accordance with IFRS 9 'Financial instruments'.

The Company has applied the impairment requirements of IFRS 9 to financial guarantees issued to its subsidiary undertakings. A financial guarantee contract is measured at fair value at the reporting date and where the expected credit loss is higher than calculated on recognition, an additional liability is recognised. Expected credit losses which arise on such arrangements have been calculated according to the nature of the guarantee and the Company's estimate of potential exposure at the balance sheet date. As at 31 December 2023, there was a release of net provision for expected credit losses on financial guarantees contracts of £126 million (2022: £55 million expected credit loss provision charge) as disclosed in note XI (iii). The significant decrease in the expected credit loss provision is due to the reduced short-term derivative liabilities in the market-facing entities which actively trade and are exposed to the risk of market price volatility during the year.

### Pensions and other post-employment benefits

The Company's employees participate in a number of the Group's defined benefit pension schemes. The total Group cost of providing benefits under defined benefit schemes is determined separately for each of the Group's schemes under the projected unit credit actuarial valuation method. Actuarial gains and losses are recognised in full in the period in which they occur. The key assumptions used for the actuarial valuation are based on the Group's best estimate of the variables that will determine the ultimate cost of providing post-employment benefits, on which further detail is provided in notes 3(b) and 22 to the Group consolidated Financial Statements.

The Company's share of the total Group surplus or deficit at the end of the reporting period for each scheme is calculated in proportion to the Company's share of ordinary employer contributions to that scheme during the year; ordinary employer contributions are determined by the pensionable pay of the Company's employees within the scheme and the cash contribution rates set by the scheme trustees. Note that as a participant in these multi-employer schemes, the Company could be liable for other entities' obligations (for example under section 75 of the Pensions Act). See note 22 of the Group consolidated Financial Statements for details of the overall scheme obligations. Current service cost is calculated with reference to the pensionable pay of the Company's employees. The Company's share of the total Group interest on scheme liabilities, expected return on scheme assets and actuarial gains or losses is calculated in proportion to ordinary employer contributions in the prior accounting period. Changes in the surplus or deficit arising as a result of the changes in the Company's share of total ordinary employer contributions are also treated as actuarial gains or losses.

## **I. GENERAL INFORMATION AND MATERIAL ACCOUNTING POLICIES OF THE COMPANY**

### **Taxation**

Current tax, including UK corporation tax, is provided at amounts expected to be paid (or recovered) using the tax rates and laws that have been enacted or substantively enacted by the balance sheet date.

Deferred tax is recognised in respect of all temporary differences identified at the balance sheet date, except for differences arising on:

- The initial recognition of an asset or liability in a transaction which is not a business combination and which at the time of the transaction affects neither accounting profit nor taxable profit; and
- Investments in subsidiaries where the Company is able to control the timing of the reversal of the difference and it is probable that the difference will not reverse in the foreseeable future.

Temporary differences are differences between the carrying amount of the Company's assets and liabilities and their tax base.

Deferred tax assets and liabilities are offset when the Company has a legally enforceable right to offset current tax assets and liabilities and the deferred tax assets and liabilities relate to taxes levied by the same tax authority.

Deferred tax assets that are not eligible for offset against deferred tax liabilities are recognised only when, on the basis of all available evidence, it can be regarded as probable that there will be suitable taxable profits in the foreseeable future, against which the deductible temporary difference can be utilised.

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

The tax expense for the year comprises current and deferred tax. Tax is recognised in the Income Statement, except to the extent that it relates to items recognised in other comprehensive income or directly in equity. In this case, the tax is also recognised in other comprehensive income or directly in equity, respectively.

### **Financial instruments**

The Company's accounting policies for financial instruments are consistent with those of the Group as disclosed in note S2 to the Group consolidated Financial Statements. The Company's financial risk management policies are consistent with those of the Group and are described in the Strategic Report – Principal Risks and Uncertainties on pages 28 to 34 and in note S3 to the Group consolidated Financial Statements.

### **Financial guarantees**

Financial guarantees are contracts that require the Company to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payment when due in accordance with the terms of a debt instrument. The Company accounts for financial guarantee contracts under IFRS 9.

### **Presentation of derivative financial instruments**

In line with the Group's accounting policy for derivative financial instruments, the Company has classified those derivatives held for the purpose of treasury management as current or non-current, based on expected settlement dates.

## II. OTHER EQUITY

	Cash flow hedging reserve £m	Actuarial gains and losses reserve £m	Financial asset at FVOCI reserve £m	Treasury and own shares reserve £m	Share-based payments reserve £m	Capital redemption reserve £m	Total £m
1 January 2022	5	(87)	11	(18)	42	28	(19)
Actuarial losses	—	(44)	—	—	—	—	(44)
Employee share schemes:							
Exercise of awards	—	—	—	10	(22)	—	(12)
Value of services provided	—	—	—	—	10	—	10
Purchase of own shares	—	—	—	(5)	—	—	(5)
Issue of shares	—	—	—	(7)	—	—	(7)
Share buyback programme: <sup>(i)</sup>							
Purchase of Treasury shares	—	—	—	(43)	—	—	(43)
Accrual for committed share purchases	—	—	—	—	—	(207)	(207)
Impact of cash flow hedging	(26)	—	—	—	—	—	(26)
Taxation on above items <sup>(ii)</sup>	8	11	—	—	—	—	19
31 December 2022	(13)	(120)	11	(63)	30	(179)	(334)
Gains on revaluation of equity investments measured at fair value through other comprehensive income	—	—	3	—	—	—	<b>3</b>
Actuarial losses	—	(48)	—	—	—	—	<b>(48)</b>
Employee Share Schemes:							
Exercise of awards	—	—	—	22	(20)	—	<b>2</b>
Value of services provided	—	—	—	—	31	—	<b>31</b>
Net proceeds from exercise of share options	—	—	—	6	—	—	<b>6</b>
Share buyback programme: <sup>(i)</sup>							
Purchase of Treasury shares	—	—	—	(615)	—	—	<b>(615)</b>
Movement on committed share purchases	—	—	—	—	—	115	<b>115</b>
Impact of cash flow hedging	(3)	—	—	—	—	—	<b>(3)</b>
Taxation on above items <sup>(ii)</sup>	1	12	(1)	—	1	—	<b>13</b>
<b>31 December 2023</b>	<b>(15)</b>	<b>(156)</b>	<b>13</b>	<b>(650)</b>	<b>42</b>	<b>(64)</b>	<b>(830)</b>

(i) See note I and note S4 of the Group consolidated Financial Statements for further details of the share buyback programme.

(ii) Includes current and deferred taxation on above items attributable to the Company only.

## III. DIRECTORS AND EMPLOYEES

### (a) Employee costs

Year ended 31 December	2023 £m	2022 £m
Wages and salaries	<b>(12)</b>	(7)
Other	<b>(8)</b>	(8)
	<b>(20)</b>	(15)

### (b) Average number of employees during the year

Year ended 31 December	2023 Number	2022 Number
Administration	<b>171</b>	138
Power	<b>11</b>	8
	<b>182</b>	146



## IV. PROPERTY, PLANT AND EQUIPMENT

	Plant, equipment & vehicles 2023 £m
<b>Cost</b>	
1 January	12
Additions	4
<b>31 December</b>	<b>16</b>
<b>Accumulated depreciation</b>	
1 January	(1)
Charge for the year	(4)
<b>31 December</b>	<b>(5)</b>
<b>NBV at 31 December <sup>(i)</sup></b>	<b>11</b>

(i) Included within the above are right-of-use assets of £6 million relating to infrastructure services (2022: £9 million), and £5 million of staff salary sacrifice electric vehicles (2022: £2 million).

## V. INVESTMENTS IN SUBSIDIARIES

	2023 <sup>(i)</sup> £m	2022 <sup>(i)</sup> £m
<b>Cost</b>		
1 January	2,262	2,273
Additions <sup>(ii)</sup>	—	—
Write-downs <sup>(iii)</sup>	(863)	—
Disposals <sup>(iv)</sup>	(1,313)	—
Employee share scheme net capital movement <sup>(v)</sup>	8	(11)
<b>31 December</b>	<b>94</b>	<b>2,262</b>
<b>Provision</b>		
1 January	(1,313)	(1,173)
Impairment provided in the year <sup>(vi)</sup>	—	(140)
Disposals <sup>(iv)</sup>	1,313	—
<b>31 December</b>	<b>—</b>	<b>(1,313)</b>
<b>NBV at 31 December</b>	<b>94</b>	<b>949</b>

(i) Direct investments are held in CH4 Energy Limited (formerly Centrica Trading Limited) and Centrica Beta Holdings Limited, both of which are incorporated in England, and Rhodes Holdings HK Limited, which was incorporated in Hong Kong and Centrica Ireland Holdings Limited, which was incorporated in Ireland. The prior year direct investment held in Centrica Holdings Limited, which was incorporated in England, has become an indirect investment after a share transfer with Centrica Ireland Holdings Limited in January 2023. Related undertakings are listed in note S10 to the Group consolidated Financial Statements.

(ii) The Company acquired 100% share capital of £0.02 million in Centrica Ireland Holdings Limited.

(iii) Investments in CH4 Energy Limited, and Centrica Beta Holdings Limited were largely written down as deemed irrecoverable after the dividend payment of £686 million (2022: £nil) and £1.7 billion (2022: £nil) from these companies in November 2023 and December 2023 respectively.

(iv) Disposals predominantly relate to Centrica Holdings Limited, following a share for share exchange transaction, swapping the previous investment in Centrica Holdings Limited for shares in Centrica Ireland Holdings Limited.

(v) Employee share scheme movement is the net change in shares to be awarded under employee share schemes to employees of Group undertakings.

(vi) An impairment charge was recognised in the prior year, predominantly in relation to the investment in Centrica Holdings Limited.

The Directors believe that the carrying value of the investments is supported by their realisable value.

## VI. TRADE AND OTHER RECEIVABLES

	2023		2022	
	Current <sup>(i)</sup> £m	Non-current <sup>(ii)</sup> £m	Current <sup>(i)</sup> £m	Non-current <sup>(ii)</sup> £m
31 December				
Amounts owed by Group undertakings	582	14,262	1,496	13,085
Prepayments and other receivables	8	12	4	4
	<b>590</b>	<b>14,274</b>	<b>1,500</b>	<b>13,089</b>

(i) The amounts receivable by the Company includes a gross balance of £480 million (2022: £1,424 million) that bears interest at a quarterly rate determined by Group treasury and linked to the Group cost of funds. The quarterly rates ranged between 2.1% and 5.7% per annum during 2023 (2022: 0% and 4.1%). The other amounts receivable from Group undertakings are interest free. All amounts receivable from Group undertakings are unsecured and repayable on demand. Amounts receivable by the Company are stated net of credit loss provision of £nil (2022: £15 million).

(ii) The amounts receivable by the Company includes a gross balance of £15,082 million (2022: £14,206 million) due after more than one year that bears interest at a quarterly rate determined by Group treasury and linked to the Group cost of funds. The quarterly rates ranged between 2.1% and 5.7% per annum during 2023 (2022: 0% and 4.1%). The other amounts receivable from Group undertakings are interest-free. All amounts receivable from Group undertakings are unsecured and not expected to be repayable within 12 months from the reporting date. Amounts receivable by the Company are stated net of credit loss provisions of £655 million (2022: £872 million).

## VII. DERIVATIVE FINANCIAL INSTRUMENTS

31 December	2023			2022		
	Current £m	Non-current £m	Total £m	Current £m	Non-current £m	Total £m
Derivative financial assets	66	39	105	217	101	318
Derivative financial liabilities	(116)	(170)	(286)	(211)	(271)	(482)

## VIII. FINANCIAL INSTRUMENTS

### (a) Determination of fair values

The Company's policies for the classification and valuation of financial instruments carried at fair value are consistent with those of the Group, as detailed in note S6 to the Group consolidated Financial Statements.

### (b) Financial instruments carried at fair value

31 December	Level 1 £m	Level 2 £m	2023 Total £m	Level 1 £m	Level 2 £m	2022 Total £m
<b>Financial assets</b>						
Derivative financial assets held for trading:						
Foreign exchange derivatives <sup>(i)</sup>	—	69	69	—	243	243
Derivative financial assets in hedge accounting relationships:						
Interest rate derivatives	—	—	—	—	37	37
Foreign exchange derivatives	—	36	36	—	38	38
Debt instruments	72	—	72	66	—	66
Equity instruments	32	—	32	29	—	29
Cash and cash equivalents <sup>(ii)</sup>	—	4,673	4,673	—	2,809	2,809
<b>Total financial assets at fair value</b>	<b>104</b>	<b>4,778</b>	<b>4,882</b>	<b>95</b>	<b>3,127</b>	<b>3,222</b>
<b>Financial liabilities</b>						
Derivative financial liabilities held for trading:						
Foreign exchange derivatives <sup>(i)</sup>	—	(134)	(134)	—	(257)	(257)
Derivative financial liabilities in hedge accounting relationships:						
Interest rate derivatives	—	(136)	(136)	—	(221)	(221)
Foreign exchange derivatives	—	(16)	(16)	—	(4)	(4)
<b>Total financial liabilities at fair value</b>	<b>—</b>	<b>(286)</b>	<b>(286)</b>	<b>—</b>	<b>(482)</b>	<b>(482)</b>

(i) In addition to the derivatives included in the table above, the Company also has internal derivative assets with a fair value of £133 million (2022: £257 million) entered into on behalf of its subsidiaries and are included within Trade receivables in note VI, and internal derivative liabilities with a fair value of £66 million (2022: £242 million) included within Trade payables in note XI.

(ii) Included within cash and cash equivalents are money market funds amounting to £4,673 million (2022: £2,809 million).

## IX. SECURITIES

31 December	2023		2022	
	Current £m	Non-current £m	Current £m	Non-current £m
Debt instruments	—	72	—	66
Equity instruments	—	32	—	29
Other	405	—	—	403
	<b>405</b>	<b>104</b>	<b>—</b>	<b>498</b>

Within Non-current securities, £104 million (2022: £95 million) of investments were held in trust, on behalf of the Company, as security in respect of the Centrica Unapproved Pension Scheme (refer to note XIV (c)).

Other Current securities represents the pension scheme loan arrangement (including interest) of £405 million (2022: £403 million within Non-current securities) as disclosed in note I(b), note XIV(f) and in note 22(b) to the Group consolidated Financial Statements.

## X. LEASE LIABILITIES MATURITY ANALYSIS

A maturity analysis of lease liabilities based on undiscounted gross cash flow is reported in the table below:

	2023 £m	2022 £m
Less than one year	5	4
2 years	4	4
3 years	1	3
<b>Total lease liabilities (undiscounted)</b>	<b>10</b>	<b>11</b>

Future finance charges are expected to be £1 million (2022: £1 million).

Analysed as:	2023 £m	2022 £m
Non-current	5	7
Current	5	4
	<b>10</b>	<b>11</b>

## XI. TRADE AND OTHER PAYABLES

31 December	2023		2022	
	Current <sup>(i)</sup> £m	Non-current <sup>(ii)</sup> £m	Current <sup>(i)</sup> £m	Non-current <sup>(ii)</sup> £m
Amounts owed to Group undertakings	(9,749)	(3)	(9,503)	(45)
Loss on financial guarantee contracts <sup>(iii)</sup>	(33)	—	(159)	—
Accruals and other creditors <sup>(iv)</sup>	(107)	—	(221)	—
Taxation and social security <sup>(v)</sup>	(36)	—	—	—
	<b>(9,925)</b>	<b>(3)</b>	<b>(9,883)</b>	<b>(45)</b>

(i) The amounts payable by the Company includes £9,582 million (2022: £8,577 million) that bears interest at a quarterly rate determined by Group treasury and linked to the Group cost of funds. The quarterly rates ranged between 2.1% and 5.7% per annum during 2023 (2022: 0% and 4.1%). Other amounts payable by the Company are interest free, unsecured and repayable on demand. Refer to note I for further details.

(ii) These other amounts payable by the Company are interest free and unsecured.

(iii) During the year, the Company has released £126 million (2022: £55 million expected credit loss provision charge) of expected credit loss provision on financial guarantee contracts. See note I for further details.

(iv) During the year, the Company recognised a financial liability of £94 million (2022: £207 million) relating to the share buyback programme. See note I and 'Own and treasury shares reserve' section in note S4 of the Group consolidated Financial Statements for more details.

(v) Includes group relief creditor of £36 million in 2023 (2022: £nil).

## XII. DEFERRED TAX LIABILITIES AND ASSETS

	Retirement benefit obligation £m	Other £m	Total £m
1 January 2022	(2)	(12)	(14)
(Charge)/credit to income	(6)	2	(4)
Credit to equity	11	8	19
Deferred tax assets/(liabilities) at 31 December 2022	3	(2)	1
(Charge)/credit to income	(5)	2	(3)
Credit to equity	9	1	10
<b>Deferred tax assets at 31 December 2023</b>	<b>7</b>	<b>1</b>	<b>8</b>

Other deferred tax assets primarily relate to other temporary differences. All deferred tax crystallises in over one year.

## XIII. BANK OVERDRAFTS, LOANS AND OTHER BORROWINGS

31 December	2023		2022	
	Current £m	Non-current £m	Current £m	Non-current £m
Bank loans and overdrafts	(731)	(130)	(600)	(143)
Bonds	—	(2,665)	(246)	(2,628)
Interest accruals	(53)	—	(55)	—
Lease obligations	(5)	(5)	(4)	(7)
	<b>(789)</b>	<b>(2,800)</b>	<b>(905)</b>	<b>(2,778)</b>

Disclosures in respect of the Group's financial liabilities are provided in notes 24 and S3 to the Group consolidated Financial Statements. With the exception of leases and overdrafts, materially all of the Group's financing activity is carried out through the Company.

## XIV. PENSIONS

### (a) Summary of main schemes

The Company's employees participate in the following Group defined benefit pension schemes: Centrica Pension Plan (CPP), Centrica Pension Scheme (CPS) and Centrica Unapproved Pension Scheme. Its employees also participate in the defined contribution section of the Centrica Pension Scheme. Information on these schemes is provided in note 22 to the Group consolidated Financial Statements.

Together with the Centrica Engineers Pensions Scheme (CEPS), CPP and CPS form the significant majority of the Group's and Company's defined benefit obligation and are referred to below and in the Group Financial Statements as the 'Registered Pension Schemes'.

### (b) Accounting assumptions, risks and sensitivity analysis

The accounting assumptions, risks and sensitivity analysis for the Registered Pension Schemes are provided in note 22 to the Group consolidated Financial Statements.

### (c) Movements in the year

	2023		2022	
	Pension liabilities £m	Pension assets £m	Pension liabilities £m	Pension assets £m
<b>1 January</b>	<b>(731)</b>	<b>738</b>	<b>(1,328)</b>	<b>1,364</b>
Items included in the Company Income Statement:				
Current service cost	(2)	—	(6)	—
Contributions by employer in respect of employee salary sacrifice arrangements <sup>(i)</sup>	(2)	—	(2)	—
<b>Total current service cost</b>	<b>(4)</b>	<b>—</b>	<b>(8)</b>	<b>—</b>
Interest (expense)/income on scheme liabilities/assets	(40)	41	(24)	27
Termination benefit	—	—	1	—
Items included in the Company Statement of Comprehensive Income:				
Returns on plan assets, excluding interest income	—	144	—	(633)
Actuarial (loss)/gain from changes to demographic assumptions	(97)	—	4	—
Actuarial (loss)/gain from changes in financial assumptions	(60)	—	621	—
Actuarial loss from experience adjustments	(35)	—	(36)	—
Other movements:				
Employer contributions	—	21	—	17
Contributions by employer in respect of employee salary sacrifice arrangements	—	2	—	2
Benefits paid from schemes	38	(38)	39	(39)
<b>31 December</b>	<b>(929)</b>	<b>908</b>	<b>(731)</b>	<b>738</b>

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

Presented in the Company Balance Sheet as:

	2023 £m	2022 £m
31 December		
Retirement benefit pension assets	28	56
Retirement benefit pension liabilities	(49)	(49)

The pension scheme liabilities relate to the Centrica Unapproved Pension Scheme.

## XIV. PENSIONS

### (d) Analysis of the actuarial losses recognised in reserves

Year ended 31 December	2023 £m	2022 £m
Actuarial gain/(loss) (actual return less expected return on pension scheme assets)	144	(633)
Experience loss arising on the scheme liabilities	(35)	(36)
Changes in assumptions underlying the present value of the schemes' liabilities	(157)	625
Actuarial loss recognised in reserves before adjustment for taxation	(48)	(44)
Cumulative actuarial losses recognised in reserves at 1 January, before adjustment for taxation	(196)	(152)
<b>Cumulative actuarial losses recognised in reserves at 31 December, before adjustment for taxation</b>	<b>(244)</b>	<b>(196)</b>

### (e) Defined benefit pension scheme contributions

Note 22 to the Group consolidated Financial Statements provides details of the triennial review carried out at 31 March 2021 in respect of the UK Registered Pension Schemes and the future pension scheme contributions, including asset-backed arrangements, agreed as part of this review. Under IAS 19, the Company's contribution and trustee interest in the Scottish Limited Partnerships are recognised as scheme assets.

The Company estimates that it will pay £4 million of employer contributions during 2024 for its defined benefit schemes, at an average rate of 22% of pensionable pay, together with contributions via the salary sacrifice arrangement of £2 million.

For details of the weighted average duration of the liabilities of the Registered Pension Schemes see note 22 of the Group consolidated Financial Statements.

### (f) Pension scheme assets

31 December	2023			2022		
	Quoted £m	Unquoted £m	Total £m	Quoted £m	Unquoted £m	Total £m
Equities	23	503	526	19	486	505
Corporate bonds	6	—	6	24	—	24
High-yield debt	18	1,238	1,256	106	1,331	1,437
Liability matching assets	2,860	—	2,860	2,835	—	2,835
Other long-dated income assets	—	1,204	1,204	—	1,343	1,343
Property	—	305	305	—	366	366
Cash pending investment	391	—	391	205	—	205
Loan and interest	—	(405)	(405)	—	(403)	(403)
Asset-backed contribution assets	—	469	469	—	527	527
Group pension scheme assets <sup>(i)</sup>	3,298	3,314	6,612	3,189	3,650	6,839

	2023 £m	2022 £m
<b>Company share of the above</b>	<b>908</b>	<b>738</b>

(i) Total pension scheme assets, including asset-backed contribution assets not recognised in the Group consolidated Financial Statements.

## XV. COMMITMENTS

At 31 December 2023, the Company had commitments of £93 million (2022: £66 million) relating to contracts for outsourced services, £129 million (2022: £177 million) relating to the contracts for centralised information services and £5 million (2022: £5 million) relating to contracts for property services.

The Company has provided guarantees and letters of credit relating to its subsidiaries' trading activities and decommissioning obligations. At 31 December 2023, the Group has derivative liabilities of £3,006 million (2022: £10,151 million), and decommissioning liabilities of £1,527 million (2022: £1,514 million). See notes 19 and 21 to the Group consolidated Financial Statements for further information on these balances.

## XVI. RELATED PARTIES

During the year the Company accepted cash deposits on behalf of the Spirit Energy group of companies giving rise to a Trade and other payables balance of £1,356 million (2022: £1,091 million). Spirit Energy Limited is a subsidiary of the Company, held indirectly, that is not wholly owned. See note 3 to the Group consolidated Financial Statements for more information.

## GAS AND LIQUIDS RESERVES (UNAUDITED)

The Group's estimates of reserves of gas and liquids are reviewed as part of the full year reporting process and updated accordingly.

A number of factors affect the volumes of gas and liquids reserves, including the available reservoir data, commodity prices and future costs. Due to the inherent uncertainties and the limited nature of reservoir data, estimates of reserves are subject to change as additional information becomes available.

The Group discloses 2P gas and liquids reserves, representing the central estimate of future hydrocarbon recovery. Reserves for Centrica operated fields are estimated by in-house technical teams composed of geoscientists and reservoir engineers. Reserves for non-operated fields are estimated by the operator but are subject to internal review and challenge.

As part of the internal control process related to reserves estimation, an assessment of the reserves, including the application of the reserves definitions, is undertaken by an independent technical auditor. An annual reserves assessment has been carried out by DeGolyer & McNaughton for the Group's global reserves. Reserves are estimated in accordance with a formal policy and procedure standard.

The Group has estimated 2P gas and liquids reserves in Europe.

The principal retained fields in Spirit Energy are Cygnus, Morecambe Hub, Rhyl and Chiswick. The principal non-Spirit Energy field is Rough. The European reserves estimates are consistent with the guidelines and definitions of the Society of Petroleum Engineers, the Society of Petroleum Evaluation Engineers and the World Petroleum Council's Petroleum Resources Management System using accepted principles.

### Estimated net 2P reserves of gas (billion cubic feet)

	Spirit Energy <sup>(i)</sup>	Rough	Total
1 January 2023	261	16	277
Revisions of previous estimates <sup>(ii)</sup>	40	—	40
Production <sup>(iii)</sup>	(59)	(1)	(60)
<b>31 December 2023</b>	<b>242</b>	<b>15</b>	<b>257</b>

### Estimated net 2P reserves of liquids (million barrels)

	Spirit Energy <sup>(i)</sup>	Rough	Total
1 January 2023	1	—	1
Revisions of previous estimates <sup>(ii)</sup>	1	—	1
Production <sup>(iii)</sup>	(1)	—	(1)
<b>31 December 2023</b>	<b>1</b>	<b>—</b>	<b>1</b>

### Estimated net 2P reserves (million barrels of oil equivalent)

	Spirit Energy <sup>(i)</sup>	Rough	Total
<b>31 December 2023 <sup>(iv)</sup></b>	<b>42</b>	<b>3</b>	<b>45</b>

(i) The movements represent Centrica's 69% interest in Spirit Energy.

(ii) Revision of previous estimates include those associated with Morecambe Hub, Chiswick and Cygnus.

(iii) Represents total sales volumes of gas and oil produced from the Group's reserves.

(iv) Includes the total of estimated gas and liquids reserves at 31 December 2023 in million barrels of oil equivalent.

Liquids reserves include oil, condensate and natural gas liquids.



## FIVE YEAR SUMMARY (UNAUDITED)

Year ended 31 December	2019 (restated) <sup>(i)</sup> £m	2020 (restated) <sup>(i)</sup> £m	2021 £m	2022 £m	2023 £m
Total Group revenue from continuing operations included in business performance	15,958	14,949	18,300	33,637	<b>33,374</b>
Operating profit/(loss) from continuing operations before exceptional items and certain re-measurements:					
British Gas Services & Solutions <sup>(i)</sup>	187	191	121	(9)	<b>47</b>
British Gas Energy <sup>(i)</sup>	117	82	118	72	<b>751</b>
Bord Gáis Energy <sup>(i)</sup>	50	42	28	31	<b>1</b>
Centrica Business Solutions <sup>(i)</sup>	(20)	(132)	(52)	44	<b>104</b>
Centrica Energy <sup>(i)</sup>	138	174	70	1,400	<b>774</b>
Upstream <sup>(i)</sup>	178	90	663	1,793	<b>1,083</b>
Colleague profit share	—	—	—	(23)	<b>(8)</b>
	<b>650</b>	<b>447</b>	<b>948</b>	<b>3,308</b>	<b>2,752</b>
Operating profit from discontinued operations before exceptional items and certain re-measurements <sup>(i)</sup>	251	252	—	—	<b>—</b>
Exceptional items and certain re-measurements after taxation	(1,531)	(520)	866	(2,755)	<b>2,165</b>
(Loss)/profit attributable to equity holders of the parent	<b>(1,023)</b>	<b>41</b>	<b>1,210</b>	<b>(782)</b>	<b>3,929</b>
	Pence	Pence	Pence	Pence	Pence
Earnings per ordinary share	(17.8)	0.7	20.7	(13.3)	<b>70.6</b>
Adjusted earnings per ordinary share	7.3	6.5	4.1	34.9	<b>33.4</b>
Dividend per ordinary share in respect of the year	1.5	—	—	3.0	<b>4.0</b>

## ASSETS AND LIABILITIES

31 December (restated) <sup>(i)</sup>	2019 £m	2020 £m	2021 £m	2022 £m	2023 £m
Goodwill and other non-current intangible assets	4,033	1,940	1,161	1,116	<b>745</b>
Other non-current assets	5,826	4,767	6,040	7,234	<b>4,555</b>
Net current (liabilities)/assets	(696)	622	1,465	(1,023)	<b>4,930</b>
Non-current liabilities	(7,474)	(8,072)	(6,360)	(6,047)	<b>(5,997)</b>
Net assets of disposal groups held for sale	106	2,125	444	—	<b>—</b>
Net assets	1,795	1,382	2,750	1,280	<b>4,233</b>
Adjusted net (debt)/cash <sup>(ii)</sup> (note 24)	(3,507)	(2,998)	680	1,199	<b>2,744</b>

## CASH FLOWS

Year ended 31 December (restated) <sup>(i)</sup>	2019 £m	2020 £m	2021 £m	2022 £m	2023 £m
Cash flow from operating activities before exceptional payments	1,548	1,532	1,687	1,338	<b>2,758</b>
Payments relating to exceptional charges in operating costs	(298)	(132)	(76)	(24)	<b>(6)</b>
Net cash flow from investing activities	(503)	(285)	2,263	(566)	<b>115</b>
Cash flow before cash flow from financing activities	747	1,115	3,874	748	<b>2,867</b>

(i) Results have been restated to reflect the new operating structure of the Group, effective during 2021.

(ii) Results have been restated to reflect the change in definition of adjusted net cash/debt in 2021.

# SHAREHOLDER INFORMATION

## GENERAL ENQUIRIES

Centrica's share register is administered and maintained by Equiniti, our Registrar, whom you can contact directly if you have any questions about your shareholding which are not answered here or on our website. You can contact Equiniti using the following details:

Address: Equiniti, Aspect House, Spencer Road, Lancing, West Sussex BN99 6DA, UK

Telephone: 0371 384 2985\*

Outside the UK: +44 (0)371 384 2985

Contact: [help.shareview.co.uk](mailto:help.shareview.co.uk)

Website: [equiniti.com](https://equiniti.com)

You can also contact Equiniti using the Relay UK website at [relayuk.bt.com](https://relayuk.bt.com)

\* Calls to an 03 number cost no more than a national rate call to an 01 or 02 number. Lines open 8.30am to 5.30pm, Monday to Friday (UK time), excluding public holidays in England and Wales.

When contacting Equiniti or registering via [shareview.co.uk](https://shareview.co.uk), you should have your shareholder reference number to hand. This can be found on your share certificate, dividend confirmation or any other correspondence you have received from Equiniti.

Together with Equiniti, we have introduced an electronic queries service to enable our shareholders to manage their investment at a convenient time. Details of this service can be found at [shareview.co.uk](https://shareview.co.uk).

## DIVIDEND

As communicated previously, dividends are now paid only by direct transfer to your bank or building society account, rather than by cheque. This is faster, more secure and better for the environment.

If you have not already done so, please therefore provide Equiniti with your bank or building society account details. You can do this online at [www.shareview.co.uk](https://www.shareview.co.uk) or by telephoning Equiniti on +44 (0)371 384 2985.

## AMERICAN DEPOSITARY RECEIPT (ADR)

We have an ADR programme, trading under the symbol CPYYY. Centrica's ratio is one ADR being equivalent to four ordinary shares. Further information is available on our website or please contact:

Regular mail delivery address: BNY Mellon Shareowner Services, PO Box 505000, Louisville, KY 20233-5000, USA

Overnight, certified, registered delivery address: BNY Mellon Shareowner Services, 462 South 4th Street, Suite 1600, Louisville, KY 40202, USA

Email: [shrrelations@cpshareownerservices.com](mailto:shrrelations@cpshareownerservices.com)

Website: [mybnymdr.com](https://mybnymdr.com)

Telephone: +1 888 269 2377 (toll-free in the US)

Outside the US: +1 201 680 6825

## MANAGE YOUR SHARES ONLINE

We actively encourage our shareholders to receive communications via email and view documents electronically via our website, [centrica.com](https://centrica.com). Receiving communications and documents electronically saves your Company money and reduces our environmental impact. If you sign up for electronic communications, you will receive an email to notify you that new shareholder documents are available to view online, including the Annual Report and Accounts, on the day it is published.

You will also receive alerts to let you know that you can cast your Annual General Meeting (AGM) vote online. You can manage your shareholding online by registering at [shareview.co.uk](https://shareview.co.uk), a free online platform provided by Equiniti, which allows you to:

- view information about your shareholding;
- update your personal details and your bank account details; and
- appoint a proxy for the AGM.

## CENTRICA FLEXISHARE

FlexiShare is an easy way to hold Centrica shares without a share certificate. Your shares are held by a nominee company, Equiniti Financial Services Limited. However, you are able to attend and vote at general meetings as if the shares were held in your own name. Holding your shares in this way is free and gives you:

- low cost share dealing rates (full details of which are available on [centrica.com](https://centrica.com), together with dealing charges);
- quicker settlement periods for buying and selling shares; and
- no paper share certificates to lose.

## centrica.com

The Shareholder Centre on our website contains a wide range of information including a dedicated investors section where you can find further details about shareholder services including:

- share price information;
- dividend history;
- telephone and internet share dealing;
- downloadable shareholder forms; and
- taxation.

This Annual Report and Accounts can also be viewed online by visiting [centrica.com/ar23](https://centrica.com/ar23).

## SHAREGIFT

If you have a small number of shares and the dealing costs or the minimum fee make it uneconomical to sell them, it is possible to donate them to ShareGift, a registered charity, which provides a free service to enable you to dispose charitably of such shares.

More information on this service can be found at [sharegift.org](https://sharegift.org) or by calling +44 (0)20 7930 3737.

## FINANCIAL CALENDAR

Ex-dividend date for 2023 final dividend	30 May 2024
Record date for 2023 final dividend	31 May 2024
Annual General Meeting (AGM)	5 June 2024
Payment of 2023 final dividend	11 July 2024

For more information on Centrica's financial calendar please visit [centrica.com/investors/financial-calendar](https://centrica.com/investors/financial-calendar)

## ADDITIONAL INFORMATION – EXPLANATORY NOTES (UNAUDITED)

### Definitions and reconciliation of adjusted performance measures

Centrica's 2023 consolidated Financial Statements include a number of non-GAAP measures. These measures are chosen as they provide additional useful information on business performance and underlying trends. They are also used to measure the Group's performance against its strategic financial framework. They are not however, defined terms under IFRS and may not be comparable with similarly titled measures reported by other companies. Where possible they have been reconciled to the statutory equivalents from the primary statements (Group Income Statement ('I/S'), Group Balance Sheet ('B/S'), Group Cash Flow Statement ('C/F')) or the notes to the Financial Statements.

Adjusted revenue, adjusted gross margin, adjusted operating profit, adjusted earnings and free cash flow have been defined and reconciled separately in notes 2, 4 and 10 to the Financial Statements where further explanation of the measures is given. Additional performance measures are used within these Financial Statements to help explain the performance of the Group and these are defined and reconciled below. Further information has been provided to help readers when reconciling between different parts of the consolidated Group Financial Statements, and when reconciling cash flow measures to the Group Cash Flow Statement.

### Adjusted EBITDA

Adjusted EBITDA is a business performance measure of operating profit, after adjusting for depreciation and amortisation. It provides a performance measure in its own right, and provides a bridge between the Income Statement and the Group's key cash metrics. Further, a reconciliation excluding Spirit Energy disposed assets is provided.

Year ended 31 December	Notes	2023 £m	2022 £m	Change
<b>Group operating profit/(loss)</b>	I/S	<b>6,512</b>	(240)	
Exceptional items included within Group operating profit/loss and certain re-measurements before taxation	7	<b>645</b>	155	
Certain re-measurements before taxation	7	<b>(4,405)</b>	3,393	
Share of profits of joint ventures and associates, net of interest and taxation <sup>(i)</sup>	I/S	<b>(209)</b>	(92)	
Depreciation and impairments of PP&E <sup>(i)</sup>	4	<b>404</b>	598	
Amortisation, write-downs and impairments of intangibles <sup>(i)</sup>	4	<b>138</b>	179	
<b>Group total adjusted EBITDA</b>		<b>3,085</b>	3,993	(23)%

(i) These line items relate to business performance only.

### Adjusted EBITDA excluding Spirit Energy disposed assets

Year ended 31 December	Notes	2023 £m	2022 £m	Change
<b>Group total adjusted EBITDA</b>		<b>3,085</b>	3,993	
Less: disposed assets adjusted EBITDA (including associated hedges)		<b>—</b>	(485)	
<b>Adjusted EBITDA excluding Spirit Energy disposed assets</b>		<b>3,085</b>	3,508	(12)%

### Adjusted operating profit excluding Spirit Energy disposed assets

Year ended 31 December	Notes	2023 £m	2022 £m	Change
<b>Group total adjusted operating profit</b>	I/S	<b>2,752</b>	3,308	
Less: disposed assets adjusted operating profit (including associated hedges)		<b>—</b>	(485)	
<b>Adjusted operating profit excluding Spirit Energy disposed assets</b>		<b>2,752</b>	2,823	(3)%

The below table shows how adjusted EBITDA reconciles to free cash flow:

Year ended 31 December	Notes	2023 £m	2022 £m
<b>Adjusted EBITDA</b>		<b>3,085</b>	<b>3,993</b>
Group operating profit/(loss) including share of joint ventures and associates, from exceptional items and certain re-measurements	I/S	<b>3,760</b>	(3,548)
Share of losses/(profits) of joint ventures and associates, net of interest and taxation, from exceptional items and certain re-measurements	I/S	<b>1</b>	(1)
Depreciation, amortisation, write downs, impairments and write-backs, from exceptional items and certain re-measurements	I/S	<b>645</b>	(207)
Loss on disposals	C/F	<b>—</b>	343
Decrease in provisions	C/F	<b>(1,021)</b>	(1,903)
Cash contributions to defined benefit schemes in excess of service cost income statement charge	C/F	<b>(215)</b>	(184)
Employee share scheme costs	C/F	<b>31</b>	10
Unrealised (gains)/losses arising from re-measurement of energy contracts	C/F	<b>(2,949)</b>	4,095
Net movement in working capital	C/F	<b>244</b>	(656)
Taxes paid	C/F	<b>(803)</b>	(574)
Operating interest paid	C/F	<b>(20)</b>	(30)
Payments relating to exceptional charges in operating profit	C/F	<b>(6)</b>	(24)
<b>Net cash flow from operating activities</b>		<b>2,752</b>	<b>1,314</b>
Purchase of businesses, net of cash acquired	C/F	<b>(34)</b>	12
Sale of businesses, including receipt of deferred consideration	C/F	<b>55</b>	92
Purchase of property, plant and equipment and intangible assets	C/F	<b>(335)</b>	(371)
Sale of property, plant and equipment and intangible assets	C/F	<b>—</b>	11
Investments in joint ventures and associates	C/F	<b>(9)</b>	(18)
Dividends received from joint ventures and associates	C/F	<b>220</b>	60
Net purchase of other investments	C/F	<b>(37)</b>	—
UK pension deficit payments	4	<b>180</b>	214
Movements in variation margin and collateral	4	<b>(585)</b>	1,173
<b>Group total free cash flow</b>	4	<b>2,207</b>	<b>2,487</b>

### Adjusted earnings attributable to shareholders excluding Spirit Energy disposed assets

Year ended 31 December	Notes	2023 £m	2022 £m	Change
<b>Adjusted earnings attributable to shareholders</b>	I/S	<b>1,859</b>	2,050	
Less: disposed assets adjusted earnings attributable to shareholders (including associated hedges)		<b>—</b>	(45)	
<b>Adjusted earnings attributable to shareholders excluding Spirit Energy disposed assets</b>		<b>1,859</b>	2,005	(7)%

### Adjusted basic earnings per share excluding Spirit Energy disposed assets

Year ended 31 December	Notes	2023	2022	Change
<b>Adjusted earnings attributable to shareholders excluding Spirit Energy disposed assets (£m)</b>		<b>1,859</b>	2,005	
Weighted average of ordinary shares in issue during the period (million shares)	10	<b>5,569</b>	5,869	
<b>Adjusted basic earnings per share excluding Spirit Energy disposed assets</b>		<b>33.4p</b>	34.2p	(2)%

## Definitions and reconciliation of adjusted performance measures

### Gain on disposals

Year ended 31 December	Notes	2023 £m	2022 £m
Loss on disposals	C/F	—	343
Less: exceptional loss on disposals	7	—	(362)
<b>Gain on disposals relating to business performance</b>		<b>—</b>	<b>(19)</b>

### Group net investment

With an increased focus on cash generation, capital discipline and managing adjusted net cash/debt, Group net investment provides a measure of the Group's capital expenditure from a cash perspective and allows the Group's capital discipline to be assessed.

Year ended 31 December	Notes	2023 £m	2022 £m	Change
Capital expenditure (including small acquisitions) <sup>(i)</sup>		<b>415</b>	377	
Net disposals <sup>(ii)</sup>		<b>(55)</b>	(103)	
<b>Group net investment</b>		<b>360</b>	274	31%
Dividends received from joint ventures and associates	C/F	<b>(220)</b>	(60)	
Interest received	C/F	<b>(267)</b>	(46)	
Net purchase of securities	C/F	<b>12</b>	398	
<b>Net cash flow from investing activities</b>	C/F	<b>(115)</b>	566	(120)%

(i) Capital expenditure is the net cash flow on capital expenditure, purchases of businesses and other investments, and investments in joint ventures and associates (less than £100 million). See table (a).

(ii) Net disposals is the net cash flow from sales of businesses, and property, plant and equipment and intangible assets. See table (b).

Group net investment is capital expenditure including acquisitions less net disposals. It excludes cash flows from investing activities not associated with capital expenditure as detailed in the table above.

### (a) Capital expenditure (including small acquisitions)

Year ended 31 December	Notes	2023 £m	2022 £m	Change
Purchase of property, plant and equipment and intangible assets	C/F	<b>335</b>	371	
Purchase of businesses, net of cash acquired	C/F	<b>34</b>	(12)	
Investment in joint ventures and associates	C/F	<b>9</b>	18	
Net purchase of other investments	C/F	<b>37</b>	—	
Less: material acquisitions (>£100 million)		<b>—</b>	—	
<b>Capital expenditure (including small acquisitions)</b>		<b>415</b>	377	10%

### (b) Net disposals

Year ended 31 December	Notes	2023 £m	2022 £m	Change
Sale of businesses, including receipt of deferred consideration	C/F	<b>(55)</b>	(92)	
Sale of property, plant and equipment and intangible assets	C/F	<b>—</b>	(11)	
<b>Net disposals</b>		<b>(55)</b>	(103)	(47)%

## Definitions and reconciliation of adjusted performance measures

The following tables provide additional information to help readers when reconciling between different parts of the consolidated Group Financial Statements, and the Group Cash Flow Statement.

### Reconciliation from free cash flow to change in adjusted net cash

Year ended 31 December	Notes	2023 £m	2022 £m
<b>Group total free cash flow</b>	4	<b>2,207</b>	2,487
Financing interest paid	C/F	(286)	(172)
Interest received	C/F	267	46
UK pension deficit payments	4	(180)	(214)
Proceeds from exercise of share options	C/F	6	—
Payments for own shares	C/F	—	(5)
Share buyback programme	C/F	(613)	(43)
Distributions to non-controlling interests	C/F	(17)	(273)
Equity dividends paid	C/F	(186)	(59)
Movements in variation margin and collateral	4	585	(1,173)
<b>Cash flows affecting adjusted net cash</b>		<b>1,783</b>	594
Non-cash movements in adjusted net cash		(238)	(75)
<b>Change in adjusted net cash</b>		<b>1,545</b>	519
<b>Opening adjusted net cash</b>	24	<b>1,199</b>	680
<b>Closing adjusted net cash</b>	24	<b>2,744</b>	1,199

### Reconciliation of adjusted net cash to unadjusted net cash

Adjusted net cash is a business performance measure used by management to assess the underlying indebtedness of the business.

Year ended 31 December	Notes	2023 £m	2022 £m
<b>Adjusted net cash</b>	24	<b>2,744</b>	1,199
Less: current and non-current securities	24	(521)	(525)
Less: sub-lease assets	24	(2)	(2)
<b>Unadjusted net cash</b>		<b>2,221</b>	672

### Payments relating to exceptional charges in operating costs

Year ended 31 December	Notes	2023 £m	2022 £m
Utilisation of prior year restructuring liabilities		6	24
<b>Payments relating to exceptional charges in operating costs</b>	C/F	<b>6</b>	24



## Definitions and reconciliation of adjusted performance measures

### Depreciation, amortisation, write-downs, impairments and write-backs

Year ended 31 December	Notes	2023 £m	2022 £m
<b>Movement from depreciation, amortisation, write-downs, impairments and write-backs, from exceptional items included in the Group Cash Flow Statement</b>	7	<b>645</b>	<b>(207)</b>
Made up of:			
Impairment/(write-back) of power assets	7	<b>563</b>	<b>(207)</b>
Impairment of gas storage asset	7	<b>82</b>	<b>—</b>
<b>Movement from depreciation, amortisation, write-downs, impairments and write-backs, from business performance included in the Group Cash Flow Statement</b>		<b>542</b>	<b>777</b>
Made up of:			
Business Performance PP&E depreciation	4	<b>395</b>	510
Business Performance PP&E impairments	4	<b>9</b>	88
Business Performance intangibles amortisation	4	<b>123</b>	159
Business Performance intangibles impairments and write-downs	4	<b>15</b>	20
<b>Movement from depreciation, amortisation, write-downs, impairments and write-backs included in the Group Cash Flow Statement</b>		<b>1,187</b>	<b>570</b>

### Reconciliation of receivables and payables to Group Cash Flow Statement

Year ended 31 December	Notes	2023 £m	2022 £m
Receivables opening balance	B/S	<b>8,579</b>	6,114
Less: receivables closing balance	B/S	<b>(5,619)</b>	(8,579)
Payables (incl. insurance contract liabilities) opening balance	B/S	<b>(10,341)</b>	(7,633)
Less: payables (incl. insurance contract liabilities) closing balance	B/S	<b>7,372</b>	10,341
Net reduction in receivables and payables		<b>(9)</b>	243
Non-cash changes, and other reconciling items:			
Movement in share buyback liability		<b>113</b>	(207)
Business disposals		<b>(55)</b>	(22)
Movement in capital creditors		<b>8</b>	6
Movement in ROCS and emission certificate intangible assets		<b>(13)</b>	(67)
Other movements (including foreign exchange movements)		<b>14</b>	(16)
Non-cash changes, and other reconciling items		<b>67</b>	(306)
Movement in trade and other receivables, trade and other payables and contract-related assets/liabilities relating to business performance	C/F	<b>58</b>	(63)

### Pensions

Year ended 31 December	Notes	2023 £m	2022 £m
Cash contributions to defined benefit schemes in excess of service cost income statement charge	C/F	<b>(215)</b>	(184)
Ordinary employer contributions	22	<b>(56)</b>	(50)
UK pension deficit payments	22	<b>(180)</b>	(214)
Contributions by employer in respect of employee salary sacrifice arrangements	22	<b>(24)</b>	(21)
Total current service cost	22	<b>46</b>	105
Termination benefit	22	<b>(1)</b>	(4)

## PEOPLE AND PLANET – PERFORMANCE MEASURES

In 2023, we engaged DNV Business Assurance Services UK Limited (DNV) to conduct an independent limited assurance engagement using the International Standard on Assurance Engagements (ISAE) 3000 (Revised): 'Assurance Engagements Other Than Audits or Reviews of Historical Financial Information'. DNV has provided an unqualified opinion in relation to four KPIs that are identified with the symbol '†' and feature on pages 1, 53 and 251. It is important to read the responsible business information in the Annual Report and Accounts 2023 in the context of DNV's full limited assurance statement and Centrica's Basis of Reporting, which are available at [centrica.com/assurance](https://centrica.com/assurance)

 [READ MORE ABOUT OUR PEOPLE & PLANET PLAN ON PAGES 41 TO 55](#)

 [READ MORE ABOUT OUR WIDER NON-FINANCIAL PERFORMANCE AT \[CENTRICA.COM/DATACENTRE\]\(https://centrica.com/datacentre\)](#)

 [READ MORE ABOUT OUR SASB DISCLOSURE AT \[CENTRICA.COM/PEOPLEANDPLANET\]\(https://centrica.com/peopleandplanet\)](#)

### PROGRESS AGAINST OUR PEOPLE & PLANET PLAN

Key: Progress against goals    On track ●    Behind ●

Goal	Milestone	2023 Progress	2022 Progress
Create an engaged team that reflects the full diversity of the communities we serve by 2030 – this means all company and senior leaders to be <sup>(i)</sup> : <ul style="list-style-type: none"> <li>48% women</li> <li>18% ethnically diverse</li> <li>20% disability</li> <li>3% LGBTQ+</li> <li>4% ex-service</li> </ul>	By the end of 2025: <ul style="list-style-type: none"> <li>40% women</li> <li>16% ethnically diverse</li> <li>10% disability</li> <li>3% LGBTQ+</li> <li>3% ex-service</li> </ul>	<b>All company: <sup>(ii)</sup></b> <ul style="list-style-type: none"> <li><b>30% women</b> ●</li> <li><b>– 41% excluding Field engineers</b> ●</li> <li><b>15% ethnically diverse</b> ●</li> <li><b>3% disability</b> ●</li> <li><b>3% LGBTQ+</b> ●</li> <li><b>2% ex-service</b> ●</li> </ul> <b>Senior leaders: <sup>(ii)</sup></b> <ul style="list-style-type: none"> <li><b>32% women</b> ●</li> <li><b>– 32% excluding Field engineers</b> ●</li> <li><b>9% ethnically diverse</b> ●</li> <li><b>2% disability</b> ●</li> <li><b>2% LGBTQ+</b> ●</li> <li><b>2% ex-service</b> ●</li> </ul>	<b>All company: <sup>(ii)</sup></b> <ul style="list-style-type: none"> <li>30% women ●</li> <li>– 41% excluding Field engineers ●</li> <li>14% ethnically diverse ●</li> <li>3% disability ●</li> <li>3% LGBTQ+ ●</li> <li>2% ex-service ●</li> </ul> <b>Senior leaders: <sup>(ii)</sup></b> <ul style="list-style-type: none"> <li>33% women ●</li> <li>– 32% excluding Field engineers ●</li> <li>9% ethnically diverse ●</li> <li>3% disability ●</li> <li>0% LGBTQ+ ●</li> <li>3% ex-service ●</li> </ul>
Recruit 3,500 apprentices and provide career development opportunities for under-represented groups by 2030 (base year 2021)	2,000 apprentices by the end of 2025	<b>1,198 apprentices</b> ●	1,033 apprentices ●
Inspire colleagues to give 100,000 days to build inclusive communities by 2030 (base year 2019)	35,000 days by the end of 2025	<b>20,383 days</b> ●	13,155 days <sup>(iii)</sup> ●
Help our customers be net zero by 2050 <sup>(iv)</sup> (base year 2019)	28% greenhouse gas (GHG) intensity reduction by the end of 2030	<b>10% reduction</b> ●	6% reduction ●
Be a net zero business by 2045 <sup>(v)</sup> (base year 2019)	40% GHG reduction by the end of 2034	<b>21% reduction</b> ●	5% reduction <sup>(iii)(vi)</sup> ●

(i) Updated at the start of 2023 to align with newly released 2021 Census data for working populations.

(ii) Beyond gender, Centrica's 2023 performance is based on colleague voluntary disclosure of 74% ethnic diversity, 45% disability, 51% LGBTQ+ and 3% ex-service. For 2022, this was 72% ethnic diversity, 40% disability, 47% LGBTQ+ and 2% ex-service. All company relates to everyone who works for Centrica. Senior leaders include colleagues above general management and spans senior leaders, the Centrica Leadership Team and the Board.

(iii) Restated due to availability of improved data.

(iv) Net zero goal measures the greenhouse gas (GHG) intensity of our customers' energy use including electricity and gas with a 2019 base year of 183gCO<sub>2</sub>e/kWh, normalised to reflect acquisitions and divestments in line with changes in Group customer base. Target aligned to the Paris Agreement and based on science to limit global warming, corresponding to a well below 2°C pathway initially and 1.5°C by mid-century.

(v) Net zero goal measures scope 1 (direct) and 2 (indirect) GHG emissions based on operator boundary. Comprises emissions from all operated assets and activities including the shipping of Liquefied Natural Gas (LNG) alongside the retained Spirit Energy assets in the UK and Netherlands. Non-operated nuclear emissions are excluded. Target is normalised to reflect acquisitions and divestments in line with changes in Group structure against a 2019 base year of 2,132,680mtCO<sub>2</sub>e. It's also aligned to the Paris Agreement and based on science to limit global warming, corresponding to a well below 2°C pathway initially and 1.5°C by mid-century.

(vi) Previous figure included in DNV's limited assurance scope for the Annual Report 2022 was 6%. See [centrica.com/performanceandreporting](https://centrica.com/performanceandreporting) for our 2022 Basis of Reporting and DNV's 2022 Assurance Statement.

## PROGRESS AGAINST OUR FOUNDATIONS

### People

Metric	2023	2022	What's next
<b>Customers</b>			
British Gas Services & Solutions – Services Engineer Net Promoter Score (NPS) <sup>(i)</sup>	<b>+71</b>	+64	Deliver energy, services and solutions that energise a greener, fairer future for all
British Gas Energy – Energy Touchpoint NPS <sup>(ii)</sup>	<b>+17</b>	+13	
Bord Gáis Energy – Journey NPS <sup>(iii)</sup>	<b>+18</b>	+19	
Centrica Business Solutions – Energy supply Touchpoint NPS <sup>(iv)</sup>	<b>+32</b>	+31	
British Gas Services & Solutions – Services complaints per customer <sup>(v)</sup>	<b>6.0%</b>	7.0%	Maintain focus on driving down complaints by improving customer experience
British Gas Energy – Energy complaints per customer <sup>(vi)</sup>	<b>13.3%</b>	14.4%	
Bord Gáis Energy – Complaints per customer <sup>(vii)</sup>	<b>1.7%</b>	2.2%	
Centrica Business Solutions – Energy supply complaints per customer <sup>(viii)</sup>	<b>12.2%</b>	9.1%	
Customer support provided during the energy crisis (cumulative) <sup>(viii)</sup>	<b>£140m</b>	£53m	Ensure customers in vulnerable circumstances receive the help they need with their energy bills during the energy crisis and beyond
Customer safety incident frequency rate per 1,000,000 jobs completed	<b>2.82</b>	3.64	Keep customers safe by following controls and encouraging customers to maintain distance from work areas

(i) Measured independently, through individual questionnaires, the customer's willingness to recommend British Gas following a gas engineer visit.

(ii) Measured independently, through individual questionnaires, the customer's willingness to recommend British Gas Energy following contact.

(iii) Weighted NPS for the main customer interaction channels.

(iv) Measured independently, through individual questionnaires and the customer's willingness to recommend.

(v) Total complaints, measured as any expression of dissatisfaction where we identify material distress, inconvenience or financial loss, as a percentage of average customers over the year.

(vi) Total complaints, measured as an expression of dissatisfaction in line with submissions made to Ofgem, as a percentage of average customers over the year.

(vii) Total complaints, measured as any oral or written expression of dissatisfaction, as a percentage of average customers over the year.

(viii) Forms part of our total community contributions in the Communities section on page 251.

Metric	2023	2022	What's next
<b>Colleagues</b>			
Colleague engagement <sup>(i)</sup>	<b>7.7</b>	7.4	Strive to achieve top quartile performance by connecting colleagues with our purpose and strategy, whilst supporting them to be their best
Gender pay gap <sup>(ii)</sup>	<b>14% median</b> <b>15% mean</b>	23% median 15% mean	
Gender bonus gap <sup>(iii)</sup>	<b>14% median</b> <b>36% mean</b>	12% median 30% mean	
Ethnicity pay gap <sup>(iii)(iv)</sup>	<b>11% median</b> <b>2% mean</b>	10% median 3% mean	
Ethnicity bonus gap <sup>(iii)(iv)</sup>	<b>25% median</b> <b>4% mean</b>	23% median 0% mean	Reduce our pay gaps by building a diverse and inclusive team through our People & Planet Plan and associated Diversity, Equity and Inclusion Action Plans
Retention	<b>90%</b>	88%	
Absence <sup>(v)</sup>	<b>10 days</b>	10 days	
Total recordable injury frequency rate (TRIFR) per 200,000 hours worked	<b>0.84</b>	1.12	
Lost time incident frequency rate (LTIFR) per 200,000 hours worked	<b>0.44</b>	0.67	Drive down TRIFR and LTIFR by keeping safety front-of-mind and reinforcing a strong safety culture whilst advancing controls and monitoring
Process safety incident frequency rate (Tier 1 and 2) per 200,000 hours worked	<b>0.09</b>	0	
Significant process safety events (Tier 1)	<b>1</b>	0	
Fatalities	<b>1</b>	1	

(i) Colleague engagement methodology has changed from percentage favourable to an average score out of 10, measuring how colleagues feel about the Company.

(ii) Based on hourly rates of pay for all employees at full pay (including bonus and allowances) at the snapshot dates of 5 April 2022 and 2023. Read our Gender and Ethnicity Pay Statement to find out more at [centrica.com/pay](https://centrica.com/pay).

(iii) Includes anyone receiving a bonus during the 12-month period leading up to the pay gap snapshot date and who are still employed on the snapshot date.

(iv) Based on 74% of colleagues in 2023 and 70% of colleagues in 2022, who confirmed whether they are from a Black, Asian or Mixed/Multiple ethnic group.

(v) Relates to absence from sickness rather than wider forms of absence such as bereavement.

Metric	2023	2022	What's next
<b>Communities</b>			
Total community contributions	<b>£501.6 million<sup>(i)</sup></b>	£293.5 million <sup>(ii)</sup>	Make a big difference in our local communities – from helping people with their energy bills and energy efficiency, to volunteering and fundraising for causes that colleagues care passionately about
On the ground site audits completed	<b>20</b>	9	Continue to monitor and raise standards across our supply chain to reduce risk and guard against modern slavery, focusing on enhancing engagement and controls
Sites completing remote worker surveys	<b>13</b>	6	
Colleagues committed to Our Code	<b>96%</b>	98%	Ensure all colleagues uphold Our Code as part of our commitment to doing the right thing and acting with integrity

- (i) Comprises £409.4 million in mandatory and £88.1 million in voluntary contributions to support vulnerable customers and colleagues, alongside £4.0 million in charitable donations which includes £0.21 million in contributions from third parties such as colleague fundraising. Sum of constituent parts is lower than total due to rounding. Voluntary category extended to include colleagues following the introduction of our Colleague Support Foundation.
- (ii) Restated due to availability of improved data. Comprises £243.8 million in mandatory and £45.1 million in voluntary contributions to support vulnerable customers, alongside £4.5 million in charitable donations which includes £0.23 million in contributions from third parties such as colleague fundraising. Sum of constituent parts is lower than total due to rounding.

## Planet

Metric	2023	2022	What's next
<b>Greenhouse gas (GHG) and energy</b>			
Total GHG emissions (scope 1 and 2) <sup>(i)</sup>	<b>1,681,475tCO<sub>2</sub>e<sup>(ii)†</sup></b>	2,009,885tCO <sub>2</sub> e <sup>(iii)(iv)(v)</sup>	Measure and reduce our emissions through our People & Planet Plan by focusing on being a net zero business by 2045 and helping our customers be net zero by 2050
Scope 1 emissions	<b>1,674,829tCO<sub>2</sub>e<sup>(vi)†</sup></b>	2,004,693tCO <sub>2</sub> e <sup>(iv)(v)(vii)</sup>	
Scope 2 emissions	<b>6,647tCO<sub>2</sub>e<sup>(viii)†</sup></b>	5,193tCO <sub>2</sub> e <sup>(iv)(v)(ix)</sup>	
Scope 3 emissions <sup>(x)</sup>	<b>21,180,922tCO<sub>2</sub>e</b>	24,330,208tCO <sub>2</sub> e	
Total GHG intensity by revenue <sup>(xi)</sup>	<b>64tCO<sub>2</sub>e/£m<sup>(xii)</sup></b>	85tCO <sub>2</sub> e/£m <sup>(xiii)</sup>	Analyse the impact of our strategy on decoupling GHG emissions from value creation
Total energy use	<b>7,437,652,380kWh<sup>(xiv)†</sup></b>	9,047,097,047kWh <sup>(v)(xv)</sup>	Remain focused on energy efficiency as we strive to be a net zero business by 2045
<b>Water, waste and non-compliance</b>			
Total water use	<b>335,512m<sup>3</sup></b>	317,760m <sup>3</sup>	Effectively monitor, manage and reduce our water use and waste production, as well as our incidence of environmental non-compliance
Total waste generated	<b>15,161 tonnes</b>	18,686 tonnes	
Environmental non-compliance <sup>(xvi)</sup>	<b>12</b>	22	

Reporting is based on operator boundary which is the more commonly used approach for reporting environmental matters, and includes all emissions from our shipping activities relating to LNG alongside the retained Spirit Energy assets in the UK and Netherlands. Non-operated nuclear emissions are excluded.

† Included in DNV's independent limited assurance report. See page 249 or [centrica.com/assurance](https://centrica.com/assurance) for more.

- (i) Comprises scope 1 and scope 2 emissions as defined by the Greenhouse Gas Protocol.
- (ii) Comprises UK 547,542tCO<sub>2</sub>e and non-UK 1,133,933tCO<sub>2</sub>e.
- (iii) Comprises UK 726,891tCO<sub>2</sub>e and non-UK 1,282,994tCO<sub>2</sub>e.
- (iv) Restated due to availability of improved data.
- (v) Included in DNV's limited assurance scope for the Annual Report 2022. See [centrica.com/performanceandreporting](https://centrica.com/performanceandreporting) for our 2022 Basis of Reporting and DNV's 2022 Assurance Statement. Previous figures included in DNV's limited assurance scope include total GHG emissions 2,007,655tCO<sub>2</sub>e, scope 1 1,994,153tCO<sub>2</sub>e and scope 2 13,502tCO<sub>2</sub>e.
- (vi) Comprises UK 542,244tCO<sub>2</sub>e and non-UK 1,132,585tCO<sub>2</sub>e.
- (vii) Comprises UK 722,810tCO<sub>2</sub>e and non-UK 1,281,883tCO<sub>2</sub>e.
- (viii) Market-based, comprises UK 5,299tCO<sub>2</sub>e and non-UK 1,348tCO<sub>2</sub>e. Location-based is 17,041tCO<sub>2</sub>e.
- (ix) Market-based, comprises UK 4,082tCO<sub>2</sub>e and non-UK 1,111tCO<sub>2</sub>e. Location-based is 16,275tCO<sub>2</sub>e.
- (x) Includes emissions from the following scope 3 categories defined by the Greenhouse Gas Protocol: purchased goods and services, capital goods, fuel and energy-related activities, waste generated in operations, business travel, employee commuting, upstream and downstream transportation and distribution, use of sold product and investments. All emissions are calculated in line with the methodologies set out by the Greenhouse Gas Protocol's technical guidance, apart from working from home emissions which are based on methodology set out in EcoAct's homeworking emissions whitepaper. Other categories spanning upstream leased assets, processing of sold products, end-of-life treatment of sold product, downstream leased assets and franchises, are not included because they are not relevant to our business.
- (xi) Carbon intensity of revenue is employed as our intensity measure because it is the most meaningful intensity measure for our diverse business and is the most widely used and understood measure for climate-related stakeholders such as CDP. Based on statutory revenue.
- (xii) Comprises UK 25tCO<sub>2</sub>e/£m and non-UK 267tCO<sub>2</sub>e/£m.
- (xiii) Comprises UK 42tCO<sub>2</sub>e/£m and non-UK 203tCO<sub>2</sub>e/£m.
- (xiv) Comprises UK & Offshore 1,654,616,311kWh and non-UK energy use 5,783,036,069kWh.
- (xv) Comprises UK & Offshore 2,394,832,533kWh and non-UK energy use 6,652,264,514kWh.
- (xvi) Includes breaches of environmental authorisation including permit, licence and consent coupled with wider environmental legislation where we are either required to notify the regulator or where an authority or regulator is involved. The majority of incidents relate to offshore activities.

## GLOSSARY

\$	Refers to US dollars unless specified otherwise
2P reserves	Proven and probable reserves
Acas	The Advisory, Conciliation and Arbitration Service is an independent public body that receives funding from the UK Government to provide employees and employers with free impartial advice on workplace rights and to help resolve disputes
AGM	Annual General Meeting
AIP	Annual Incentive Plan
bcf	Billion cubic feet
CFD	Climate-Related Financial Disclosure
CHP	Combined heat and power
CO <sub>2</sub> e	Universal unit of measurement of the global warming potential (GWP) of greenhouse gases (GHG) expressed in terms of the GWP of one unit of CO <sub>2</sub> e (carbon dioxide equivalent)
CPI	Consumer Price Index
CSS	Consolidated Segmental Statement
CUPS DB	Centrica Unapproved Pension Scheme defined benefit
CUPS DC	Centrica Unapproved Pension Scheme defined contribution
Data analytics	The process of examining data sets to draw conclusions and insights about the information they contain
EBITDA	Earnings before interest, tax, depreciation and amortisation
EBT	Employee Benefit Trust
EP	Economic profit
EPS	Earnings per share
ESG	Environmental, Social & Governance
Ethnically diverse	Colleagues from a Black, Asian, Mixed or other ethnic background
EV	Electric vehicle
EU	European Union
FCA	Financial Conduct Authority
FCF	Free cash flow
FRS	Financial Reporting Standards
GDPR	General Data Protection Regulation
GHG	Greenhouse gas emissions
GM	Gross margin
GMB	Trade union
Green jobs	Jobs that have a direct positive impact on the planet
GW	Gigawatt
GWh	Gigawatt hours
IAS	International Accounting Standards
IFRS	International Financial Reporting Standards
KPI	Key performance indicators
kWh	Kilowatt hour
LGBTQ+	Lesbian, Gay, Bisexual, Trans and Queer/Questioning plus. The 'plus' is inclusive of other groups such as asexual, intersex and questioning

LNG	Liquefied natural gas
LTIFR	Lost time injury frequency rate
mmboe	Million barrels of oil equivalent
MThms	Million therms
Net zero	The point at which there is a balance between human-related carbon dioxide (CO <sub>2</sub> ) being emitted into the atmosphere and the CO <sub>2</sub> taken out
NGO	Non-governmental organisation
NPS	Net promoter score
Ofgem	The government regulator for gas and electricity markets in Great Britain
Paris Agreement	A global agreement to keep temperature rise well below 2°C above pre-industrial levels, and pursue efforts to limit the increase to 1.5°C
PP&E	Property, Plant and Equipment
ppt	Percentage point
Process safety	Process safety is concerned with the prevention of harm to people and the environment, or asset damage from major incidents such as fires, explosions and accidental releases of hazardous substances
PRA	Prudential Regulatory Authority
PRT	Petroleum Revenue Tax
PWR	Pressurised water reactor
RBD	Reconciliation by difference
ROC	Renewable Obligation Certificate
RPI	Retail Price Index
SASB	Sustainability Accounting Standards Board
SAYE	Save As You Earn
SESC	Safety, Environment and Sustainability Committee
SIP	Share Incentive Plan
tCO <sub>2</sub> e	Tonnes of carbon dioxide equivalent
T&Cs	Terms and Conditions
TCFD	Task Force on Climate-related Financial Disclosures
The Company	Centrica plc
The Group	Centrica plc and all of its subsidiary entities
TRIFR	Total recordable injury frequency rate
TSR	Total shareholder return
TWh	Terawatt hour
UAOCF	Underlying adjusted operating cash flow
Under-represented groups	A person or group of people who are insufficiently or inadequately represented in society such as women apprentices or those who are ethnically diverse, have a disability, are LGBTQ+ or carers
VIU	Value in use
WBCSD	World Business Council for Sustainable Development
WRI	World Resources Institute



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Further when considering the information contained in, or referred to in this Annual Report and Accounts, please note that profit and inventory from Rough operations are reported under Centrica Energy Storage Limited for presentational purposes only. Centrica Energy Storage Limited does not produce, supply or trade gas, except to the extent necessary for the efficient operation of the storage facility. In accordance with the Gas Act 1986, such production, supply and trading of gas is carried out wholly independently of Centrica Energy Storage Limited by other Centrica group companies.

Certain figures shown in this announcement were rounded in accordance with standard business rounding principles and therefore there may be discrepancies.



**Centrica plc**

Registered office:  
Millstream  
Maidenhead Road  
Windsor  
Berkshire  
SL4 5GD

Company registered  
in England and Wales  
No. 3033654

[centrica.com](https://centrica.com)

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# Appendix B – Sample M & V Report



# Cortland County, New York

## Year 3 Measurement and Verification Report

[REDACTED]  
Project Director  
3 Rosell Dr, Ballston Lake, NY

[REDACTED]  
[REDACTED]

[REDACTED]  
Senior Energy Engineer  
3 Rosell Dr, Ballston Lake, NY

[REDACTED]  
[REDACTED]

**centrica**  
Business Solutions

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## **1.0 Executive Summary**

### **1.1 Project Overview**

Centrica Business Solutions (Formerly SmartWatt Energy) completed a Utility Energy Service Contract (UESC) through National Grid at various facilities owned by Cortland County. An Investment Grade Audit was completed by Centrica leading to the Utility Energy Service Contract totaling \$4,642,872. This was adjusted from the original IGA proposal of \$5,020,470 due to the removal of the Jail building from the original scope of work. Substantial Completion documentation for the project was completed on November 30<sup>th</sup> 2017.

This report documents the savings achieved in one complete year of energy savings based on the period from December 2019 to November 2020 which represents the third complete year of savings in the term.

### **1.2 Summary of Guaranteed and Verified Savings**

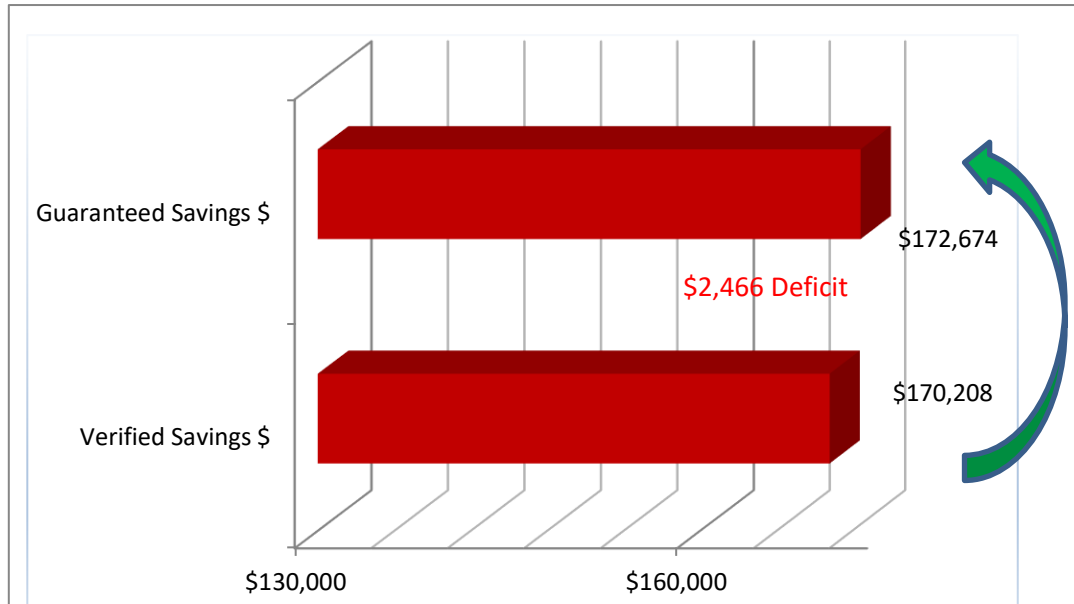
This project was executed through a Utility Energy Service Contract with a guaranteed annual utility cost savings of \$179,303 in Year 3 of the term. The agreed to annual Operations & Maintenance (O&M) cost savings is \$116,752 for a total annual cost savings of \$305,853. The figure on the following page represents a comparison of energy cost savings from the guaranteed amount to the verified savings through the M&V plan included in the IGA for Year 3 of the Term.

The verified savings are completed using Option A of the IPMVP. This method isolates each measure as called out in the M&V plan of the IGA.

#### **NOTE:**

During Year 3 of the project term, the building controls system has been adjusted by the County to reflect a change in the schedules and set-point temperatures throughout that vary from the values agreed upon as part of the Measurement and Verification plan. Due to this change, there is a savings deficit for Year 2 of \$2,466. If the schedules and setpoints are adhered to as agreed in the Measurement and Verification Plan, the County should expect a net surplus of approximately \$12,831/yr. This would be a result of all the measures in the project.

**Figure 1: Cost Savings Comparison**



The cost savings are based on units of energy (kWh of electricity, therms, of natural gas) The baseline utility rates, as described in Section 2.3, are applied to the verified energy savings to determine the verified cost savings. The savings summary resulting from the installation of the FIMs is presented in **Figure 1**. The total annual verified utility cost savings is \$170,208. This amount is short of the SmartWatt utility savings guarantee stated in the IGA M&V Plan of \$172,674/yr. This results in a deficit in savings of \$2,466/yr. The summary below displays a comparison of the guaranteed savings and verified savings following project completion. A complete description of the savings for each FIM is found in **Section 2** of this report.



**Table 1: Guaranteed Annual Savings Summary**

FIM #	FIM Description	Guaranteed Energy/Water Reduction			Cost Savings			
		Electric (kWh/yr)	Natural Gas (Therm/yr)	Water Savings (kGal/yr)	Electricity (\$/yr)	Natural Gas (\$/yr)	Water (\$/yr)	Total Cost Savings (\$/yr)
1	Lighting Improvements	316,116	-	-	\$34,490	-	-	\$34,490
2	Building Envelope Improvements	12,737	19,959	-	\$1,370	\$17,198	-	\$18,569
3	Window Sealing at County Office Building	5,711	3,995	-	\$603	\$3,376	-	\$3,978
4	Replace Windows at Highway Garage	-	332	-	-	\$277	-	\$277
5	Window Replacement at Courthouse	11,598	14,021	-	\$1,417	\$11,626	-	\$13,043
6	Window Tinting at County Office Bldg.	17,398	2,015	-	\$1,831	\$1,703	-	\$3,534
7	HVAC Upgrades at PSB	53,867	3,285	-	\$5,169	\$2,725	-	\$7,893
8	Cooling Tower Replacement at PSB	9,790	-	-	\$939	-	-	\$939
9	Boiler Replacement at PSB	-	2,478	-	-	\$2,055	-	\$2,055
10	HVAC Upgrades at COB	144,379	14,481	-	\$15,195	\$12,236	-	\$27,431
11	Replace Roof Top Units at COB	59,847	-	-	\$6,299	-	-	\$6,299
12	Install New Hot Water Heater at COB	-1,950	-	-	\$(205)	-	-	\$(205)
13	HVAC Upgrades at Courthouse	17,777	46,355	-	\$2,164	\$38,440	-	\$40,605
14	Insulate Basement Piping at Courthouse	-	855	-	-	\$709	-	\$709
15	Replace Suite 301 AC Unit at Courthouse	5,862	-	-	\$714	-	-	\$714
16	Water Conservation	-	682	525	-	\$592	\$4,330	\$4,923
17	Replace Transformers	68,395	-	-	\$7,422			
<b>Total</b>		<b>721,528</b>	<b>108,460</b>	<b>525</b>	<b>\$77,407</b>	<b>\$90,937</b>	<b>\$4,330</b>	<b>\$172,674</b>

**Table 2: Verified Annual Savings Summary**

FIM #	FIM Description	Verified Energy/Water Reduction			Cost Savings			
		Electric (kWh/yr)	Natural Gas (Therm/yr)	Water Savings (kGal/yr)	Electricity (\$/yr)	Natural Gas (\$/yr)	Water (\$/yr)	Total Cost Savings (\$/yr)
1	Lighting Improvements	339,439	-	-	\$37,035	-		\$37,035
2	Building Envelope Improvements	12,737	19,959	-	\$1,364	\$19,431		\$20,796
3	Window Sealing at County Office Building	5,711	4,262	-	\$601	\$3,601		\$4,202
4	Replace Windows at Highway Garage	-	332	-	-	\$289		\$289
5	Window Replacement at Courthouse	11,598	14,021	-	\$1,412	\$11,627		\$13,039
6	Window Tinting at County Office Bldg.	17,398	2,015	-	\$1,831	\$1,703		\$3,534
7	HVAC Upgrades at PSB	48,705	1,116	-	\$4,623	\$926		\$5,549
8	Cooling Tower Replacement at PSB	11,599	-	-	\$1,101	-		\$1,101
9	Boiler Replacement at PSB	-	2,439	-	-	\$2,023		\$2,023
10	HVAC Upgrades at COB	150,084	13,577	-	\$15,795	\$11,471		\$27,267
11	Replace Roof Top Units at COB	63,059	-	-	\$6,637	-		\$6,637
12	Install New Hot Water Heater at COB	-1,950	-	-	\$(205)	-		\$(205)
13	HVAC Upgrades at Courthouse	10,668	40,619	-	\$1,299	\$33,684		\$34,983
14	Insulate Basement Piping at Courthouse	-	855	-	-	\$709		\$709
15	Replace Suite 301 AC Unit at Courthouse	7,289	-	-	\$887	-		\$887
16	Water Conservation	-	685	527	-	\$595	\$4,347	\$4,942
17	Replace Transformers	68,486	-	-	\$7,422			\$7,422
<b>Total</b>		<b>744,824</b>	<b>99,880</b>	<b>527</b>	<b>\$79,803</b>	<b>\$86,058</b>	<b>\$4,347</b>	<b>\$170,208<sup>1</sup></b>

<sup>1</sup> Year 2 savings results in a deficit of \$2,466.

## 2.0 Project Background

### 2.1 Facility Improvement Measure Overview

SmartWatt Energy completed seventeen FIMs as part of an energy efficiency project. These measures were described in the Investment Grade Audit and subsequent UESC contract that was signed in April 2016. Substantial completion for the project was completed on November 30<sup>th</sup>, 2017. A summary of each of the FIMs is provided below:

- FIM 1: Lighting Upgrades: Interior and exterior lighting replacement with LED fixtures.
- FIM 2: Building Envelope Improvements
- FIM 3: Window Sealing at County Office Building
- FIM 4: Window Replacement at Highway Garage
- FIM 5: Window Replacement at the Courthouse
- FIM 6: Window Tinting at the County Office Building
- FIM 7: HVAC Upgrades at the PSB
- FIM 8: Cooling Tower Replacement at the PSB
- FIM 9: Boiler Replacements at the PSB
- FIM 10: HVAC Upgrades at the COB
- FIM 11: Replace Roof Top Units at the COB
- FIM 12: Install New Hot Water Heater at COB
- FIM 13: HVAC Upgrades at the Courthouse
- FIM 14: Insulate Basement Piping at the Courthouse
- FIM 15: Replace Suite 301 AC Unit at the Courthouse
- FIM 16: Water Conservation
- FIM 17: Transformer Upgrade

### 2.2 Baseline Utility Usage

**Table 3** provides a summary of the baseline energy usage prior to the Energy Performance Contract. The baseline period is January 1<sup>st</sup> 2014 – December 31<sup>st</sup>, 2014. Costs are determined by applying the baseline utility rates as defined in Section 2.3.

**Table 1: Baseline Utility Usage and Cost Summary**

Facility	Electric Usage (kWh/yr)	Natural Gas Usage (Therm/yr)	Water Usage (kGal/yr)
County Office Building	1,059,920	59,014	626
Jail / PSB / Courthouse	879,840	103,348	3,957
Cleary Building	61,040	2,186	37
DMV	12,144	3,024	64
Highway Complex	62,038	4,198	26
Recycle Center	338,760	55,609	174
<b>Total</b>	<b>2,413,742</b>	<b>227,380</b>	<b>4,884</b>

Baseline Electric Cost (\$/yr)	Baseline Natural Gas Cost (\$/yr)	Baseline Water Cost (\$/yr)	Total Baseline Utility Cost (\$/yr)
\$250,620	\$185,261	\$38,355	\$474,236

### 2.3 Escalated Year 2 Utility Rates

**Table 4** provides a summary of the baseline energy rates as presented in Schedule D of the Energy Performance Contract. These values are applied to the guaranteed and verified utility usage savings to determine the annual cost savings for Year 2 of the term.

**Table 2: Escalated Year 2 Utility Rates**

Building	Electricity Distribution (\$/kWh)	Electricity Supply (\$/kWh)	Electricity Total (\$/kWh)
COB	\$0.039	\$0.066	\$0.105
Jail/PSB	\$0.029	\$0.066	\$0.095
Courthouse	\$0.056	\$0.066	\$0.122
Recycle Center	\$0.075	\$0.066	\$0.141
Cleary Building	\$0.087	\$0.066	\$0.153
DMV	\$0.057	\$0.066	\$0.123
Highway Garage	\$0.043	\$0.066	\$0.109

Building	Natural Gas Distribution (\$/therm)	Natural Gas Supply (\$/therm)	Natural Gas Total (\$/Therm)
COB	\$0.216	\$0.629	\$0.845
Jail/PSB	\$0.206	\$0.624	\$0.829
Courthouse <sup>2</sup>	\$0.206	\$0.624	\$0.829
Recycle Center	\$0.426	\$0.629	\$1.055
Cleary Building	\$0.419	\$0.629	\$1.048
DMV	\$0.410	\$0.626	\$1.036
Highway Garage	\$0.234	\$0.631	\$0.865

Building	Water & Sewer (\$/kGal)
COB	\$8.15
Jail	\$7.93
Courthouse	\$8.15
Recycle Center	\$13.33
Cleary Building	\$8.41
DMV	\$9.54
Highway Garage	\$8.97
PSB (Water Only)	\$8.19

<sup>2</sup> Shares Gas Meter with the Jail/PSB

## 3.0 Verified Savings Analysis

Verified utility usage savings are described in the following section for each FIM. The utility rates as described in Section 2.3 are applied to determine the annual cost savings. **Table 2** provides a summary of the verified savings with the appropriate costs applied. Adjustments made to the measured energy use is discussed in further detail within the FIM write-up.

### 3.1 FIM 1 – Lighting Upgrades

Pre-Installation		
Pre-Installation Energy Use IGA (kWh/yr)	Pre-Installation Energy Use - Verified <sup>3</sup>	Variance (kWh/yr)
647,910	639,531	8,379

Post - Installation		
Post - Installation IGA Energy Use (kWh/yr)	Post - Installation Verified Energy Use (kWh/yr)	Variance (kWh/yr)
331,794	300,091	(31,703)

Energy Savings		
Guaranteed Energy Savings (kWh/yr)	Verified Energy Savings (kWh/yr)	Variance from Guarantee
316,116	339,439	23,323

#### Overview

SmartWatt completed a lighting upgrade that included replacing existing fluorescent lighting with new LED lighting throughout the County Buildings. The measurement and verification plan outlined in the IGA required measurements for this FIM to be performed in Year 1 only. Therefore, the measurements made below are representative from Year 1 of the project term and reflected accordingly.

#### Savings Measurement Procedure

IPMVP Option A (Retrofit Isolation) was utilized for energy savings verification for this measure. The key parameter measured was power draw for a representative sample of post installation fixtures. The table below represents four fixture types that account for 47% of the total energy savings. Sample sizes and the results for these fixture types assume a coefficient of variation (Cv) of 0.2, 20% Precision, and 80% Confidence. The voltage and amperage were measured on site. A power factor of 1 was used. The wattage can be calculated by multiplying the voltage, amperage, and power factor together ( $V \times A \times PF$ ).

<sup>3</sup> Includes baseline fixture wattage measurements.



The table below represents the fixture sample size needed to meet the above-mentioned coefficient of variation, precision, and confidence factors.

Fixture Type	Quantity	Sample Size
RL - 2 LED tube	1,119	4
RL - 2 LED tube - low powered	735	16
RL A lamp	317	10
RL - 3 LED tube - low powered	496	13
<b>Total</b>	<b>2,667</b>	<b>40</b>

The pre-installation verified baseline was used during the first year of the reporting period to reflect consistency and to be conservative in the savings calculations.

**Table 3: Pre-Installation Fixture Measurement**

Building	Fixture Location	Sample Quantity	Fixture Type	Measured Amperage	Measured Voltage	Verified Wattage
Office Building	121 - Office #1	1	RKTF2F28N	0.16	277	44.3
Office Building	121 - Office #2	1	RKTF2F28N	0.15	277	41.6
Office Building	100- 1st Floor Hallways	2	RKTF2F28N	0.16	277	44.3
Office Building	215- Office #1	1	RKTF2F28N	0.15	276.7	41.5
Office Building	215 - Office #2	1	RKTF2F28N	0.15	279	41.9
DMV	Cash Room	1	VN4/2F32/E	0.16	276.9	44.3
DMV	Mens Room	1	TF/2F32/E	0.16	276.4	44.2
Jail	18- Lobby	1	S4/2F32/E	0.15	280	42
Courthouse	35-Office	1	W4/2F32/E	0.14	280	39.2
Office Building	103-105 Open Area	4	RB2F28LPS	0.16	279	44.6
Office Building	GYM	2	RB2F28LPS	0.15	278	41.7
Office Building	Bathroom next to B12A	1	RB2F25L	0.15	279.3	41.9
Office Building	DSS Storage Near Gym	3	RB2F28L	0.16	278.3	44.5
Office Building	230 - Open Area	2	RB3F28L	0.27	279.3	75.4
Office Building	240 - Music Room	2	RB3F28L	0.27	274.1	74
Office Building	222-Open Area	2	RB3F28L	0.28	278	77.8
Office Building	131-129 Open Area	2	RB3F28L	0.26	276	71.8
Office Building	B18- Cafeteria	2	RB3F28L	0.28	277	77.6

Building	Fixture Location	Sample Quantity	Fixture Type	Measured Amperage	Measured Voltage	Verified Wattage
Office Building	310 - County Legislative Chambers	1	RLPAR40DIM	0.35	112	39.2
Office Building	Auditorium	2	I/100	0.81	117	94.8
HB3	Tiny Bathroom	1	I/60	0.47	110	51.7
HB1	Stairs	1	CF/13TWIST	0.2	110	22
HB1	Mens Room	1	I/40	0.36	110	39.6
Cleary Bld	bathroom 1	1	I/100	0.83	116	96.3
Courthouse	Judges Chambers	2	I/50	0.41	111	45.5
Courthouse	Attic	1	CF26W	0.18	115	20.7

**Table 4: Post Installation Lighting Measurements**

Building	Fixture Location	Sample Quantity	Fixture Type	Measured Amperage	Measured Voltage	Verified Wattage
Office Building	121 - Office #1	1	RL - 2 LED tube-county office - low powered	0.09	276	24.8
Office Building	121 - Office #2	1	RL - 2 LED tube-county office - low powered	0.09	278	25
Office Building	100- 1st Floor Hallways	2	RL - 2 LED tube-county office - low powered	0.08	277	22.2
Office Building	215- Office #1	1	RL - 2 LED tube-county office - low powered	0.09	277	24.9
Office Building	215 - Office #2	1	RL - 2 LED tube-county office - low powered	0.1	279	27.9
DMV	Cash Room	1	RL - 2 LED tube	0.1	278	27.8
DMV	Mens Room	1	RL - 2 LED tube	0.09	277	24.9
Jail	18- Lobby	1	RL - 2 LED tube	0.10	279	27.9
Courthouse	35-Office	1	RL - 2 LED tube	0.09	280	25.2
Office Building	103-105 Open Area	4	RL - 2 LED tube-county office - low powered	0.09	278	25
Office Building	GYM	2	RL - 2 LED tube-county office - low powered	0.1	278	27.8
Office Building	Bathroom next to B12A	1	RL - 2 LED tube-county office - low powered	0.1	279	27.9
Office Building	DSS Storage Near Gym	3	RL - 2 LED tube-county office - low powered	0.09	279	25.1
Office Building	230 - Open Area	2	RL - 3 LED tube-county office - low powered	0.13	277	36.0
Office Building	240 - Music Room	2	RL - 3 LED tube-county office - low powered	0.14	276	38.6

Building	Fixture Location	Sample Quantity	Fixture Type	Measured Amperage	Measured Voltage	Verified Wattage
Office Building	222-Open Area	2	RL - 3 LED tube-county office - low powered	0.13	279	36.3
Office Building	131-129 Open Area	2	RL - 3 LED tube-county office - low powered	0.13	277	36.0
Office Building	B18- Cafeteria	2	RL - 3 LED tube-county office - low powered	0.14	277	38.8
Office Building	310 - County Legislative Chambers	1	RL A lamp	0.1	111	11.1
Office Building	Auditorium	2	RL A lamp	0.1	115	11.5
HB3	Tiny Bathroom	1	RL A lamp	0.1	112	11.2
HB1	Stairs	1	RL A lamp	0.1	112	11.2
HB1	Mens Room	1	RL A lamp	0.11	111	12.2
Cleary Bld	bathroom 1	1	RL A lamp	0.11	120	13.2
Courthouse	Judges Chambers	2	RL A lamp	0.11	113	12.4
Courthouse	Attic	1	RL A lamp	0.11	113	12.4

Baseline and post retrofit fixture wattages are provided in **Appendix 1** for each fixture type. Operating hours were determined through logged data and stipulated in the Measurement and Verification Plan. A summary of the hours determined, and occupancy sensor savings by space type are listed in the tables below. The electric rates for this savings analysis are based on the baseline utility rates as described in Section 2.3.

**Table 5: Lighting Operating Hours by Space Type**

Building	Space	Hours / Year
Office Building	Break / Kitchen	1,195
Office Building	Conference	1,377
Office Building	Corridor	3,509
Office Building	Courtroom	808
Office Building	Office	2,700
Office Building	Open Office	2,712
Office Building	Restroom	1,063
Office Building	Closet / Storage / Gym	521
Cleary Building	Break / Kitchen	1,195
Cleary Building	Conference	1,377
Cleary Building	Corridor	3,509
Cleary Building	Office	2,700
Cleary Building	Restrooms	1,063
Cleary Building	Storage / Closet	521
Courthouse	Break / Kitchen	1,195
Courthouse	Conference	1,377

Building	Space	Hours / Year
Courthouse	Corridor	3,509
Courthouse	Courtroom	808
Courthouse	Office	2,700
Courthouse	Open Office	2,712
Courthouse	Restrooms	1,063
Courthouse	Storage / Closet	521
DMV	Office	2,700
DMV	Break / Kitchen / DMV	8,760
DMV	Corridor	3,509
DMV	Storage / Closet	521
Highway Buildings	Office	2,700
Highway Buildings	Break / Kitchen	1,195
Highway Buildings	Corridor	3,509
Highway Buildings	Garage	1,859
Highway Buildings	Restrooms	1,063
Highway Buildings	Storage / Closet	521
Public Safety Building	Conference	1,172
Public Safety Building	Corridor	8,760
Public Safety Building	Office	2,972
Public Safety Building	Mechanical / Evidence	8,760
Public Safety Building	Women's Restroom 2 <sup>nd</sup> Floor	1,063
Public Safety Building	Restrooms	6,682
Public Safety Building	Storage / Closet	521
Recycle Center	Production / Office / Hallways	2,529
Recycle Center	Storage / Closet	521

**Table 6: Occupancy Sensor Hour Reduction Factor**

Building	Usage Group	% Reduction
Highway Department / Courthouse	Offices	73

Highway Department	Cubicle Office Space	80
Public Safety Building	Break Rooms	91
Jail	Conference Rooms	30
Highway Department / Courthouse	Wampsville Hwy Garage	60

The average post installation wattage measured for each like fixture type were applied to the “ $Watts_{post}$ ” variable in the equations below to calculate verified energy savings. The annual energy usage and cost savings are calculated using the following equations for each space.

$$Annual\ Energy\ Savings = Baseline\ Energy\ Usage - Post\ Retrofit\ Energy\ Usage$$

$$Baseline\ Energy\ Usage = Qty_{existing} \times Watts_{existing} \times Hrs_{existing} \times 1\ kW/1,000\ Watts$$

$$Post\ Retrofit\ Energy\ Usage = Qty_{post} \times Watts_{post} \times Hrs_{post} \times \% \text{ Reduction} \times 1\ kW/1,000\ Watts$$

$$Energy\ Cost\ Savings = Annual\ Energy\ Savings \times Electric\ Rate$$

Where,

$Qty_{existing}$  = Existing number of fixtures

$Watts_{existing}$  = Per fixture wattage of existing fixtures including lamps and ballasts, Watts

$Hrs_{existing}$  = Existing annual hours of operation, hours/yr

$Qty_{post}$  = Post retrofit number of fixtures from as-built documentation

$Watts_{post}$  = Per fixture wattage of post installation fixtures, Watts

$\% \text{ Reduction}$  = % Reduction in post installation hours where applicable

$Hrs_{post}$  = Post retrofit annual hours of operation, hours/yr

### 3.2 FIM 2 – Building Envelope Improvements

Pre-Installation	
Pre-Installation Energy Use (kWh/yr)	Pre-Installation Natural Gas Use (Therm/yr)
12,737	19,959

The post retrofit conditions verify that the total crack area was sealed and the energy losses were reduced to zero.

Energy Savings - Guarantee		Energy Savings - Verified		Variance from IGA Guarantee	
Electric (kWh/yr)	Natural Gas (Therm/yr)	Electric (kWh/yr)	Natural Gas (Therm/yr)	Electric (kWh/yr)	Natural (Therm/yr)
12,737	19,959	12,737	19,959	0	0

#### Overview

The measurement and verification plan outlined in the IGA required measurements for this FIM to be Performed in Year 1 only. Therefore, the measurements made below are representative from Year 1 of the project term and reflected accordingly

#### County Office Building

- 11 Single commercial doors weather-stripped (bronze anodized weather-stripping)
- 1 Double commercial door weather-stripped (bronze anodized weather-stripping)
- 1 Single commercial door weather-stripped, sweep only (bronze anodized weather-stripping)
- 1 Single commercial attic access door weather-stripped (bronze anodized weather-stripping)
- 1 Attic hatch/door weather-stripped, 12 linear feet (bronze anodized weather-stripping)
- Note: newly installed 2014 doors are not included in door weather-stripping
- 1 Overhead garage door weather-stripped, 32 linear feet
- 10 Roof top ventilators opened, dampers lubricated and perimeters sealed, 84 linear feet
- 9,400 Square feet of attic space air-sealed (seal pipe, duct, wire penetrations) and fiberglass batt insulation (R30) re-distributed continuously through-out space.

#### Courthouse

- 5 Single commercial doors weather-stripped (bronze anodized weather-stripping)
- 1 Single commercial attic access door weather-stripped



- 3 Double commercial doors weather-stripped (bronze anodized weather-stripping)

**Public Safety Building / Jail**

- 8 Single commercial doors weather-stripped (5 bronze anodized weather-stripping)
- 2 Single commercial roof access doors weather-stripped
- 10 Single commercial doors weather-stripped, secure areas (4 bronze anodized weather-stripping)
- 3 Roll-up garage doors weather-stripped, 132 linear feet

**Cleary Building**

- 4 Single commercial doors weather-stripped (2 bronze anodized weather-stripping)
- 1 Double commercial door weather-stripped (1 bronze anodized weather-stripping)

**DMV**

- 4 Single commercial doors weather-stripped
- 1 Double commercial doors weather-stripped
- 1 Roll-up garage door weather-stripped, 36 linear feet
- 1 Roof top ventilators opened, dampers lubricated and perimeters sealed, 4 linear feet

**Highway Garage Complex**

**HB1**

- 5 Single commercial doors weather-stripped
- 1 Mail slot opening in door weather-stripped (overlapping extra-large fin seal brush)
- 117' Roof/wall joint sealed (building addition)

**HB2**

- 3 Single commercial doors weather-stripped
- 4 Overhead garage doors weather-stripped, 212 linear feet

**HB3**

- 3 Single commercial doors weather-stripped

27 Overhead garage doors weather-stripped, 1,512 linear feet (bottom track extensions required for all)

**HB4**

11 Single commercial doors weather-stripped

1 Double commercial door weather-stripped

21 Overhead garage doors weather-stripped, 1,228 linear feet

15 Roof top ventilators opened, dampers lubricated and perimeters sealed, 60 linear feet

**Recycle Center**

1 Single commercial door weather-stripped

1 Double commercial door weather-stripped

The following materials have been specified for use in the weatherization of Cortland County. Cut sheets for these materials are provided in Appendix C of the IGA.

**Single/Double Door Weather-Stripping**

ECP Aluminum Door Carrier (QDS 650 Retainer) (mill finish and dark bronze anodized)

Schlegel QLON-QDS 650 Polyethylene Clad Urethane Foam Gasket

Schlegel QLON-QFS 375 Polyethylene Clad Urethane Foam Gasket w/ adhesive backer

3M Super 77 Multipurpose Spray Adhesive

Schlegel Door Sweep with Fin Seal

DAP Alex Plus Acrylic Latex Caulk Plus Silicone (clear)

**Overhead/Roll-Up Garage Door Weather-Stripping**

Sealeze Nylon Brush Weather-Seal with EPDM Fin Seal Gasket

Action Industries Aluminum Bottom Overhead Door Retainer ("T" Rubber Retainer)

Action Industries Bottom "T" Rubber Seal

DAP Alex Plus Acrylic Latex Caulk plus Silicone (clear)

**Roof Top Ventilator Sealing**

WD40

DAP All Purpose Indoor/Outdoor Silicone

Convenience Products Touch'nSeal All-season 1-component Foam

#10-3-1/2" Hexagonal Self Drilling Sheet Metal Screws (re-securing units to curb)

#### Roof/Wall Joint and Soffit Joint Air-Sealing

Convenience Products Touch'nSeal CPDS 750FR (2 part foam)

Dow Thermax Sheathing FSK (1/2", 1") (used as insulated backer for joint spans larger than 4")

#### Stipulated Parameters

Stipulated parameters were based on equipment nameplates, drawings, and engineering estimates as defined in the table that follows.

Building Envelope Upgrades	
% Infiltration to Exfiltration	50%
Wind Velocity	8.7 mph
Heating Efficiency	Varies by Building See Appendix B of IGA
Cooling Efficiency	Varies by Building See Appendix B of IGA
Outside Air Temperature	BIN Maker Pro for Syracuse, NY
Heating and Cooling Season Hours	BIN Maker Pro for Syracuse, NY
Supply Air Enthalpy	Psychometric Chart
Outside Air Enthalpy	BIN Maker Plus for Syracuse, NY
Stack Coefficient	Table in Appendix B of IGA
Wind Coefficient	Table in Appendix B of IGA
Shielding Class	Table in Appendix B of IGA

#### Post FIM Measurement Procedure

Visual Inspection of doors and gaps to ensure cracks are eliminated. Confirmation of initial scope of work was verified on site to confirm project was installed as closely designed.

#### Savings Measurement Procedure

Energy savings are calculated with an energy model based on the reduction in infiltration. The calculation is provided in Appendix B of the IGA report.

$$\text{Annual Savings} = \text{Baseline Infiltration Energy Loss} - \text{Post Installation Energy Loss}$$

$$\text{Annual \$ Savings} = \text{Annual NG Savings} \times \frac{\$}{\text{Therm}} \text{Rate} + \text{Annual kWh Savings} \times \frac{\$}{\text{kWh}} \text{Rate}$$

### 3.3 FIM 3 – Window Sealing at the County Office Building

SmartWatt has sealed 42 ft<sup>2</sup> of window casings in the County Office Building. During construction, 218 ft<sup>2</sup> of window casing space was removed from the original scope of 260 ft<sup>2</sup>. Instead SmartWatt has included 1,040 ft<sup>2</sup> of floor slab insulation under the tunnel leading to the Courtyard area of the County Office Building. The change in scope of work was considered slightly positive in savings comparison and is reflected below.

SmartWatt has also sealed and caulked 6,246 ft of window perimeter in the County Office Building and was included in the as-built package and accounted for in the calculations.

The pre-installation numbers in the tables below reflect the original baseline alone with the adjusted baseline to include the other buildings in the scope of work.

Pre-Installation Energy / Fuel Use			
IGA Electric (kWh/yr)	IGA Natural Gas (Therm/yr)	Adjusted Electric (kWh/yr)	Adjusted Natural Gas (Therm/yr) <sup>4</sup>
5,711	3,995	5,711	4,326

Post – Installation (Electric)		
Post – Installation IGA Electric Usage (kWh/yr)	Post - Installation Verified Energy Use (kWh/yr)	Variance (kWh/yr)
0	0	0

Post – Installation (Gas)		
Post – Installation IGA Natural Gas (Therm/yr)	Post - Installation Verified Energy Use (Therm/yr)	Variance (Therm/yr)
0	(64)	(64)

Energy Savings - Guarantee		Energy Savings - Verified		Variance from IGA Guarantee	
Electric (kWh/yr)	Natural Gas (Therm/yr)	Electric (kWh/yr)	Natural Gas (Therm/yr)	Electric (kWh/yr)	Natural (Therm/yr) <sup>5</sup>
5,711	3,995	5,711	4,262	0	267

<sup>4</sup> Reflects scope of work change that took place during construction.

<sup>5</sup> Change reflects net savings from installation of the floor slab insulation.

## Overview

Implementation of this FIM included the following:

- Removed trim and insulated casing on 42 ft<sup>2</sup> of windows
- Install insulation on 1,040 ft<sup>2</sup> of floor slab.
- Install window caulk on 6,246 linear feet of window perimeter.

The measurement and verification plan outlined in the IGA required measurements for this FIM to be Performed in Year 1 only. Therefore, the measurements made below are representative from Year 1 of the project term and reflected accordingly.

## Stipulated Parameters

Stipulated parameters were based on current equipment nameplates, drawings, and engineering estimates as defined in the table that follows.

Window Sealing Upgrades	
% Infiltration to Exfiltration	50%
Wind Velocity	8.7 mph
Size of Air Gap	1/32"
Total Gap Size	16.3 ft2
Heating Efficiency	92%
Cooling Efficiency	0.8 kW/ton
Space Heating Temperature	Occupied 70°F, Unoccupied 69°F
Space Cooling Temperature	Occupied 74°F, Unoccupied 78°F
Outside Air Temperature	BIN Maker Pro for Syracuse, NY
Heating and Cooling Season Hours	BIN Maker Pro for Syracuse, NY
Supply Air Enthalpy	Psychometric Chart
Outside Air Enthalpy	BIN Maker Pro for Syracuse, NY
Stack Coefficient	Table in Appendix B of the IGA
Wind Coefficient	Table in Appendix B of the IGA
Shielding Class	Table in Appendix B of the IGA
Existing U-value	1.0
Proposed U-value	0.333

## Post FIM Measurement Procedure

SmartWatt has verified proper installation of the following items mentioned below:

- Verified square footage of window area for window trim and casing insulation.
- Verified linear foot of window perimeter sealing.
- Verified square footage of floor slab to be insulated.

## Saving Measurement Procedure

The post retrofit verified conditions confirm that the total crack area was sealed and the energy losses associated with window infiltration were reduced to zero. The post installation window joint and floor slab

insulation is calculated by an increase in R-value from the baseline to verified installation. The calculation method is provided in **Appendix B** of the IGA.



### 3.4 FIM 4 – Replace Windows at the Highway Garage

SmartWatt has replaced four windows in the lounge area of Highway Building three with new high efficiency windows. Savings were associated with a reduction in infiltration as well as thermal losses.

Pre-Installation
Pre-Installation Gas Use (Therm/yr)
411

Post - Installation		
Post – Installation IGA Natural Gas (Therm/yr)	Post - Installation Verified Natural Gas (Therm/yr)	Variance (Therm/yr)
79	79	0

Energy Savings		
Guaranteed NG Savings (Therm/yr)	Verified NG Savings (Therm/yr)	Variance from Guarantee (Therm/yr)
332	332	0

#### Overview

SmartWatt has replaced four large windows in the lounge area of Building HB3 with vinyl Alside units with Climatech TG2 glass. The new units have a U-value of 0.22, with a surface area of 142ft<sup>2</sup>. The measurement and verification plan outlined in the IGA required measurements for this FIM to be performed in Year 1 only. Therefore, the measurements made below are representative from Year 1 of the project term and reflected accordingly.

#### Stipulated Parameters

Stipulated parameters were based on equipment nameplates, drawings, and engineering estimates as defined in the table that follows.

Building Envelope Upgrades	
% Infiltration to Exfiltration	50%
Wind Velocity	8.7 mph
Size of Air Gap	1/32"
Total Gap Size	0.3 ft2
Heating Efficiency	80%
Cooling Efficiency	N/A
Space Heating Temperature	Occupied 70°F, Unoccupied 70°F
Space Cooling Temperature	N/A
Outside Air Temperature	BIN Maker Pro for Syracuse, NY
Heating and Cooling Season Hours	BIN Maker Pro for Syracuse, NY
Supply Air Enthalpy	Psychometric Chart

Outside Air Enthalpy	BIN Maker Pro for Syracuse, NY
Stack Coefficient	Table in Appendix B of the IGA
Wind Coefficient	Table in Appendix B of the IGA
Shielding Class	Table in Appendix B of the IGA
Existing U-value	1.0
Proposed U-value	0.22

### Post FIM Measurement Procedure

Visual Inspection of windows and confirmation of specified windows being installed.

### Savings Measurement Procedure

Energy savings are calculated with an energy model based on the reduction in infiltration and an increase in the R-value of the new windows. By reducing infiltration and thermal losses the rate of heat transfer is reduced, resulting in energy savings. To verify energy savings a spreadsheet model was developed to determine the leakage rate, thermal losses, heating energy savings, and cooling energy savings. The calculation is provided in **Appendix B** of the IGA.

$$Annual\ Savings = Baseline\ Infiltration\ Energy\ Loss - Post\ Installation\ Energy\ Loss$$

$$Annual\ \$\ Savings = Annual\ NG\ Savings \times \frac{\$}{Therm} Rate + Annual\ kWh\ Savings \times \frac{\$}{kWh} Rate$$

### 3.5 FIM 5 – Replace Windows at the Courthouse

SmartWatt has replaced 239 windows totaling 5,673 ft<sup>2</sup> in the County Courthouse.

Pre-Installation	
Pre-Installation Energy Use (kWh/yr)	Pre-Installation Natural Gas Use (Therm/yr)
11,598	17,904

The post retrofit conditions assume that the total crack area will be sealed and the energy losses will be reduced to zero for the infiltration and electric savings. There was thermal savings claimed in this measure and the post installation consumption is presented in the table below.

Post - Installation		
Post – Installation IGA Natural Gas (Therm/yr)	Post - Installation Verified Natural Gas (Therm/yr)	Variance (Therm/yr)
3,884	3,884	0

Energy Savings - Guarantee		Energy Savings - Verified		Variance from IGA Guarantee	
Electric (kWh/yr)	Natural Gas (Therm/yr)	Electric (kWh/yr)	Natural Gas (Therm/yr)	Electric (kWh/yr)	Natural Gas (Therm/yr)
11,598	14,021	11,598	14,021	0	0

#### Overview

SmartWatt has replaced the existing windows at the Courthouse. The measurement and verification plan outlined in the IGA required measurements for this FIM to be performed in Year 1 only. Therefore, the measurements made below are representative from Year 1 of the project term and reflected accordingly.

#### Stipulated Parameters

Stipulated parameters were based on equipment nameplates, drawings, and engineering estimates as defined in the table that follows.

Building Envelope Upgrades	
% Infiltration to Exfiltration	50%
Wind Velocity	8.7 mph
Size of Air Gap	Caulking 1/64", weather-stripping 3/32"
Total Gap Size	28.2 ft <sup>2</sup>
Heating Efficiency	80%
Cooling Efficiency	1.2 kW/ton
Space Heating Temperature	Occupied 70°F, Unoccupied 70°F

Space Cooling Temperature	Occupied 74°F, Unoccupied 74°F
Outside Air Temperature	BIN Maker Pro for Syracuse, NY
Heating and Cooling Season Hours	BIN Maker Pro for Syracuse, NY
Supply Air Enthalpy	Psychometric Chart
Outside Air Enthalpy	BIN Maker Pro for Syracuse, NY
Stack Coefficient	Table in Appendix B of the IGA
Wind Coefficient	Table in Appendix B of the IGA
Shielding Class	Table in Appendix B of the IGA
Existing U-value	0.9
Proposed U-Value	0.32

### Post FIM Measurement Procedure

Visual Inspection of windows and gaps to ensure cracks are eliminated. Confirmation of specified windows being installed.

### Savings Measurement Procedure

Energy savings are calculated with an energy model based on the reduction in infiltration and an increase in the R-value of the new windows. The calculation is provided in Appendix B of the IGA.

$$Annual\ Savings = Baseline\ Infiltration\ Energy\ Loss - Post\ Installation\ Energy\ Loss$$

$$Annual\ \$\ Savings = Annual\ NG\ Savings \times \frac{\$}{Therm} Rate + Annual\ kWh\ Savings \times \frac{\$}{kWh} Rate$$

### 3.6 FIM 6 – Install Window Tinting at the County Office Building

SmartWatt has installed 3,384 ft<sup>2</sup> of window tint on the south facing windows of the County Office Building.

Pre- Installation	
IGA Electric (kWh/yr)	IGA Natural Gas (Therm/yr)
31,068	4,160

Post – Installation (kWh)	
Post – Installation IGA Electric Usage (kWh/yr)	Post - Installation Verified Energy Use (kWh/yr)
13,670	13,670

Post – Installation (Therms)	
Post – Installation IGA Natural Gas (Therm/yr)	Post - Installation Verified Energy Use (Therm/yr)
2,145	2,145

Energy Savings - Guarantee		Energy Savings - Verified		Variance from IGA Guarantee	
Electric (kWh/yr)	Natural Gas (Therm/yr)	Electric (kWh/yr)	Natural Gas (Therm/yr)	Electric (kWh/yr)	Natural (Therm/yr)
17,398	2,015	17,398	2,015	0	0

#### Overview

Installation of this FIM included applying tinting to 3,384 ft<sup>2</sup> on the south side of the County Office Building. The measurement and verification plan outlined in the IGA required measurements for this FIM to be Performed in Year 1 only. Therefore, the measurements made below are representative from Year 1 of the project term and reflected accordingly.

#### Stipulated Parameters

Stipulated parameters were based on equipment nameplates, drawings, and engineering estimates as defined in the table that follows.

Building Envelope Upgrades	
% Solar Heat Rejection	56%
Cooling Equipment Efficiency	1.0 kW/ton
Solar Radiation Data Location, NREL	Syracuse, NY
Existing Window U Value	0.64 Btu/hr-ft <sup>2</sup> -°F
Window U Value Including Film	0.33 Btu/hr-ft <sup>2</sup> -°F

Heating Efficiency	92%
--------------------	-----

#### **Post FIM Measurement Procedure**

SmartWatt has verified proper installation of window film located throughout the County Office Building mentioned above. The energy calculations were based upon the verified square footage of window area covered.

#### **Saving Measurement Procedure**

Energy savings for this measure is based on a spreadsheet model that was developed to calculate the cooling load increase associated with solar gain and the heat loss associated with the existing windows. The spreadsheet uses average daily transmitted solar radiation from the National Renewable Energy Laboratory (NREL) for the Syracuse/Cortland area. Based on this solar radiation data the cooling gain was determined for the existing conditions and for the post retrofit conditions based on a 56% reduction in solar heat rejection. Savings for the heating season are determined by a BIN analysis to calculate the existing and proposed heat loss based on a reduction in window U value from 0.64 to 0.33 Btu/hr-ft<sup>2</sup>-F). The calculation is provided in **Appendix B** of the IGA.



### 3.7 FIM 7 – HVAC Upgrades at the Public Safety Building

Pre-Installation Energy Use	
Electric Usage (kWh/yr)	Natural Gas Usage (Therm/yr)
177,123	29,485

Post - Installation IGA		Post - Installation Verified		Variance	
Electric Usage (kWh/yr)	Natural Gas Usage (Therm/yr)	Electric Usage (kWh/yr)	Natural Gas Usage (Therm/yr)	Electric Usage (kWh/yr)	Natural Gas Usage (Therm/yr)
117,270	25,835	128,417	28,369	11,147	4,899

Energy Savings - Guarantee <sup>6</sup>		Energy Savings - Verified		Variance from IGA Guarantee	
Electric (kWh/yr)	Natural Gas (Therm/yr)	Electric (kWh/yr)	Natural Gas (Therm/yr)	Electric (kWh/yr)	Natural Gas (Therm/yr)
53,867	3,285	48,705	1,116	(5,162)	(2,169)

#### Overview

Installation of this FIM includes the following three upgrades:

- Replaced water source heat pumps with high efficiency heat pumps.
- Install VFDs on the loop transfer pumps.
- Install Building Automation System.

#### Stipulated Parameters

Stipulated parameters were based on current equipment nameplates and drawings. A summary of the stipulated parameters are listed in the tables below:

Water Source Heat Pumps	
Boiler Efficiency	0.94
Total Cooling Capacity	349 MBH
Total Heating Capacity	420 MBH
Adjusted Cooling Hours	2,146
Adjusted Heating Hours	2,219
Existing and Proposed EER and COP	Varies, see table in Appendix A of the IGA

<sup>6</sup> Includes a 0.90 safety factor as stated in original IGA proposal.

VFD Improvements	
Pump Load Factor	90%
Pump Efficiency	85.5%
Minimum Fluid Flow	30%
% Flow at each BIN	Appendix B of the IGA
VFD Efficiency	98%
Pump Load Factor	90%

BMS Installation (Setup/Setback and Temperature Correction)	
Boiler Efficiency	94%
Chiller Efficiency (kW/ton)	1.2
Ventilation Rate (cfm)	1,650
Window U Factor (Btu/(h*sqft*degF))	0.55
Wall U Factor (Btu/(h*sqft*degF))	0.06
Roof U Factor (Btu/(h*sqft*degF))	0.03
Window Area (ft2)	885
Wall Area (ft2)	25,920
Roof Area (ft2)	4,000
Air Infiltration Leakage (cfm/SqFt)	0.2
Building Solar Gain Heating Season (degF)	5
Building Solar Gain Cooling Season (degF)	10
Baseline Occ Heating Temperature (degF)	71.8
Baseline Unocc Heating Temperature (degF)	71.0
Proposed Occ Heating Temperature (degF)	70
Proposed Unocc Heating Temperature (degF)	72
Baseline Occ Cooling Temperature (degF)	74
Baseline Unocc Cooling Temperature (degF)	74
Proposed Occ Cooling Temperature (degF)	74
Proposed Unocc Cooling Temperature (degF)	78

### Savings Measurement Procedure

M&V Option A was selected to provide a cost-effective means to evaluate savings. The post-installation measurement parameters that were made are as follows:

- Visual inspection of installed WSHPs.
- Amperage draw of 4 WSHP units for a one-week period.
- Annual VFD speed measurements from EMS.
- Space Temperature.

### Energy Usage of 4 WSHP Units

SmartWatt energy engineers deployed CT loggers on the following units listed in the table below at the PSB Building for a 1-week period of time (1/19/19 – 1/22/19). The table below represents a summary of the measurements. These measurements were taken during Year 1 of the term and are reflected accordingly.

The post installation COP is calculated as follows:

HP Drawing ID	Model Number	Average Amperage (Measured)	Voltage	Heating Btuh	Calculated COP Used in Energy Calculations
6	50PEC12TXLECD1A1	3.39	208	13,300	5.53
15 <sup>7</sup>	50PEC09TXLECD1A1	-	-	-	-
19	50PEC09TXLECD1A1	2.84	208	10,800	5.74
23	50PEC09TXLECD1A1	2.49	208	10,800	5.74
33	50PEC09TXLECD1A1	2.63	208	10,800	5.74

$$COP = \frac{\text{Energy Output } (\frac{Btu}{hr})}{\text{Energy Input (Watts)}}$$

### Motor Power Draw on Loop Pumps

SmartWatt energy engineers retrieved trend data from the energy management system for the PSB loop transfer pumps. The post installation motor power is input into the energy savings calculations to verify post installation energy use. The minimum power is 18% in the bins of 45-60 °F. **Tables 9 and 10** illustrate the change in power from what was proposed in the IGA to the verified VFD Power for Year 2 of the term. Corrections were made during Year 2 to reflect slightly more energy savings than Year 1.

During the IGA, power of the motor is calculated using the fan laws. The power is a cubic function of the speed of the motor. This means that as the speed decreases, the fan power decreases by an exponential power of 3. During Year 2 of the term, the power was pulled directly from the building energy management system for each bin listed in the tables below. The % power was a direct relation of the average energy vs max energy use for each bin.

<sup>7</sup> Equipment logger failed upon initiation and therefore was not included in the EER calculation.

**Table 7: IGA Proposed VFD Power**

BIN Hours (°F)	Proposed Power with VFD (%)
95 to 100	102%
90 to 95	75%
85 to 90	52%
80 to 85	34%
75 to 80	21%
70 to 75	11%
65 to 70	5%
60 to 65	5%
55 to 60	5%
50 to 55	5%
45 to 50	5%
40 to 45	5%
35 to 40	5%
30 to 35	5%
25 to 30	10%
20 to 25	16%
15 to 20	25%
10 to 15	35%
5 to 10	48%
0 to 5	63%
-5 to 0	81%
-10 to -6	102%

**Table 8: Year 2 Verified VFD Power**

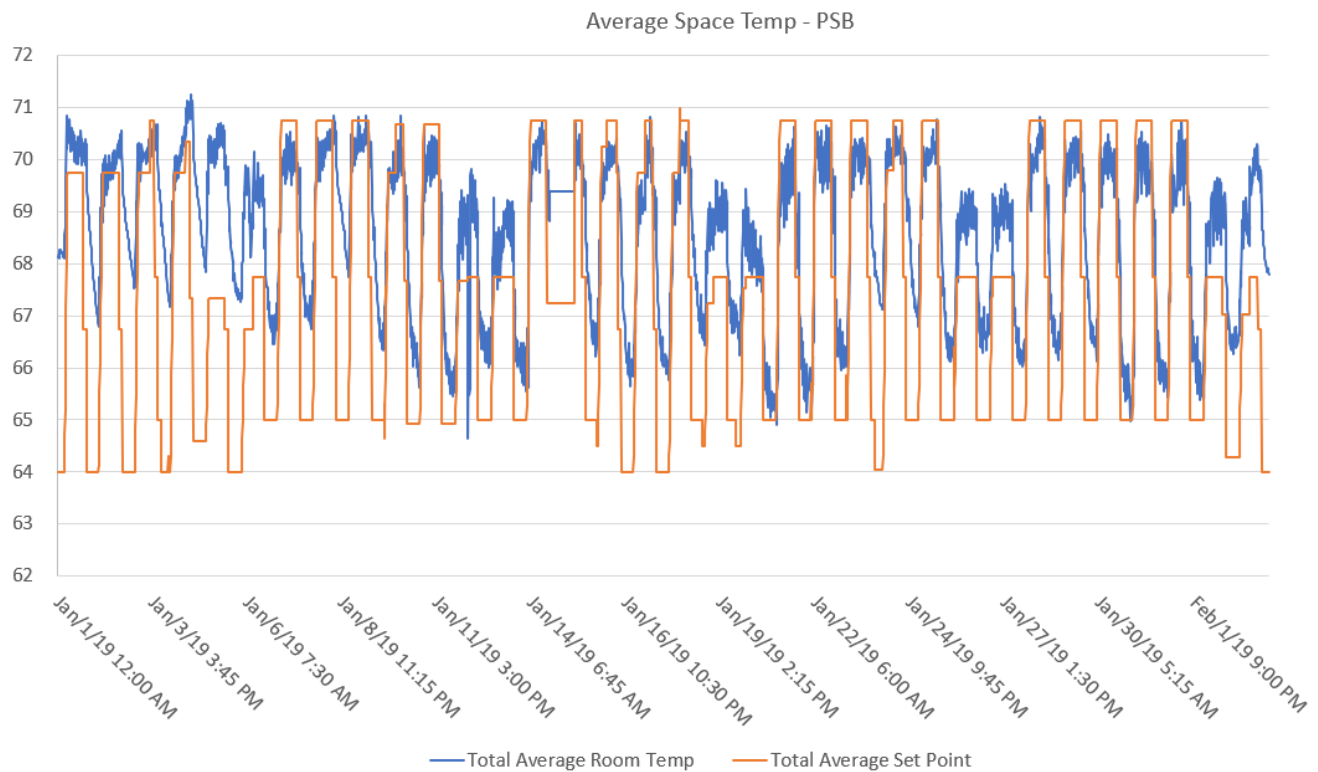
BIN Hours (°F)	Verified Power on VFD (%)
95 to 100	19%
90 to 95	23%
85 to 90	22%
80 to 85	22%
75 to 80	21%
70 to 75	20%
65 to 70	19%
60 to 65	19%
55 to 60	18%
50 to 55	18%
45 to 50	18%
40 to 45	19%
35 to 40	19%
30 to 35	19%
25 to 30	20%
20 to 25	19%
15 to 20	20%
10 to 15	20%
5 to 10	19%
0 to 5	20%
-5 to 0	19%
-10 to -6	19%

### Space Temperature

SmartWatt energy engineers retrieved trend data from the energy management system for the heat pumps in the Public Safety building for the 2019 calendar year. During the summer check in of the building automation system, it was confirmed that 19 of 38 heat pumps were forced into “always occ” mode. This was comparable to the year 1 observation that had 21 of 38 heat pumps that has the same status. **Figure 1** is reflective of the average building space temp and set point as it relates to a representative sample of spaces throughout the building. **Figure 2** below is reflective of a heat pump that has the thermostat overridden to reflect an “always occupied” status with little variation during January 2019. As indicated most of the spaces are set according to a schedule with some variation throughout the weekends. Below is a chart that describes the proposed space temperatures from the IGA along with the verified space temperatures.

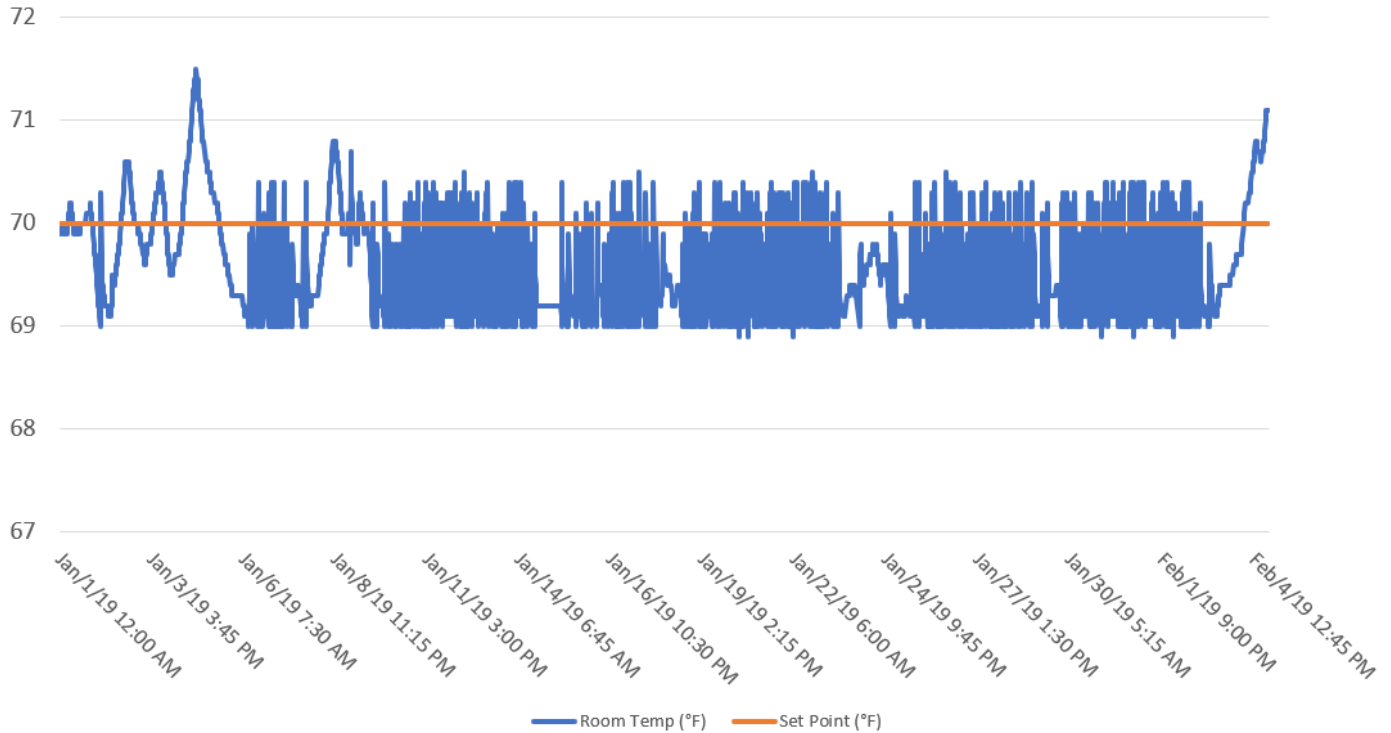
	IGA Temperatures (°F)	Year 2 Verified Temperatures (°F)
Post Installation Occupied Heating Temperature	70	71
Post Installation Unoccupied Heating Temperature	65	70
Post Installation Occupied Cooling Temperature	74	72
Post Installation Unoccupied Cooling Temperature	78	72

**Figure 2: PSB Average Space Temp**



**Figure 3: Heat Pump #2 with Overridden Setpoint**

HP - 02



The shortfall in savings as it relates to this item of the project is associated with fewer setbacks during unoccupied times than anticipated. The occupied temperatures are also slightly higher on the heating and lower on the cooling. This results in more energy use than anticipated. SmartWatt has worked with the occupants of the building along with the county staff to address the temperatures throughout Year 2 of the reporting period. Throughout the year, it has been noted that the schedules and temperatures were changed to address occupant requests.



### 3.8 FIM 8 – Cooling Tower Replacement at PSB

Pre-Installation
Pre-Installation Energy Use (kWh/yr)
13,783

Post - Installation		
Post - Installation IGA Energy Use (kWh/yr)	Post - Installation Verified Energy Use (kWh/yr)	Variance (kWh/yr)
2,905	2,183	(722)

Energy Savings		
Guaranteed Energy Savings (kWh/yr) <sup>8</sup>	Verified Energy Savings (kWh/yr)	Variance from Guarantee (kWh/yr)
9,790	11,600	1,810

#### Overview

Installation of this FIM includes replacing the existing cooling tower located in the PSB mezzanine along with a new VFD and motor on the cooling tower fan. The measurement and verification plan outlined in the IGA required measurements for this FIM to be Performed in Year 1 only. Therefore, the measurements made below are representative from Year 1 of the project term and reflected accordingly.

#### Stipulated Parameters

Stipulated parameters were based on current equipment nameplates, drawings, and engineering estimates as defined in the table that follows:

Cooling Tower Fan Motor	
Fan Load Factor	90%
Fan Motor Efficiency	72% High Speed, 85.5% Low Speed
New Motor Efficiency	91.7%
Minimum Fluid Flow	30%
Fan on Low Speed point for fan (°F)	50
Fan on High Speed point for fan (°F)	70
% Flow at each BIN	Appendix B of IGA
VFD Efficiency	98%

#### Post FIM Measurement Procedure

- Power Draw on motor & flow trended through EMS
- Outside Air Temperature for the same period

<sup>8</sup> Includes a .90 safety factor.

### Motor Power Draw on Loop Pumps

SmartWatt energy engineers retrieved trend data from the energy management system for the PSB cooling tower fan. The post installation motor power is input into the energy savings calculations to verify post installation energy use. **Tables 12 and 13** illustrate the change in power from what was proposed in the IGA to the verified VFD Power. The VFD is working as designed with a slight surplus in energy savings. This is due to the lower power % during the middle temperature bins where the majority of the hours are located.

**Table 12: IGA Proposed VFD Power**

BIN Hours (°F)	Proposed Power with VFD (%)
95 to 100	102%
90 to 95	77%
85 to 90	57%
80 to 85	40%
75 to 80	26%
70 to 75	16%
65 to 70	8%
60 to 65	5%
55 to 60	5%
50 to 55	5%

**Table 13: Verified VFD Power**

BIN Hours (°F)	Verified Power on VFD (%)
95 to 100	102%
90 to 95	77%
85 to 90	41%
80 to 85	11%
75 to 80	7%
70 to 75	8%
65 to 70	9%
60 to 65	10%
55 to 60	9%
50 to 55	6%

### 3.9 FIM 9 – Replace Boilers in Public Safety Building

Pre-Installation
Pre-Installation Gas Use (Therm/yr)
12,730

Post - Installation		
Post – Installation IGA Natural Gas (Therm/yr)	Post - Installation Verified Natural Gas (Therm/yr)	Variance (Therm/yr)
9,977	10,292	315

Energy Savings		
Guaranteed NG Savings (Therm/yr)	Verified NG Savings (Therm/yr)	Variance from Guarantee (Therm/yr)
2,478	2,439	(39)

#### Overview

Installation of this FIM includes replacing the existing two (2) natural-gas fired boilers with two (2) high efficiency PK Mach Series 500 Boilers – Model CM500 at the Public Safety Building. The increase in combustion efficiency results in a reduction in natural gas use. The measurement and verification plan outlined in the IGA required measurements for this FIM to be Performed in Year 1 only. Therefore, the measurements made below are representative from Year 1 of the project term and reflected accordingly.

#### Post FIM Measurement Procedure

SmartWatt has taken a combustion efficiency measurement post installation of the two boilers. The results of the verified measurement compared to the proposed measurement are shown in the table below.

Combustion Efficiency	
IGA Proposed Efficiency	Verified Efficiency
94%	91%

#### Saving Measurement Procedure

Energy savings are calculated by increasing boiler efficiency. The calculations utilized to determine savings are provided below:

$$\text{Annual NG Savings} = \text{Baseline NG Use} - \text{Post Installation NG Use}$$

$$\text{Baseline NG Use} = \text{Total Facility NG Use} - \text{DHW NG Use}$$

$$\text{Post Install NG Use} = \frac{\text{Baseline NG Use} \times \text{Current Boiler Efficiency}}{\text{Post Installation Measured Efficiency} \times \text{Post Install Distribution Efficiency}}$$

$$\text{Annual \$ Savings} = \text{Annual NG Savings} \times \$/\text{Therm Rate}$$

### 3.10 FIM 10 – HVAC Upgrades at the County Office Building

Pre-Installation Energy Use		
Electric Usage (kWh/yr)	Electric Use – Adjusted Baseline (kWh/yr) <sup>9</sup>	Natural Gas Usage (Therm/yr)
193,099	199,772	57,711

Post - Installation IGA		Post - Installation Verified		Variance	
Electric Usage (kWh/yr)	Natural Gas Usage (Therm/yr)	Electric Usage (kWh/yr)	Natural Gas Usage (Therm/yr)	Electric Usage (kWh/yr)	Natural Gas Usage (Therm/yr)
32,678	41,621	49,688	44,134	-11,456	-2,513

Energy Savings - Guarantee <sup>10</sup>		Energy Savings - Verified		Variance from IGA Guarantee	
Electric (kWh/yr)	Natural Gas (Therm/yr)	Electric (kWh/yr)	Natural Gas (Therm/yr)	Electric (kWh/yr)	Natural Gas (Therm/yr)
144,378	14,481	150,084	13,577	5,706	904

#### Overview

Installation of this FIM includes the following three upgrades:

- Install Building Automation System.
- Reduction in FCU and UV Operating Hours.
- VFDs installed on the chilled water and hot water pumps.

#### Stipulated Parameters

Stipulated parameters were based on current equipment nameplates, drawings, and engineering estimates. A summary of the stipulated parameters is listed in the tables below:

<sup>9</sup> Baseline adjusted to include all temperature bins in pre and post calculation.

<sup>10</sup> Includes a 0.90 safety factor as stated in original IGA proposal.

BMS Installation (Setup/Setback and Temperature Correction)	
Boiler Efficiency	92%
Chiller Efficiency (kW/ton)	1.0
Ventilation Rate (cfm)	2,625
Window U Factor (Btu/(h*sqft*°F))	0.55
Wall U Factor (Btu/(h*sqft*°F))	0.06
Roof U Factor (Btu/(h*sqft*°F))	0.03
Window Area (ft <sup>2</sup> )	12,025
Wall Area (ft <sup>2</sup> )	51,205
Roof Area (ft <sup>2</sup> )	27,914
Air Infiltration Leakage (cfm/Ft <sup>2</sup> )	0.1
Building Solar Gain Heating Season (°F) Basement thru 2nd Floor	5
Building Solar Gain Cooling Season (°F) Basement thru 2nd Floor	10
Baseline Occ Heating Temperature (°F) Basement thru 2nd Floor	71.0
Baseline Unocc Heating Temperature (°F) Basement thru 2nd Floor	70.7
Proposed Occ Heating Temperature (°F) Basement thru 2nd Floor	70
Proposed Unocc Heating Temperature (°F) Basement thru 2nd Floor	65
Baseline Occ Cooling Temperature (°F) Basement thru 2nd Floor	74
Baseline Unocc Cooling Temperature (°F) Basement thru 2nd Floor	74
Proposed Occ Cooling Temperature (°F) Basement thru 2nd Floor	74
Proposed Unocc Cooling Temperature (°F) Basement thru 2nd Floor	80
Building Solar Gain Heating Season (°F) Third Floor	5
Building Solar Gain Cooling Season (°F) Third Floor	10
Baseline Occ Heating Temperature (°F) Third Floor	72.6
Baseline Unocc Heating Temperature (°F) Third Floor	71.7
Proposed Occ Heating Temperature (°F) Third Floor	70
Proposed Unocc Heating Temperature (°F) Third Floor	65
Baseline Occ Cooling Temperature (°F) Third Floor	74
Baseline Unocc Cooling Temperature (°F) Third Floor	74
Proposed Occ Cooling Temperature (°F) Third Floor	74
Proposed Unocc Cooling Temperature (°F) Third Floor	80
Boiler Efficiency	92%

Reduction in FCU and UV Operating Hours	
Unit Ventilator Quantity	67
Unit Ventilator Total Power (HP)	8.4
Existing Unit Ventilator Motor Efficiency	30%
Unit Ventilator Part Load Factor	90%
Unit Ventilator Annual Operating Hours (hr/yr)	4,928
New Unit Ventilator Motor Efficiency	70%
Fan Coil Unit Quantity	55
Fan Coil Unit Total Power (HP)	0.9
Existing Fan Coil Unit Motor Efficiency	30%
Fan Coil Unit Part Load Factor	90%



Fan Coil Unit Annual Operating Hours (hr/yr)	4,928
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VFD Improvements	
Hot Water Pump Rated Power (HP)	10
Hot Water Pump Motor Efficiency	91.0%
Hot Water Pump Load Factor	90%
Chilled Water Pump Rated Power (HP)	7.5
Chilled Water Pump Motor Efficiency	91.7%
Chilled Water Pump Load Factor	90%
Minimum Fluid Flow	30%
Heating On point for HW pump (degF)	50
Cooling On point for CW pump (degF)	55
Annual Operating Hours	BinMaker Pro (See Appendix B of the IGA)
% Flow at each BIN	Appendix B of the IGA
VFD Efficiency	98%

### Savings Measurement Procedure

M&V Option A was selected to provide a cost-effective means to evaluate savings. The post-installation measurement parameters that were made are as follows:

- EMS Space Temperature
- FCU and UV Operating Hours
- VFD Motor Power Draw from EMS

### EMS Space Temperatures

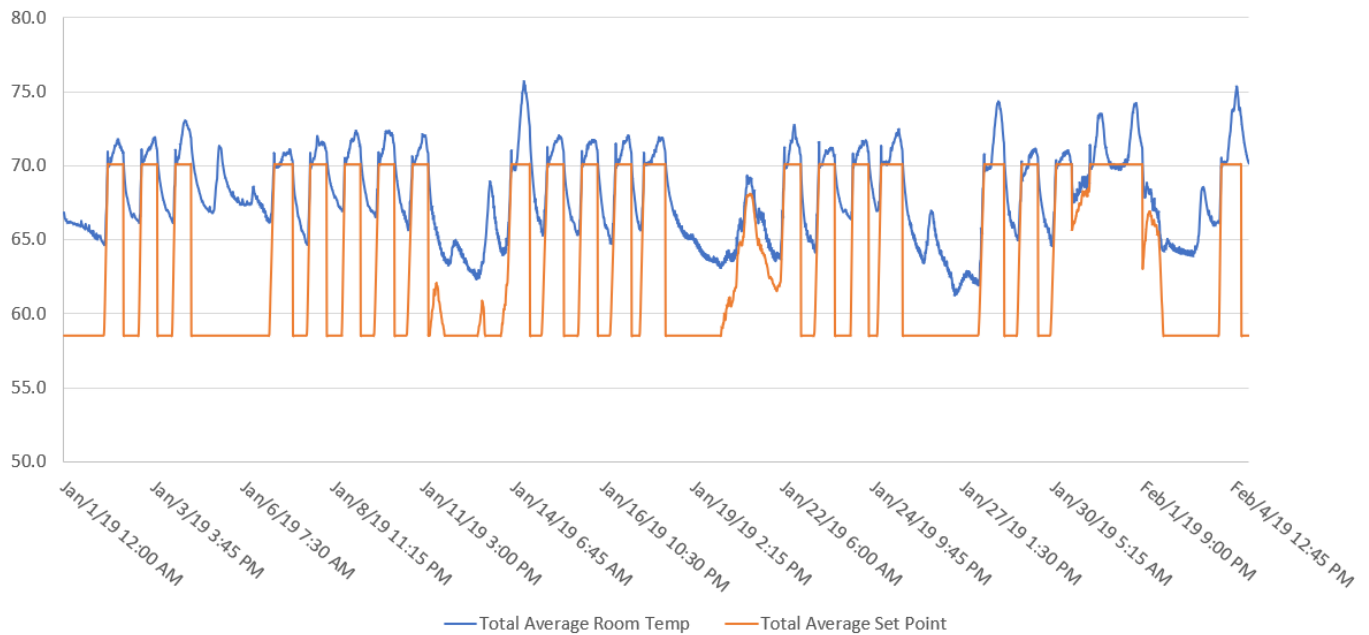
SmartWatt energy engineers retrieved trend data from the energy management system for the 2019 calendar year. The table below represents the total average space temperature for that time period for a representative sample of the building.

Basement – 2 <sup>nd</sup> Floor Summary		
	IGA Temperatures (°F)	Verified Temperatures (°F)
Post Installation Occupied Heating Temperature	70	70.1
Post Installation Unoccupied Heating Temperature	65	67.4
Post Installation Occupied Cooling Temperature	74	73.4
Post Installation Unoccupied Cooling Temperature	80	74.2
3 <sup>rd</sup> Floor Summary		

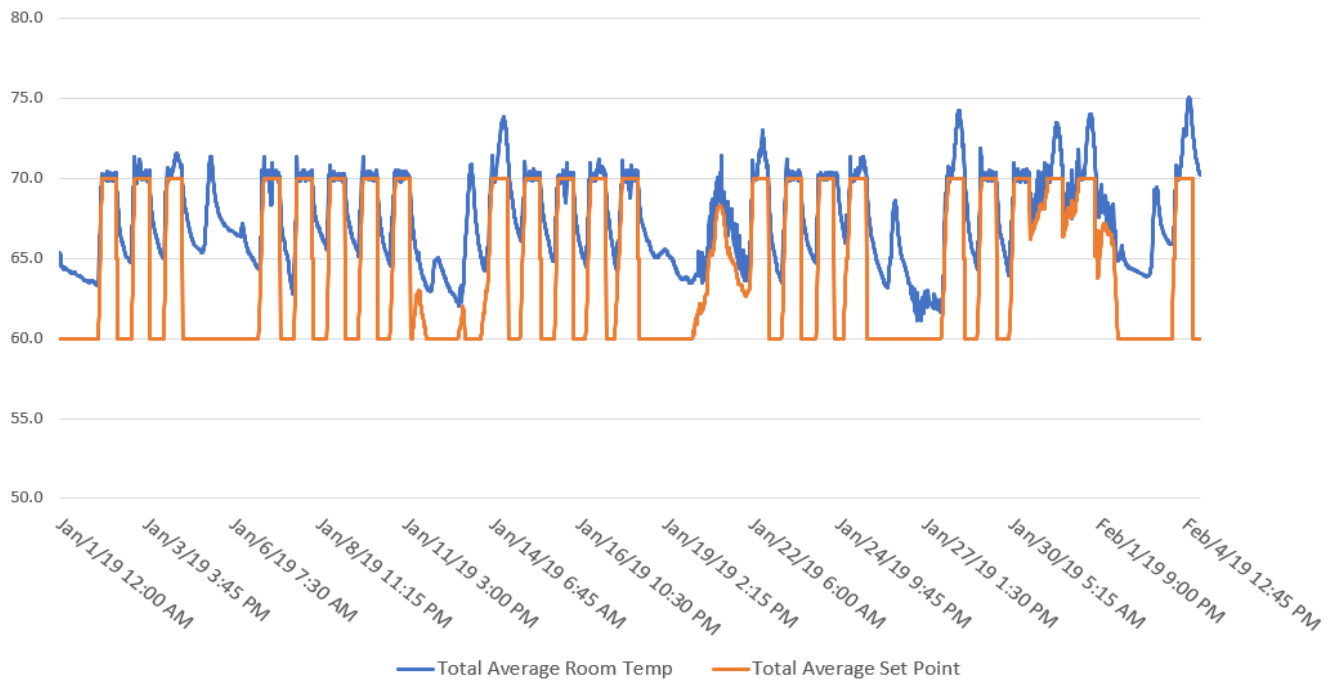
	IGA Temperatures (°F)	Verified Temperatures (°F)
Post Installation Occupied Heating Temperature	70	70.3
Post Installation Unoccupied Heating Temperature	65	67.2
Post Installation Occupied Cooling Temperature	74	73.3
Post Installation Unoccupied Cooling Temperature	80	75.6

The figures below are a graphical representation of the set points along with the space temperature for the month of January 2019 to illustrate the temperature trends of the building. On some dates, space temperatures are trending higher than the programmed setpoint. The graphs below indicate that electric space heater use within the building could be attributing to the higher than anticipated space temperatures. This was noted in Year 1 and brought to the County's attention by SmartWatt throughout Year 2 check ins.

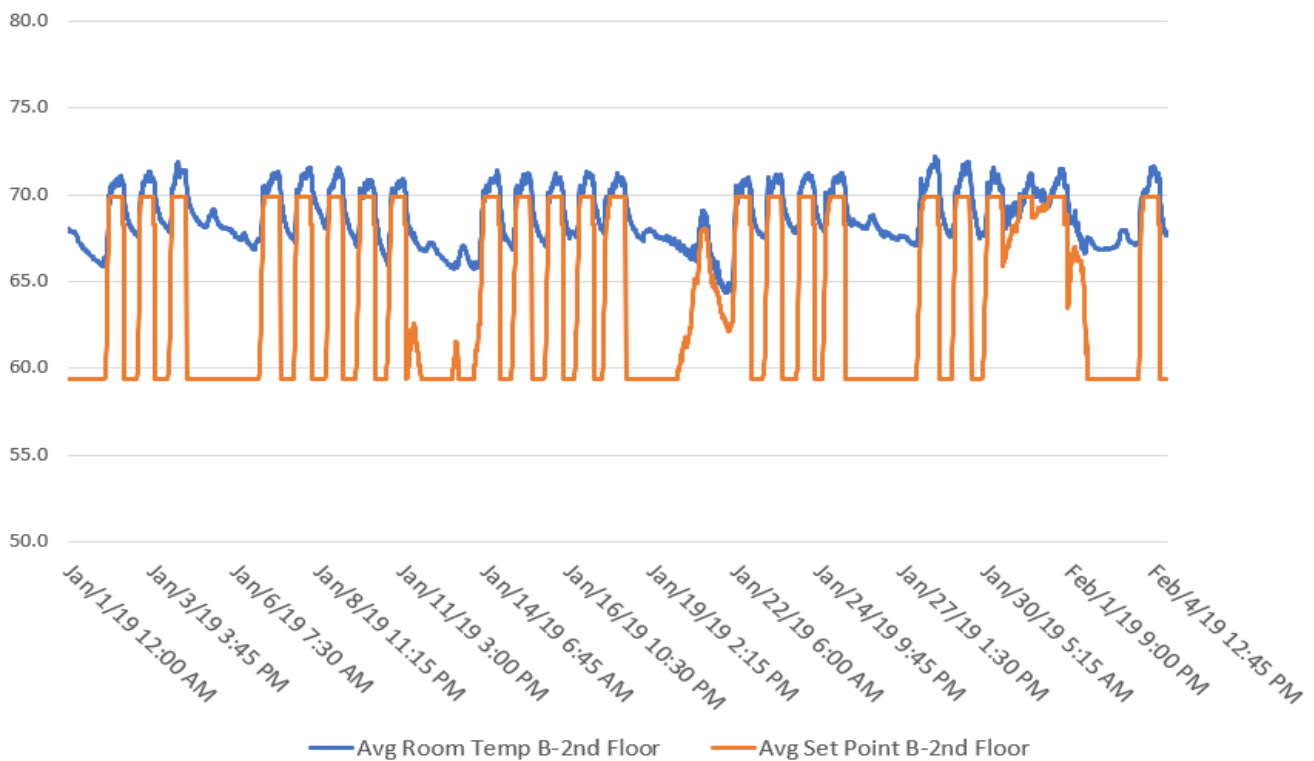
COB B- 2nd Floor Summary (FCUs)

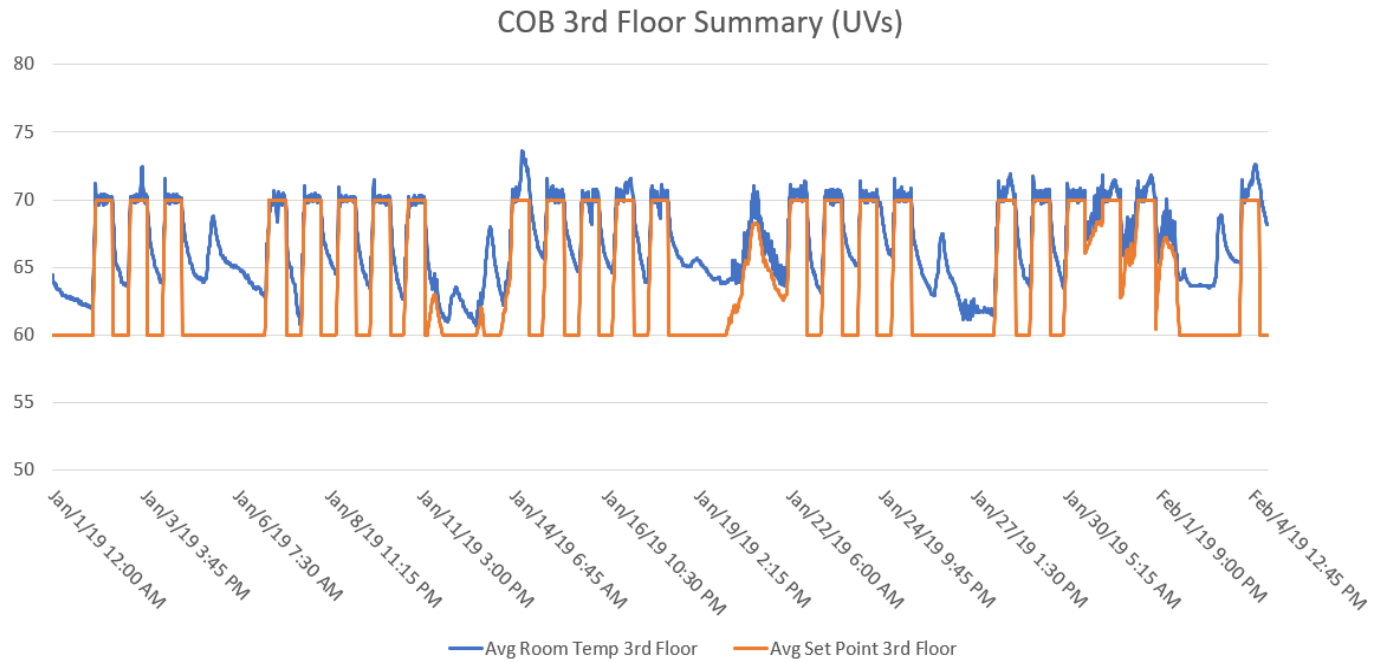


### COB - 3rd Floor Summary (FCUs)



### COB B - 2nd Floor Summary (UVs)





### FCU and UV Operating Hours

SmartWatt energy engineers have trended run times of the fan coil units (FCUs) and the unit ventilators (UVs) for the 2019 calendar year. The tables below represent the verified Year 2 run times compared to the verified run times from the trend data for Year 1. The verified hours of the unit ventilators are slightly lower on the first 3 floors and slightly higher on the 3<sup>rd</sup> floor. This is an overall reduction from the Year 1 run-times in the last column of the tables below.

COB UV & FCU Fan Run Times B-2 <sup>nd</sup> Floor			
	IGA Proposed Run Time (Hours)	Verified Run Time - Year 2 (Hours)	Verified Run Time - Year 1 (Hours)
Unit Ventilators - 750 CFM	1095	746	817
Unit Ventilators - 1,000 CFM	1095	746	817
Unit Ventilators - 1,250 CFM	1095	746	817
Unit Ventilators - 1,500 CFM	1095	746	817
Fan Coil Units	1095	1267	2071

COB UV & FCU Fan Run Times 3 <sup>rd</sup> Floor			
	IGA Proposed Run Time (Hours)	Verified Run Time - Year 2 (Hours)	Verified Run Time - Year 1 (Hours)
Unit Ventilators	1095	1623	1057
Fan Coil Units	1095	1059	2780

### VFD Motor Power Draw

SmartWatt energy engineers retrieved trend data from the energy management system for the COB Chilled water and hot water loop pumps. The post installation motor power is input into the energy savings calculations to verify post installation energy use.

During the IGA, power of the motor is calculated using the fan laws. The power is a cubic function of the speed of the motor. This means that as the speed decreases, the fan power decreases by an exponential power of 3. During Year 2 of the term, the power was pulled directly from the building energy management system for each bin listed in the tables below. The % power was a direct relation of the average energy vs max energy use for each bin.

**Tables 11 and 12** illustrate the change in power from what was proposed in the IGA to the verified VFD power. During Year 1 The verified power represented a larger power draw during the middle temperature bins. This was addressed during Year 2 of the term and the lower percent power is reflective during the cooling bins.

**Table 9: IGA Proposed VFD Power**

BIN Hours	Proposed Power with VFD (%)
95 to 100	102%
90 to 95	75%
85 to 90	52%
80 to 85	34%
75 to 80	21%
70 to 75	11%
65 to 70	5%
60 to 65	5%
55 to 60	5%
50 to 55	0%
45 to 50	5%
40 to 45	5%
35 to 40	5%
30 to 35	5%
25 to 30	10%
20 to 25	16%
15 to 20	25%
10 to 15	35%
5 to 10	48%
0 to 5	63%
-5 to 0	81%
-10 to -6	102%

**Table 10: Year 2 - Verified VFD Power**

BIN Hours	Verified Power on VFD (%)
95 to 100	41%
90 to 95	51%
85 to 90	11%
80 to 85	5%
75 to 80	3%
70 to 75	2%
65 to 70	1%
60 to 65	2%
55 to 60	1%
50 to 55	2%
45 to 50	2%
40 to 45	69%
35 to 40	34%
30 to 35	71%
25 to 30	71%
20 to 25	72%
15 to 20	72%
10 to 15	73%
5 to 10	74%
0 to 5	76%
-5 to 0	78%
-10 to -6	102%

The shortfall in savings as it relates to this item of the project is associated with reduced setbacks during unoccupied times than anticipated. The occupied temperatures are also slightly higher on the heating and lower

on the cooling. This results in more energy use than anticipated. SmartWatt has worked with the occupants and County staff during Year 2 of the term to address the temperatures through frequent check-ins. However, the schedules and temperatures are still being overridden and, in some cases, result in the temperatures being slightly higher than anticipated. This is an improvement from Year 1, but the overall measure is still slightly below the anticipated savings amount.



### 3.11 FIM 11 – Replace RTUs in the County Office Building

Pre-Installation
Pre-Installation Electric Use (kWh/yr)
106,912

Post - Installation		
Post – Installation IGA Electric Use (kWh/yr)	Post - Installation Verified Electric Use (kWh/yr)	Variance (kWh/yr)
40,415	43,853	(3,438)

Energy Savings		
Guaranteed kWh Savings <sup>11</sup> (kWh/yr)	Verified kWh Savings (kWh/yr)	Variance from Guarantee (kWh/yr)
59,847	63,059	3,212

#### Overview

Installation of this FIM included the following upgrades:

- Replaced 5 existing rooftop units with 5 new Carrier roof top units.
- Reduced RTU unoccupied motor run time.

The measurement and verification plan outlined in the IGA required measurements for this FIM to be Performed in Year 1 only. Therefore, the measurements made below are representative from Year 1 of the project term and reflected accordingly.

#### Stipulated Parameters

Stipulated parameters were based on current equipment nameplates, drawings, and engineering estimates. A summary of the stipulated parameters is listed in the table below:

<sup>11</sup> Includes a 0.90 safety factor as stated in original IGA proposal.

COB RTUs	
Total Cooling Rating (Tons)	60
Average EER of RTUs including degradation	6.16
Equivalent Full Load Operating Hours (hr/yr) from NYS Tech Manual	667
Total Supply Fan Rating (HP)	11
Supply Fan Runtime During Unoccupied Periods	3,528
Supply Fan Part Load Factor	90%
Existing Supply Fan Efficiency	90%
Proposed Supply Fan Efficiency	92%

### Savings Measurement Procedure

M&V Option A was selected to provide a cost-effective means to evaluate savings. The post-installation measurement parameters that were made are as follows:

- Visual Inspection of RTUs and SEER
- Operating hours during unoccupied periods
- RTU motor power and energy from as-built package

### Post FIM Measurement Procedure

SmartWatt has verified the SEER of the units being installed compared to the proposed SEER from the as-built package. The Verified SEER was approximately 13% lower than anticipated. Due to the guarantee being at 90% and the slight surplus in verified unoccupied run times, the measure has a net positive total of 3,212 kWh.

SEER	
IGA Proposed SEER	Verified SEER
17.1	14.8

The tables below represent the verified reduction in runtime during unoccupied hours compared to the runtime hours proposed in the IGA. The RTU fan run times were taken from the EMS trends over a 1 year period (2018).

RTU Run Times During Unoccupied Hours		
	IGA Proposed Run Time (Hours)	Verified Run Time (Hours)
AC-1	1536	1369
AC-2	1536	1444
AC-3	1536	1123
AC-4	1536	1654
AC-5	1536	1519

The verified run hours were approximately 7.5% (571 hours) lower than proposed and resulted in a slight surplus in energy savings.

**Saving Measurement Procedure**

Energy savings are calculated through the increase in RTU efficiency (EER) as well as a reduction in the supply fan run time during unoccupied periods. Each saving calculation is defined below:

$$EER_{Measured} = \frac{Rated\ Btu\ of\ Cooling\ Tons}{Measured\ Watt\ hours}$$

Energy efficiency savings are calculated as follows:

$$Energy\ Efficiency\ Savings\ \left(\frac{kWh}{yr}\right) = Current\ RTU\ Usage - Post\ Implementation\ RTU\ Usage$$

$$Cost\ Savings = (kWh\ Savings * \frac{\$}{kWh}\ Rate)$$

*Current RTU Usage*

$$= Cooling\ tons \times 12,000 \frac{Btu}{ton} \times Cooling\ Full\ Load\ Hours \div EER_{Current} \div 1,000\ W/kW$$

*Post Implementation RTU Usage =*

$$= Cooling\ tons \times 12,000 \frac{Btu}{ton} \times Cooling\ Full\ Load\ Hours \div EER_{Measured} \div 1,000\ W/kW$$

### 3.12 FIM 12 – Replace Domestic Hot Water Heater at the COB

Pre-Installation
Pre-Installation Electric Use (kWh/yr)
0

Post - Installation		
Post – Installation IGA Electric (kWh/yr)	Post - Installation Verified Electric (kWh/yr)	Variance (kWh/yr)
1,950	1,950	0

Energy Savings		
Guaranteed Electric Savings (kWh/yr)	Verified Electric Savings (kWh/yr)	Variance from Guarantee (kWh/yr)
(1,950)	(1,950)	0

#### Overview

SmartWatt installed a new 40 gallon storage-type electric hot water heater adjacent to the locker rooms serving the gymnasium area. This unit acts as a supplementary heater for the locker room showers. The installation of this measure results in a negative savings due to the baseline being zero. The measurement and verification plan outlined in the IGA required measurements for this FIM to be Performed in Year 1 only. Therefore, the measurements made below are representative from Year 1 of the project term and reflected accordingly.

#### Stipulated Parameters

The unit heating capacity is based on the manufacturer’s rating of 4.5 kW.

#### Post FIM Measurement Procedure

SmartWatt has verified that the installed water heater has been installed as proposed and designed.

#### Saving Measurement Procedure

Energy savings were calculated by using the equations below:

$$\text{Annual Energy Savings} = \text{Baseline Energy Usage} - \text{Post Installation Energy Usage}$$

$$\text{Annual \$ Savings} = \text{Annual Energy Savings} \times \frac{\$}{\text{kWh}} \text{Rate}$$

$$\text{Baseline Energy Usage} = 0 \frac{\text{kWh}}{\text{yr}} (\text{no existing unit})$$

$$\text{Post Installation Energy Usage} = \text{Unit Heating Capacity} \times \text{Annual Operating Hours}$$

### 3.13 FIM 13 – HVAC Upgrades at the Courthouse

Pre-Installation Energy Use	
Electric Usage (kWh/yr)	Natural Gas Usage (Therm/yr)
43,734	111,621

Post - Installation IGA		Post - Installation Verified		Variance	
Electric Usage (kWh/yr)	Natural Gas Usage (Therm/yr)	Electric Usage (kWh/yr)	Natural Gas Usage (Therm/yr)	Electric Usage (kWh/yr)	Natural Gas Usage (Therm/yr)
23,982	60,115	33,065	71,002	9,083	10,887

Energy Savings - Guarantee <sup>12</sup>		Energy Savings - Verified		Variance from IGA Guarantee	
Electric (kWh/yr)	Natural Gas (Therm/yr)	Electric (kWh/yr)	Natural Gas (Therm/yr)	Electric (kWh/yr)	Natural Gas (Therm/yr)
17,777	46,355	10,668	40,619	(7,109)	(5,736)

#### Overview

Installation of this FIM included the following three upgrades:

- Installation of BMS (Unoccupied Period Setback/Setup)
- Reduction in AHU Operating Hours
- Steam Trap Replacement

#### Stipulated Parameters

Stipulated parameters were based on current equipment nameplates, drawings, and engineering estimates. A summary of the stipulated parameters is listed in the tables below:

<sup>12</sup> Includes a 0.90 safety factor as stated in original IGA proposal.

BMS Installation (Setup/Setback and Temperature Correction)	
Boiler Efficiency	80%
Chiller Efficiency (kW/ton)	1.0
Ventilation Rate (cfm)	8,850
Window U Factor (Btu/(h*sqft*°F))	0.9
Wall U Factor (Btu/(h*sqft*°F))	0.12
Roof U Factor (Btu/(h*sqft*°F))	0.06
Window Area (ft²)	5,673
Wall Area (ft²)	31,287
Roof Area (ft²)	13,409
Air Infiltration Leakage (cfm/Ft²)	0.3
Building Solar Gain Heating Season (°F)	5
Building Solar Gain Cooling Season (°F)	10
Baseline Occ Heating Temperature (°F)	74.0
Baseline Unocc Heating Temperature (°F)	73.3
Proposed Occ Heating Temperature (°F)	70
Proposed Unocc Heating Temperature (°F)	64
Baseline Occ Cooling Temperature (°F)	74
Baseline Unocc Cooling Temperature (°F)	74
Proposed Occ Cooling Temperature (°F)	74
Proposed Unocc Cooling Temperature (°F)	80

Reduction in AHU Operating Hours	
AHU Quantity	2
AHU Fan Total Power (HP)	4.5
Existing Fan Motor Efficiency	87.2%
Fan Part Load Factor	90%
Current Annual Operating Hours (hr/yr)	4,777

Steam Trap Replacements	
Steam Trap Inventory	See Appendix E of the IGA
Total Number of Steam Traps	178
Percentage of Failed Steam Traps (from survey)	49%
Total Number of Failed Steam Traps with 1/16" Diameter Orifice	37
Total Number of Failed Steam Traps with 3/32" Diameter Orifice	50
Steam Hours of Operation (hr/yr)	4,996
Boiler Efficiency	80%
Steam Pressure	5 psig



### Savings Measurement Procedure

M&V Option A was selected to provide a cost-effective means to evaluate savings. The post-installation measurement parameters that were made are as follows:

- EMS Space Temperature
- AHU Operating Hours
- Steam Trap Installation Verification

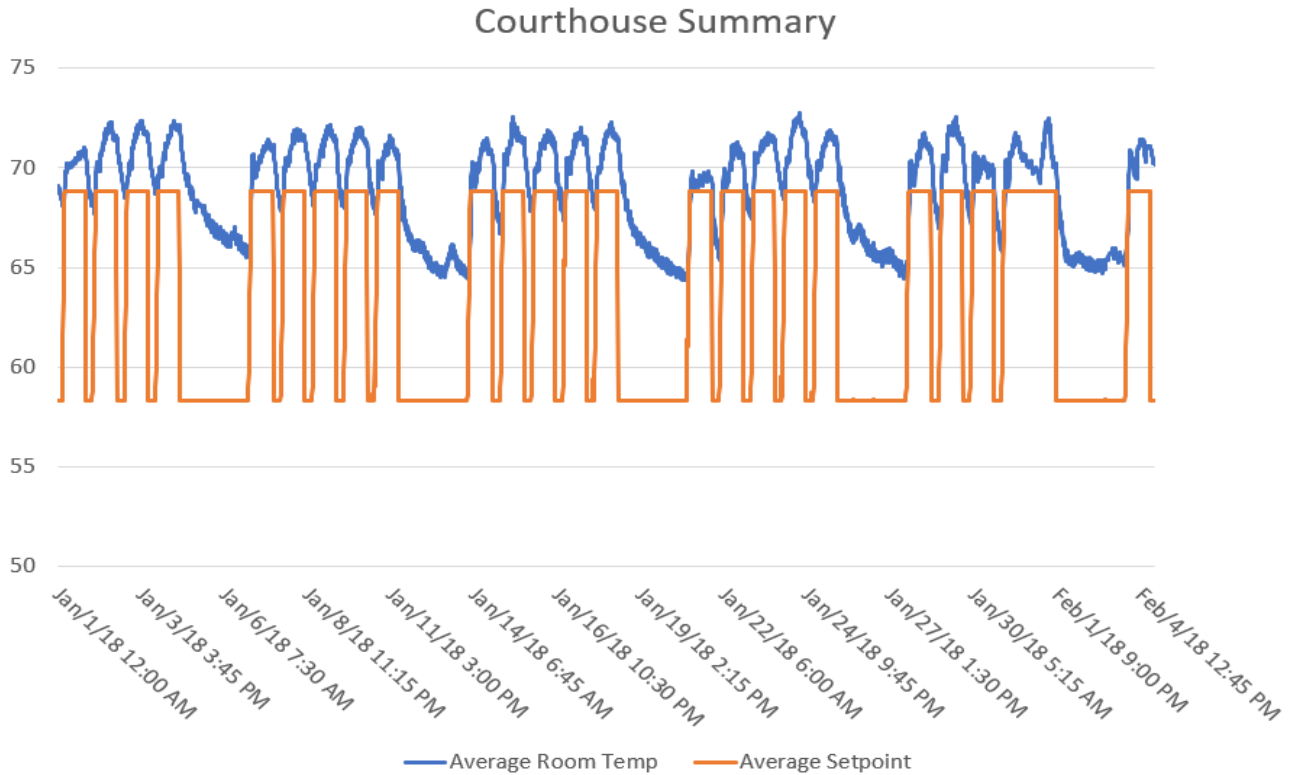
### EMS Space Temperatures

SmartWatt energy engineers retrieved trend data from the energy management system for the 2019 calendar year. The table below represents the total average space temperature for that time period for a representative sample of the building.

Courthouse Temperature Summary		
	IGA Temperatures (°F)	Verified Temperatures (°F)
Post Installation Occupied Heating Temperature	70	71.8
Post Installation Unoccupied Heating Temperature	64	69.8
Post Installation Occupied Cooling Temperature	74	72.9
Post Installation Unoccupied Cooling Temperature	80	73.5

The figure below is a representative sample of the set points along with the space temperature for the month of January 2019 to illustrate the temperature trends of the building. Most of the time, space temperatures are trending higher than the programmed setpoint. The setback temperatures, particularly in the cooling season are not reaching the designed setback temperatures. In addition to the lack of setback, the schedule runs in occupied mode from 6:00am – 9:00PM in most areas. These temperatures and schedules are noted and were addressed with the County staff during Year 2 of the term. However, during frequent check-ins, the schedules are still being overridden and adjusted to reflect the run times noted above.

**Figure 4: Courthouse Temperature Summary - January**



### AHU Operating Hours

SmartWatt energy engineers have trended run times of the AHUs for the 2019 calendar year. The baseline runtime of the units was 4777 annual hours. The tables below represent the proposed run times compared to the verified run times from the EMS trend data for Year 2.

COB UV & FCU Fan Run Times B-2 <sup>nd</sup> Floor			
	IGA Proposed Run Time (Hours)	Verified Run Time – Year 2 (Hours)	Verified Run Time – Year 1 (Hours)
AHU-1	955	840	729
AHU-2	955	684	1770

The verified run times for Year 2 were net lower for the 2 AHUs combined. This was addressed during Year 2 of the term to allow for increased verified energy savings.

### Steam Trap Replacements

SmartWatt has replaced 178 steam traps and verified the proper installation of the new equipment to be sure they operate as designed. The new steam traps match closely with the proposed steam traps represented in the IGA. This was verified in Year 1 of the term.

### 3.14 FIM 14 – Insulate Basement Steam Piping at Courthouse

Pre-Installation
Pre-Installation Gas Use (Therm/yr)
924

Post - Installation		
Post – Installation IGA Natural Gas (Therm/yr)	Post - Installation Verified Natural Gas (Therm/yr)	Variance (Therm/yr)
69	69	0

Energy Savings		
Guaranteed NG Savings (Therm/yr)	Verified NG Savings (Therm/yr)	Variance from Guarantee (Therm/yr)
855	855	0

#### Overview

SmartWatt installed 3” insulation on approximately 50’ of 3” steam condensate pipes located in the south-east area of the basement. The measurement and verification plan outlined in the IGA required measurements for this FIM to be Performed in Year 1 only. Therefore, the measurements made below are representative from Year 1 of the project term and reflected accordingly.

#### Stipulated Parameters

The unit heating capacity is based on the manufacturer’s rating of 4.5 kW.

Pipe Insulation Stipulated Parameters	
Heating Hours of Operation	5,024
Boiler Efficiency	80%
Insulation Conductivity k (Btuh/ft <sup>2</sup> * °F/inch)	0.26
Insulation Surface Resistance Rs (ft <sup>2</sup> * °F/Btuh)	0.50

#### Post FIM Measurement Procedure

Visual inspection of insulation to be sure insulation thickness and pipe temperatures were verified accordingly. During installation of the project 3” fiberglass pipe insulation was installed. This exceeds the specifications of the original pipe insulation.

### **Saving Measurement Procedure**

Energy savings were calculated by using the equations below:

$$\text{Energy Savings } (Q) = \text{Baseline Heatloss} - \text{Proposed Heat Loss}$$

$$\text{Baseline Heatloss} = \frac{\text{bare pipe heat loss per foot} \times \text{pipe length} \times \text{heating hours of operation}}{\text{boiler efficiency}}$$

$$\text{Proposed Heatloss} = ((Ts - Ta) * A / (rs + IT * \frac{\ln(\frac{rs}{rp})}{k} + Rs) / (\text{boiler efficiency})) \times \text{pipe length} \times \text{heating hours of operation}$$

$$\text{Energy Cost Savings } \$ = \left( \frac{\text{Energy Savings}}{100,000} \right) \times \frac{\$}{\text{therm}} \text{ Natural Gas}$$

Where:

Ts = Pipe surface temperature equal to fluid temperature (°F)

Ta = Ambient Temperature (°F)

A = Surface Area (sqft/ft)

rs = radius of outer surface (in)

IT = Insulation Thickness (in)

rp = Pipe Radius (in)

k = Thermal conductivity of insulation, Btuh/(sqft\* °F/inch)

Rs = Surface resistance (sq ft\*°F/Btuh)

### 3.15 FIM 15 – Replace Suite 301 AC Unit at the Courthouse

Pre-Installation
Pre-Installation Electric Use (kWh/yr)
12,487

Post - Installation		
Post – Installation IGA Electric Use (kWh/yr)	Post - Installation Verified Electric Use (kWh/yr)	Variance (kWh/yr)
5,973	5,197	(776)

Energy Savings		
Guaranteed kWh Savings <sup>13</sup> (kWh/yr)	Verified kWh Savings (kWh/yr)	Variance from Guarantee (kWh/yr)
5,863	7,290	1,427

#### Overview

Installation of This FIM includes replacing the existing 10-ton DX cooling unit with a new high efficiency Carrier Unit. The measurement and verification plan outlined in the IGA required measurements for this FIM to be Performed in Year 1 only. Therefore, the measurements made below are representative from Year 1 of the project term and reflected accordingly.

#### Stipulated Parameters

Stipulated parameters were based on current equipment nameplates, drawings, and engineering estimates. A summary of the stipulated parameters is listed in the table below:

COB RTUs	
Total Cooling Rating (Tons)	60
Average EER of RTUs including degradation	6.16
Equivalent Full Load Operating Hours (hr/yr) from NYS Tech Manual	667

#### Post FIM Measurement Procedure

SmartWatt has verified the SEER of the units being installed compared to the proposed SEER. The Verified SEER was approximately 13% higher than anticipated. This was the reason for the slight surplus in savings for this measure.

SEER
------

<sup>13</sup> Includes a 0.90 safety factor as stated in original IGA proposal.

IGA Proposed SEER	Verified SEER
13.4	15.4

**Saving Measurement Procedure**

Energy savings are calculated through the increase in RTU efficiency (SEER). The saving calculation is defined below:

$$SEER_{Measured} = \frac{Rated\ Btu\ of\ Cooling\ Tons}{Measured\ Watt\ hours}$$

Energy efficiency savings are calculated as follows:

$$Energy\ Efficiency\ Savings\ \left(\frac{kWh}{yr}\right) = Current\ RTU\ Usage - Post\ Implementation\ RTU\ Usage$$

$$Cost\ Savings = (kWh\ Savings * \frac{\$}{kWh}\ Rate)$$

*Current RTU Usage*

$$= Cooling\ tons \times 12,000 \frac{Btu}{ton} \times Cooling\ Full\ Load\ Hours \div SEER_{Current} \div 1,000\ W/kW$$

*Post Implementation RTU Usage =*

$$= Cooling\ tons \times 12,000 \frac{Btu}{ton} \times Cooling\ Full\ Load\ Hours \div SEER_{Measured} \div 1,000\ W/kW$$



### 3.16 FIM 16 – Water Fixture Upgrades

Pre-Installation	Pre-Installation
Pre-Installation Water Use (kGal/yr)	Pre-Installation Water Use – Adjusted Baseline (kGal/yr) <sup>14</sup>
932	935

Post - Installation		
Post - Installation Water Use (kGal/yr)	Post - Installation Verified Water Use (kGal/yr)	Variance (kGal/yr)
407	408	1

Water Savings		
Guaranteed Water Savings (kGal/yr)	Verified Electric Savings (kGal/yr)	Variance from Guarantee (kGal)
525	527	2

Energy Savings		
Guaranteed NG Savings (Therm/yr)	Verified NG Savings (Therm/yr)	Variance from Guarantee (Therm/yr)
682	685	3

#### Overview

SmartWatt has replaced existing water fixtures (toilets, flushometers, faucet flow restrictors) as described in the IGA report. The as-built water fixtures are included in **Appendix 3**. The measurement and verification plan outlined in the IGA required measurements for this FIM to be Performed in Year 1 only. Therefore, the measurements made below are representative from Year 1 of the project term and reflected accordingly.

#### Post FIM Measurement Procedure

SmartWatt has verified the proper installation and quantities of the water fixtures included in the scope of work. The as-built quantities reflect the post installation water fixtures after project completion with the following exceptions.

- 1 Additional faucet verified in the County Office Building.
- 2 Additional toilets verified in the County Office Building.

#### Savings Calculation Method

Water and energy savings were calculated based on the reduction in water consumption and lowered fuel or natural gas use associated with a reduction in hot water. A water and energy model was developed using the parameters stipulated in the IGA and are provided in **Appendix B** of the IGA. **Appendix 3** of this report

<sup>14</sup> Adjusted baseline to reflect added fixtures during construction.

represents a sample flow rate measurement that was taken on site that match the stipulated flow rates in the IGA.

*Annual Water Savings*

*= Baseline water consumption for affected fixtures*

*– Post installation water consumption for affected fixtures*

*Annual Fuel Savings*

*= Baseline fuel consumption for DHW fixtures*

*– Post installation fuel consumption for DHW fixtures*

$$\text{Annual \$ Savings} = \text{Annual water savings} \times \frac{\$}{\text{kGal}} \text{Rate} + \text{annual natural gas savings} \times \frac{\$}{\text{Therm}} \text{Rate}$$

### 3.17 FIM 17 – Replace Transformers

SmartWatt has replaced twelve (12) transformers at the following locations:

- 10 at the County Office Building
- 1 at the Recycle Center
- 1 at the Highway Garage

Pre-Installation
Pre-Installation Energy Use (kWh/yr)
87,235

Post - Installation		
Post - Installation Electric Usage (kWh/yr)	Post - Installation Verified Energy Use (kWh/yr)	Variance (kWh/yr)
18,839	18,839	0

Energy Savings		
Guaranteed Electric Savings (kWh/yr)	Verified Electric Savings (kWh/yr)	Variance from Guarantee
68,396	68,486	90

#### Overview

Installation of this FIM includes replacement of the transformers at the County Office Building, Recycle Center, and Highway Garage with high efficiency low loss transformers. The measurement and verification plan outlined in the IGA required measurements for this FIM to be Performed in Year 1 only. Therefore, the measurements made below are representative from Year 1 of the project term and reflected accordingly.

#### Post FIM Measurement Procedure

SmartWatt has verified the proper installation of the transformers along with measuring post install input power on a sample of transformers. The post install kVA of the transformers was equal to the proposed kVA of the transformers.

#### Savings Calculation Method

Energy savings are calculated based on a decrease in transformer losses. Based on the results of the metering sample the expected efficiencies were determined. The losses of the custom-built transformers were tested at the manufacturer at the same input load as measured on-site.

$$\text{Annual kWh Savings} = \text{Measured Baseline Losses} - \text{Measured Post Installation Losses}$$

$$\text{Annual \$ Savings} = \text{Annual kWh Savings} \times \frac{\$}{\text{kWh}} \text{Rate}$$



# Appendix C – Sample Performance Energy Contract



## **DESIGN-BUILD ENERGY SERVICES AGREEMENT**

**THIS DESIGN-BUILD ENERGY SERVICES AGREEMENT** (this “Agreement”) is made and effective \_\_\_\_\_ (the “Effective Date”), by and between \_\_\_\_\_ (“Owner”), with an address at \_\_\_\_\_, and **CENTRICA BUSINESS SOLUTIONS SERVICES, INC.** (“Centrica Business Solutions” or sometimes referred, “Contractor”), with an address at 2111 Ellsworth Boulevard, Malta, New York 12020. Owner and Centrica Business Solutions Services, Inc. are sometimes referred to herein, individually, as a “Party”, and, collectively, as the “Parties”.

### **RECITALS**

- A. Owner is a \_\_\_\_\_ incorporated under the laws of the State of California, and is a Public Agency within the meaning of the California Government Code 4217.10 et seq. (“4217 Code”)
- B. Owner owns and operates certain facilities described on the attached Schedule 1 (the “Facilities”), and desires to procure long-term energy cost savings and reduce related expenses in the operation of such Facilities.
- C. Centrica Business Solutions is a New York business corporation and is duly authorized to do business in the State of California and is a Qualified Energy Service Company within the meaning of the 4217 Code, engaged in the business of and having experience and capabilities in providing energy efficiency services, including Energy Conservation Measures (“ECMs”), as defined in the 4217 Code.
- D. Pursuant to Centrica Business Solutions' Proposal, Centrica Business Solutions and Owner entered into an Investment Grade Audit Agreement, pursuant to which Centrica Business Solutions conducted an investment grade audit and delivered to Owner a detailed engineering and economic report (the “IGA Report”) that specifically identifies the ECMs that are recommended to be installed and/or implemented at the Facilities.
- E. The governing body of Owner has determined, in its lawful discretion, prior to approval or ratification of this Agreement, that this Agreement meets all criteria required pursuant to California Government Code Sections 4217.10 et seq.
- F. Pursuant to the IGA Report, Owner now desires to enter into this Agreement with Centrica Business Solutions as a Design-Build Energy Services Agreement for the installation and implementation of the ECMs at the Facilities (the “Project”).

NOW, THEREFORE, the Parties agree as follows:



## **ARTICLE I**

### **PRELIMINARY MATTERS**

**1.1 INCORPORATION.** The Recitals set forth above are hereby incorporated into the body of this Agreement and made a binding part hereof.

**1.2 THE IGA REPORT.** The IGA Report is attached hereto as Exhibit A. Owner acknowledges that it has approved and accepted the IGA Report, which identifies all ECMs to be performed under this Agreement.

**1.3 CONTRACT DOCUMENTS.** The entire agreement of the Parties with respect to the Project is contained in the “Contract Documents”, which consist of: 1) this Agreement ii) any Change Orders or other amendments to this Agreement, and iii) the following Exhibits and Schedules:

Exhibit A: The IGA Report  
Exhibit B: Certificate of Substantial Completion  
Exhibit C: Savings Reconciliation Report

Schedule 1: The Facilities  
Schedule 2A: Scope of ECM Work  
Schedule 2B: Scope of MM&V Services  
Schedule 3: ECM Work Schedule  
Schedule 4: As-Built Drawings Requirements  
Schedule 5: Energy Savings Schedule  
Schedule 6A: ECM Work Schedule of Values  
Schedule 6B: MM&V Services Schedule of Values

The provisions of this Agreement shall control in the event of any conflict between its terms and those contained in any of the Exhibits or Schedules

## **ARTICLE II**

### **SCOPE AND TERM**

**2.1 SCOPE OF THE PROJECT.** The Project shall consist of two phases: 1) the “Construction & Installation Phase”, in which the Equipment (as hereinafter defined) will be designed, constructed and/or installed into the Facilities and the ECMs shall be implemented (the “ECM Work”), and 2) the “MM&V Services Phase”, in which Centrica Business Solutions will provide ongoing energy savings monitoring and reporting services, and management and/or modification of the Equipment (the “MM&V Services”). The full scope of the ECM Work and the MM&V Services are set forth and detailed, respectively, on the “Scope of ECM Work” attached as Schedule 2A, and the “Scope of MM&V Services” attached as Schedule 2B. Centrica Business Solutions shall be responsible for the professional and technical accuracy of the ECM Work and the MM&V Services, whether performed by Centrica Business Solutions or by subcontractors or others on its behalf.

**2.2 TERM.** The term of this Agreement (the “Term”) shall commence on the Effective Date, and, unless sooner terminated in accordance with the terms hereof, shall continue for a period of \_\_\_\_\_ (\_\_\_\_\_) years from the MM&V Services Commencement Date (as hereinafter defined), but subject to the termination rights provided in Sections 2.2.1.

**2.2.1 RIGHT TO PARTIAL TERMINATION.** At any time following the first (1<sup>st</sup>) anniversary of the MM&V Services Commencement Date, and upon at least sixty (60) days’ prior written notice to Centrica Business Solutions, Owner shall have the right to terminate non-required MM&V Services set forth on Schedule 2B. If Owner so elects to partially terminate, all of the then-applicable terms and provisions of this Agreement shall continue in full force and effect, except that the MM&V Services Fee shall be equitably adjusted by the Parties in a manner consistent with Schedule 6B.

### **ARTICLE III** **THE ECM WORK**

**3.1 CONSTRUCTION AND INSTALLATION OF THE ECM WORK.** Subject to the other provisions of this Agreement, Centrica Business Solutions will act as a turn-key design-builder assuming total responsibility for the design, procurement of labor and materials for the improvements to the Facilities, and the installation and start-up of the energy efficiency equipment (the “Equipment”), as set forth in and in accordance with the Scope of ECM Work.

**3.1.1 CONSTRUCTION SCHEDULE.** The Construction and Installation Phase will commence upon either the issuance by Owner of a written notice to proceed or the written agreement of the Parties fixing such commencement date. The performance of the ECM Work shall be carried out and proceed in accordance with the schedule (the “ECM Work Schedule”) attached as Schedule 3. The ECM Work Schedule may be amended from time to time by the Parties due to changes in the ECM Work or other events affecting the completion of the ECM Work.

**3.1.2 STATUTORY COMPLIANCE.** In the performance of the ECM Work, including the installation of the Equipment, Centrica Business Solutions shall, and shall require all of its contractors, subcontractors, and all subcontractors under them to, as applicable, comply with the requirements of all applicable statutes and regulations. Without limiting the foregoing, Centrica Business Solutions shall otherwise give all notices and comply with all laws and ordinances legally enacted at the date of execution of the Agreement that govern the proper performance of the ECM Work.

**3.1.3 CALIFORNIA CONTRACTORS’ LICENSE.** At all times during performance of construction services, Contractor shall be duly licensed and in good standing by the California Contractors State License Board under License #947569.

**3.1.4 CONTRACTOR/SUBCONTRACTOR REGISTRATION.** Pursuant to Labor Code Section 1771.1, “A contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract

Code, or engage in the performance of any contract for public work, as defined in this chapter, unless currently registered and qualified to perform public work pursuant to Labor Code Section 1725.5.” Contractor’s public works contractor registration number, issued by the Department of Industrial Relations is 1000661242.

**3.1.5 PERMITS AND APPROVALS.** Centrica Business Solutions shall be responsible for obtaining all necessary permits and approvals for the ECM Work, including the installation of the Equipment, and shall pay any and all permit fees. Owner shall use its best efforts to assist Centrica Business Solutions in obtaining all such necessary permits and approvals. The Equipment and the operation of the Equipment by Centrica Business Solutions shall conform to all federal, state and local code requirements in effect at the time of installation. Before Centrica Business Solutions commences any portion of the ECM Work that requires a permit or license, Centrica Business Solutions shall furnish copies of each such permit or license to Owner.

**3.1.6 PERFORMANCE.** Owner and Centrica Business Solutions shall coordinate the activities associated with the installation of the Equipment by Centrica Business Solutions with any ECM Work or installations by Owner, its employees and agents. Centrica Business Solutions shall not commit or permit any act that will materially interfere with the performance of business activities conducted by Owner or its employees without the prior written approval of Owner, which shall not be unreasonably withheld, and provided that the ECM Work Schedule shall be modified if Owner requires Centrica Business Solutions to delay or re-sequence the ECM Work in order to accommodate Owner’s operations. Centrica Business Solutions shall perform all of the ECM Work in such a manner so as not to harm the structural integrity of the Facilities or their operating systems. Centrica Business Solutions shall repair and restore to its original condition any area of damage caused by Centrica Business Solutions' performance under this Agreement. Owner reserves the right to review the ECM Work and to direct Centrica Business Solutions to take corrective action if, in the reasonable opinion of Owner, the structural integrity of the Facilities or its systems is or will be harmed. All costs associated with such corrective action to address damage caused by Centrica Business Solutions' performance of the ECM Work shall be borne by Centrica Business Solutions. In addition, Centrica Business Solutions shall be responsible for the professional and technical accuracy of all ECM Work performed, whether by its own forces or by its subcontractors or others on its behalf. Centrica Business Solutions is responsible for general broom cleaning, and shall, to the fullest extent practicable, at all times keep the Facilities clean and free of debris, rubbish and dust. At the completion of the ECM Work, Centrica Business Solutions shall remove from the worksite all construction equipment, tools, surplus materials, waste materials and debris.

**3.2 DESIGN AND CONSTRUCTION DOCUMENTS.** Drawings, specifications, and other documents, including those in electronic form, furnished or utilized by Centrica Business Solutions are instruments of service (the “Instruments of Service”). Centrica Business Solutions shall retain all common law, statutory and other reserved rights, including copyrights in the Instruments of Service. Drawings, specifications, and other documents and materials and electronic data are furnished for use solely with respect to the Project.

**3.2.1** Centrica Business Solutions grants to Owner a non-exclusive license to reproduce and use the Instruments of Service solely in connection with the Project, provided that Owner shall comply with all obligations, including prompt payment of sums when due. Owner shall not assign or transfer any license herein to another party without prior written agreement of Centrica Business Solutions. Any unauthorized reproduction or use of the Instruments of Service by Owner shall be at Owner's sole risk and expense without liability to Centrica Business Solutions, and its design professionals. Termination of this Agreement due to the default of Owner shall terminate this license. If this Agreement is terminated for any reason other than the default of Owner, Owner shall have a non-exclusive license to use the Instruments of Service for the completion, use and maintenance of the Project. Submission or distribution of Centrica Business Solutions' documents to meet official regulatory requirements or for similar purposes in connection with the Project is not to be construed as publication in derogation of the rights reserved here.

**3.2.2** Centrica Business Solutions shall pay all royalties and license fees that may be due on the inclusion of any patented or copyrighted materials, methods or systems selected by Centrica Business Solutions and incorporated in the ECM Work. Centrica Business Solutions shall defend, indemnify and hold Owner harmless from all suits or claims for infringement of any patent rights or copyrights arising out of such selection. Owner agrees to defend, indemnify and hold Centrica Business Solutions harmless from all suits or claims of infringement of any patent rights or copyrights arising out of any patented or copyrighted materials, methods or systems specified by Owner.

**3.2.3** Centrica Business Solutions shall prepare and submit to Owner final marked up as-built drawings to the extent and as set forth in the attached Schedule 4.

### **3.3 WARRANTIES.**

**3.3.1** Centrica Business Solutions warrants that all materials and equipment furnished under the Construction and Installation Phase of this Agreement will be new unless otherwise specified, of good quality, in conformance with the Scope of ECM Work and all documents associated therewith, and free from defective workmanship and materials. Warranties with respect to the ECM Work, or applicable portion of the ECM Work, as the case may be, shall commence on the date of Substantial Completion thereof (as hereinafter defined). Centrica Business Solutions agrees to correct all ECM Work that is defective in workmanship and/or materials within a period of one (1) year from the date of Substantial Completion.

**3.3.2** Centrica Business Solutions shall collect, deliver, and, to the extent permissible, assign all manufacturers' warranties and Equipment manuals to Owner. There are no warranties that extend beyond the description on the face of any such warranty.

**3.3.3** ALL WARRANTIES NOT EXPRESSLY INCLUDED IN THIS AGREEMENT, EXPRESS OR IMPLIED, INCLUDING THE WARRANTY OF MERCHANTABILITY AND THE WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, ARE

EXPRESSLY DISCLAIMED. In addition, the warranties shall be void and do not extend to any ECM Work that has been abused, altered, or misused, or that has been repaired by Owner or third parties without the supervisions or prior written approval of Centrica Business Solutions

**3.4 SAFETY OF PERSONS AND PROPERTY.** Centrica Business Solutions shall endeavor to avoid injury, loss or damage to persons or property by taking reasonable steps to protect: a) its employees and other persons at the worksite, and b) materials, supplies and equipment stored at the worksite for use in performance of the ECM Work. Centrica Business Solutions shall also oversee the safety precautions and programs of its subcontractors and suppliers at the worksite. Centrica Business Solutions' safety program shall include all actions and programs necessary for compliance with California or federally statutorily mandated workplace safety programs, including without limitation, compliance with the California Drug Free Workplace Act of 1990 (California Government Code 8350 et seq.).

### **3.5 HAZARDOUS MATERIALS.**

**3.5.1** A "Hazardous Material" is any substance or material identified now or in the future as hazardous under any federal, state or local law or regulation, or any other substance or material that may be considered hazardous or otherwise subject to statutory or regulatory requirements governing handling, disposal and/or clean-up. Centrica Business Solutions shall not be obligated to commence or continue the ECM Work until any Hazardous Material discovered at the Project site has been removed, rendered or determined to be harmless by Owner as certified by an independent testing laboratory approved by the appropriate government agency.

**3.5.2** If after the commencement of the ECM Work, Hazardous Material is discovered at the Project site, Centrica Business Solutions shall be entitled to immediately stop ECM Work in the affected area. Centrica Business Solutions shall report the condition to Owner and, if required, to the government agency with jurisdiction. If any Hazardous Material is discovered at the Project site, Owner shall be responsible for retaining any independent testing laboratory to determine the nature of the materials encountered and whether it is a Hazardous Material requiring corrective measures and/or remedial action. Such measures shall be the sole responsibility of Owner, and shall be performed in a manner minimizing any adverse effects upon the ECM Work. Centrica Business Solutions shall resume ECM Work in the area affected by any Hazardous Material only upon written agreement between the Parties after the Hazardous Material has been removed or rendered harmless and only after approval, if necessary, of the governmental agency or agencies with jurisdiction.

**3.5.3** Centrica Business Solutions shall not be required to perform any ECM Work relating to or in the area of any Hazardous Material without written mutual agreement of the Parties.

**3.5.4** If Centrica Business Solutions incurs additional costs and/or is delayed due to the presence or remediation of Hazardous Material, Centrica Business Solutions shall be entitled to an equitable adjustment in compensation and/or the ECM Work Schedule.

**3.5.5** To the extent not caused by the negligent acts or omissions of Centrica Business Solutions, or its subcontractors or suppliers, and their agents, officers, and employees of each of them, Owner shall defend, indemnify and hold harmless Centrica Business Solutions, its subcontractors, suppliers, and their agents, officers and employees, from and against any and all claims, damages, penalties, losses, expenses, and other liabilities, including attorney's fees, arising out of or relating to the performance of the ECM Work in any area affected by Hazardous Material.

**3.5.6** During the performance of the ECM Work, Centrica Business Solutions shall be responsible for the proper handling of all materials brought by it to the worksite. The provisions of this Section 3.5 shall also apply to the MM&V Services, and, without limiting the foregoing, on and after the MM&V Services Commencement Date, Owner shall be responsible under this Section 3.5 for materials and substances brought to the site by Centrica Business Solutions if such materials or substances are required by the Contract Documents.

**3.5.7** The terms of this Section 3.5 shall survive the completion of the ECM Work and the termination of this Agreement.

### **3.6 SYSTEMS START-UP AND TRAINING.**

**3.6.1** Upon Substantial Completion of the ECM Work, with the assistance of Owner's personnel, Centrica Business Solutions shall direct the checkout of Equipment and start-up operations, and adjusting and balancing of Equipment and for readiness. Centrica Business Solutions shall also secure required certificates of inspection, testing and/or approval and deliver them to Owner.

**3.6.2** Centrica Business Solutions shall conduct the training program described in Schedule 2A. The training specified in Schedule 2A shall be completed prior to Final Completion (as hereinafter defined) of the ECM Work.

### **3.7 SUBSTANTIAL COMPLETION/FINAL COMPLETION**

**3.7.1** "Substantial Completion" means that stage in the progress of the ECM Work when the ECM Work is sufficiently complete in accordance with this Agreement such that Owner can use or occupy the Facilities and utilize the ECM Work or designated portion thereof for its intended use. Upon Substantial Completion, the Parties shall execute a Certificate of Substantial Completion fixing the date of Substantial Completion and listing all unfinished items of ECM Work, in substantially the form attached hereto as Exhibit B.

**3.7.2** "Final Completion" means the point when all of the ECM Work is fully and finally complete in accordance with the requirements of this Agreement, and Owner has accepted the ECM Work, which acceptance shall not be unreasonably delayed or conditioned by Owner.

## **ARTICLE IV**



## **THE MM&V SERVICES**

**4.1 COMMENCEMENT OF THE MM&V SERVICES.** The date of the commencement of Centrica Business Solutions' obligations under the MM&V Services Phase (the "MM&V Services Commencement Date") shall be the date that: (i) Substantial Completion has been achieved for all portions of the ECM Work, and (ii) the systems start-up and training obligations under Section 3.6 have been completed. Centrica Business Solutions' obligations under the MM&V Services Phase shall thereafter continue until the conclusion of the Term or any earlier termination of this Agreement.

### **4.2 THE MM&V SERVICES.**

**4.2.1** During the MM&V Services Phase Centrica Business Solutions shall perform those MM&V Services set forth in and in accordance with the Scope of MM&V Services. Without limiting the foregoing, Centrica Business Solutions shall perform and carry out the duties and obligations set forth below in Section 4.2.2.

**4.2.2** For each year of the Term after the MM&V Services Commencement Date, within sixty (60) days of the anniversary date of the MM&V Services Commencement Date, Centrica Business Solutions shall provide Owner with an annual energy savings guarantee reconciliation report (the "Savings Reconciliation Report") in substantially the form attached hereto as Exhibit C, that calculates annual energy savings according to the Energy Savings Methodologies defined in the "Energy Savings Schedule" attached hereto as Schedule 5. Centrica Business Solutions will provide Owner with an explanation as to any variations between annual energy savings and the Guaranteed Energy Savings (as hereinafter defined) shown in the Savings Reconciliation Report. The Savings Reconciliation Report shall initially be submitted by Centrica Business Solutions to Owner in draft form whereupon Centrica Business Solutions and Owner shall use their best efforts to resolve any discrepancies in the draft Savings Reconciliation Report as soon as possible so as to arrive at mutually acceptable Savings Reconciliation Report. Centrica Business Solutions and Owner will indicate their acceptance of the Savings Reconciliation Report by signing at the end thereof. Failure of Owner to respond within 60 days of receipt of the report shall indicate Owner's acceptance of the report.

### **4.3 GUARANTEED ENERGY SAVINGS.**

**4.3.1** Centrica Business Solutions has formulated and hereby guarantees the energy and operations savings (the "Guaranteed Energy Savings") to be achieved as a result of the installation and operation of the ECM Work and the provisions of the MM&V Services, as set forth in the Energy Savings Schedule (Schedule 5). The amount of the Guaranteed Energy Savings is subject to modification based upon i) changes in the ECM Work after the Effective Date, ii) changes in the MM&V Services after the Effective Date, and iii) Material Changes, and the Parties shall reflect all such modifications by revising accordingly the Guaranteed Energy Savings and any other applicable portions of the Energy Savings Schedule.

**4.3.2** Commencing with the first twelve (12) month period following the MM&V Services Commencement Date, and for each twelve (12) month period within the Term thereafter, where the energy savings, as calculated using the method defined in the Energy Savings Schedule, are less than the Guaranteed Energy Savings, Centrica Business Solutions agrees to pay to Owner the difference between the Guaranteed Energy Savings and the sum of the actual energy savings as calculated. Centrica Business Solutions will make any such Guaranteed Energy Savings payment within ninety (90) days of the date of Owner's acceptance of the Savings Reconciliation Report pursuant to Section 4.3.1.

#### **4.4 EQUIPMENT SERVICE AND MODIFICATION.**

**4.4.1** Owner shall not move, remove, modify, alter, or change the Equipment or any part thereof ("Alterations") in any way without the prior written approval of Centrica Business Solutions, except in the event of a *bona fide* emergency where it is not reasonably possible to notify Centrica Business Solutions before carrying out Alterations. In the event of such an emergency, Owner shall take reasonable steps to protect the Equipment from damage or injury, shall follow any instructions for emergency action provided in advance by Centrica Business Solutions, and shall notify Centrica Business Solutions within three (3) business days of such emergency. Any telephonic notice of such emergency shall be followed within one (1) business day by written notice to Centrica Business Solutions from Owner. Owner agrees to maintain the Facilities in good repair and to protect and preserve all portions thereof that may in any way affect the operation or maintenance of the Equipment.

**4.4.2** In the event that any actions of Owner, including but not limited to the carrying out of Alterations, affect the performance of the Equipment, the Guaranteed Energy Savings shall be adjusted to reflect the impact of such actions. If Owner unreasonably delays in notifying Centrica Business Solutions of changes resulting from an emergency and/or Owner does not receive written approval to carry out Alterations, all Guaranteed Energy Savings obligations of Centrica Business Solutions under Section 4.3 and elsewhere in this Agreement shall automatically cease and be of no further force or effect.

**4.4.3** At all times during the Term, Centrica Business Solutions shall have the right, subject to Owner's prior written approval, which approval shall not be unreasonably withheld, to change the Equipment or any related energy automation management systems, revise any procedures for the operation thereof, and/or implement other energy saving actions in the Facilities, provided that: (i) such modifications are necessary, in Centrica Business Solutions' reasonable judgment, to enable Centrica Business Solutions to achieve the Guaranteed Energy Savings at the Facilities, and (ii) any cost incurred relative to such modifications, additions or replacement of the Equipment, or operational changes or new procedures shall be the responsibility of Centrica Business Solutions. All such modifications, additions or replacements of the Equipment or revisions to operating or other procedures shall be described in a supplemental schedule to be provided to Owner.

### **ARTICLE V** **OWNER'S RESPONSIBILITIES**

## **5.1 GENERAL RESPONSIBILITIES.**

**5.1.1** Upon request of Centrica Business Solutions, Owner shall provide all available information in a timely manner regarding requirements for the Project, including all existing reports or studies regarding the physical characteristics of the site (such as surveys, site evaluations and existing conditions reports), legal descriptions, plans and drawings, building controls, systems, apparatus, equipment and machinery.

**5.1.2** Owner shall promptly notify Centrica Business Solutions of all known unusual or materially change to the operating conditions that affect any Facilities, or any condition that may affect the ECM Work or the MM&V Services.

**5.1.3** Owner shall appoint an authorized representative to facilitate Centrica Business Solutions' performance of the ECM Work and the MM&V Services. The representative shall:

- a) be fully acquainted with the ECM Work and the MM&V Services;
- b) agree to furnish the information and MM&V Services required of Owner so as not to delay Centrica Business Solutions' performance of its obligations under this Agreement; and
- c) shall have authority to bind Owner in all matters requiring Owner's approval, authorization or written notice. If Owner changes its representative or the representative's authority as listed above, Owner shall notify Centrica Business Solutions in advance.

## **5.2 RESPONSIBILITIES DURING CONSTRUCTION & INSTALLATION PHASE.**

**5.2.1** Owner shall review the ECM Work Schedule as set forth in Section 3.1.1, timely approve any milestone dates set forth, and timely respond to its obligations thereunder.

**5.2.2** Owner shall provide sufficient space at the Project site for the performance of the ECM Work. Owner shall provide access to the Project site and Facilities for Centrica Business Solutions to perform any function related to this Agreement during regular business hours, and at such other reasonable times as may be requested by Centrica Business Solutions. Owner shall not unreasonably restrict Centrica Business Solutions' access to the Project site or Facilities to make emergency repairs or corrections as Centrica Business Solutions may determine are needed.

**5.2.3** Owner shall provide inspection and testing services during construction as required by law or as mutually agreed in writing.

**5.2.4** Contractor shall have no responsibility for compliance with the California Environmental Quality Act, other than as may be expressly included in the ECM Work in order to comply with mitigation measures designated by Owner.

**5.2.5** Contractor and the Owner acknowledge that under California Government Code Section 4215, the Owner assumes the responsibility for the timely removal, relocation, or protection of existing main or trunkline utility facilities located on the Project site which are not identified in the drawings, specifications or other Contract Documents. Prior to commencing any underground work on this Project, Contractor shall: take all reasonable steps to confirm the location of such utility facilities sufficient to assure itself that no conditions exist at or about the Project site which would require revision to the ECM Work, ECM Work Price, dates for Substantial Completion or Final Completion, or any other material provision of this Agreement; and, contact the appropriate Underground Service Alert (“USA”) and arrange to have the Project area marked by USA for underground utilities. In addition, Contractor shall review the Owner’s as-built drawings, survey’s and other site documents produced and/or made available to Contractor to locate and verify all underground utilities or other underground obstacles or site conditions. In the event that underground utilities or other underground obstacles or site conditions are discovered by Contractor that were not reflected in the results of the USA underground service inspection or in the Owner’s as-built drawings, survey’s and other site documents produced to Contractor, such matters shall be deemed unforeseen circumstances and Contractor shall be entitled to a reasonable extension of time and a reasonable increase in the ECM Work Price based upon the time and increased costs and expenses incurred by Contractor as a result of such inaccuracies. Contractor and the Owner agree that the provisions of California Government Code Section 4215 requiring that the utilities be identified in the invitation for bids shall not apply to this Agreement insofar as Contractor has the responsibility for design of the Project as well as construction of the Project. Rather, Contractor and the Owner agree that the scope of Contractor’s responsibilities relating to design of the Project includes review of Owner-provided existing condition information and interface with Underground Service Alert.

**5.2.6** If Owner becomes aware of any error, omission or failure of Contractor to meet the requirements of this Agreement or any fault or defect in the ECM Work, Owner shall give prompt written notice to Centrica Business Solutions.

### **5.3 RESPONSIBILITIES DURING THE MM&V SERVICES PHASE.**

**5.3.1** Owner shall provide Centrica Business Solutions with complete energy usage information and energy-using equipment information, as requested by Centrica Business Solutions. This information will include, but not be limited to:

- a) Copies of all utility and fuel bills for the Facilities; for the two years prior to the MM&V Services Commencement Date and ongoing throughout the Term.
- b) Direct access, by telephone modem or other reasonable means installed at Centrica Business Solutions' expense, to any and all energy management systems or building automation systems installed in or used in connection with the Facilities, with permission granted to Centrica Business Solutions to download any and all information from these systems and to store such information for the Term;

- c) Permission to install, at Centrica Business Solutions' expense, add-on devices to any and all utility and energy use meters, to enable Centrica Business Solutions to directly observe Facility utility usage, with permission granted to Centrica Business Solutions to download any and all information from these systems and to store such information for the Term;
- d) Permission, as an agent of Owner, to obtain and utilize any and all energy usage information from any and all utilities or energy suppliers providing service to the Facilities, with permission granted to Centrica Business Solutions to download any and all information from these systems and to store such information for the Term. In connection herewith, Owner agrees to execute such permission or authorization forms, which utilities or energy suppliers may from time to time require to release such information to Centrica Business Solutions; and
- e) Copies of any and all energy-using equipment repair orders or invoices for repairs or maintenance ECM Work not subject to the direct control of Centrica Business Solutions

**5.3.2** Failure by Owner to provide the information required in this Section 5.3 or otherwise comply with its obligations under this Agreement in timely fashion, will suspend the Energy Savings Guarantee described in the Energy Savings Schedule until the information is provided or other obligation is met. The failure of Owner to provide this information within ninety (90) days of the end of the applicable annual period shall be deemed a material breach of this Agreement in accordance with Section 8.2.1(d) hereof.

## **ARTICLE VI**

### **COMPENSATION AND PAYMENT**

#### **6.1 COMPENSATION FOR THE ECM WORK.**

**6.1.1** For the performance of the ECM Work, and all obligations in connection therewith under this Agreement, Owner agrees to pay Centrica Business Solutions the following sum (the “ECM Work Price”): \_\_\_\_\_ (\$\_\_\_\_\_). A detailed “ECM Work Schedule of Values”, setting forth the breakdown of the total ECM Work Price, is attached hereto as Schedule 6A.

**6.1.2** Based upon itemized applications for payment submitted to Owner by Centrica Business Solutions during the Construction and Installation Phase, Owner shall make payment to Centrica Business Solutions of the ECM Work Price as follows:

- a) The period covered by each application for payment shall be one calendar month ending on the last day of the month. Provided an application for payment is received by Owner not later than the 5<sup>th</sup> day of a month, Owner shall make payment pursuant to such application to Centrica Business Solutions not later

than the 20<sup>th</sup> day of the same month. If an application for payment is received by Owner after the application date fixed above, payment shall be made by Owner not later than twenty (20) days after receipt of the application for payment.

- b) Each application for payment shall provide such detail and back-up information or data as Owner may reasonably require, and shall be based upon the ECM Work completed and materials stored on Project site and/or at locations approved by Owner in its reasonable discretion for the period ending on the last day of the applicable month. The ECM Work Schedule of Values shall be used in establishing percentages of completion in payment applications.
- c) Final payment, constituting the entire unpaid balance of the ECM Work Price, shall be made by Owner to Centrica Business Solutions within fifteen (15) days of the date of Final Completion.
- d) Payments due and unpaid shall bear interest from the date due at the legal rate prevailing from time to time at the place where the Project is located.

## **6.2 COMPENSATION FOR THE MM&V SERVICES.**

**6.2.1** For the performance of the MM&V Services during the Term, Owner agrees to pay Centrica Business Solutions the following fee (the “MM&V Services Fee”): \_\_\_\_\_ (\$ \_\_\_\_\_). A detailed “MM&V Services Schedule of Values”, setting forth the breakdown of the total MM&V Services Fee for each item of MM&V Services, is attached hereto as Schedule 6B.

**6.2.2** Effective as of each one year anniversary of the MM&V Services Commencement Date, the MM&V Services Fee shall be increased by an amount equal to three (3%) percent of the amount of the MM&V Services Fee for the immediately preceding one (1) year period.

**6.2.3** The MM&V Services Fee shall be paid in arrears in equal annual installments on the first (1<sup>st</sup>) day of the month in which the one year anniversary of the MM&V Services Commencement Date occurs.



## **ARTICLE VII**

### **CHANGES**

**7.1 CHANGE ORDERS.** Changes in the ECM Work or MM&V Services that are within the general scope of this Agreement, and that are not minor changes in the ECM Work or MM&V Services, shall be accomplished without invalidating this Agreement by a written instrument executed by both Parties in accordance with this Article VII (a “Change Order”). Centrica Business Solutions may request or Owner may order changes in the ECM Work or MM&V Services within the general scope of this Agreement consisting of adjustment to the ECM Work Price and/or MM&V Services Fee, respectively, or the ECM Work Schedule. All such changes in the ECM Work shall be authorized by applicable Change Order.

**7.1.1** Owner and Centrica Business Solutions shall negotiate in good faith an appropriate adjustment, as applicable, to the ECM Work Price, MM&V Services Fee and/or the ECM Work Schedule, and shall conclude these negotiations as expeditiously as possible. Acceptance of the Change Order and any adjustment in the ECM Work Price, MM&V Services Fee and/or ECM Work Schedule shall not be unreasonably withheld. An increase or decrease in the ECM Work Price or MM&V Services Fee resulting from a change in the scope of the ECM Work or MM&V Services shall be determined by one or more of the following methods:

- a) unit prices set forth in this Agreement or as subsequently agreed in writing by the Parties;
- b) a mutually accepted, itemized lump sum; or
- c) if an increase or decrease cannot be agreed upon as set forth in this Section 7.1, the adjustment in the ECM Work Price or MM&V Services Fee shall be determined by the reasonable expense and savings of the performance of the ECM Work resulting from the change. If there is a net increase in the ECM Work Price or MM&V Services Fee, then a reasonable adjustment shall be made for Centrica Business Solutions' overhead and profit. In the case of a net decrease in cost, the amount of the decrease in the ECM Work Price or MM&V Services Fee shall not include reduction for overhead and profit.

**7.2 MINOR CHANGES IN THE ECM WORK.** Centrica Business Solutions may make minor changes in the design and construction of the ECM Work consistent with the intent of this Agreement that do not involve an adjustment in the ECM Work Price or MM&V Services Fee or the ECM Work Schedule, so long as such changes do not materially and adversely affect the ECM Work, the quality of the materials or equipment specified herein, the performance of any materials, equipment or systems specified herein, or the quality of the workmanship required by this Agreement.

**7.3 CHANGES AFFECTING THE GUARANTEED ENERGY SAVINGS.** The Parties acknowledge that changes that negatively or positively affect the scope of the ECM Work will necessarily affect the Guaranteed Energy Savings set forth in Section 4.3. Any Change Order

documents containing such scope changes shall also delineate any corollary Guaranteed Energy Savings adjustments.

**7.4 UNKNOWN CONDITIONS.** If in the performance of the ECM Work or the MM&V Services Centrica Business Solutions finds latent, concealed or other conditions that materially differ from the conditions Centrica Business Solutions reasonably anticipated, or if the physical conditions are different from those normally encountered and generally recognized as inherent in the kind of ECM Work or MM&V Services provided for in this Agreement, then the ECM Work Price or the MM&V Services Fee shall be equitably adjusted, and, as applicable, the ECM Work Schedule and Guaranteed Energy Savings shall be appropriately modified, by a Change Order within a reasonable time after the conditions are first observed. Centrica Business Solutions shall provide Owner with written notice of its discovery of any of the foregoing conditions as soon as practicable after such discovery.

**7.5 EMERGENCIES.** In any emergency affecting the safety of persons or property, Centrica Business Solutions shall act, at its discretion, to prevent threatened damage, injury or loss. Any change in the ECM Work Price, MM&V Services Fee or ECM Work Schedule on account of such emergency ECM Work shall be determined as provided in this Article VII.

**7.6 CHANGES IN LAW.** In the event any changes in laws or regulations affecting the performance of the ECM Work are enacted after the date of this Agreement, the ECM Work Price, the MM&V Services Fee and/or the ECM Work Schedule or Guaranteed Savings shall be equitably adjusted by Change Order.

**7.7 MATERIAL CHANGES.**

**7.7.1 Definition.** A “Material Change” is any change in or to the Facilities, whether structural, operational or otherwise in nature that reasonably can be expected, in the judgment of Owner and Centrica Business Solutions to decrease annual energy savings in accordance with the provisions and procedures set forth in the Energy Savings Schedule (Schedule 5) after adjustments for climatic variations. Actions by Owner that may result in a Material Change include, but are not limited to the following;

- a) The manner of use of the Facilities by Owner;
- b) The hours of operation for the Facilities or for any Equipment or energy using systems operating at the Facilities;
- c) Permanent changes in the comfort and service parameters set forth in Scope of ECM Work (Schedule 2A);
- d) Occupancy of the Facilities;
- e) The structure of the Facilities;
- f) The types and quantities of equipment used at the Facilities;

- g) The modification, renovation or construction at the Facilities (other than the ECM Work);
- h) Owners' failure to provide maintenance of and repairs to the Equipment; or
- i) Any other conditions other than climate affecting energy use at the Facilities.

**7.7.2 Reported Material Changes.** Owner shall use best efforts to deliver to Centrica Business Solutions a written notice describing all actual or proposed Material Changes at least thirty (30) days prior to the implementation of such Material Change, or as soon as is practicable after an emergency or other unplanned event. After Centrica Business Solutions' review of the notice, the Parties shall meet as soon as practicable to agree upon adjustments to the Energy Savings Schedule and the MM&V Services Fee, which adjustments shall be set forth in a Change Order.

## **ARTICLE VIII** **TERMINATION**

**8.1 TERMINATION BY OWNER FOR CAUSE.** Upon thirty (30) days' advance written notice to Centrica Business Solutions, Owner may terminate this Agreement for Cause (as hereinafter defined) if after giving Centrica Business Solutions written notice of such Cause, Centrica Business Solutions fails to cure the same within thirty (30) days following receipt of such notice or, if such cure cannot reasonably be effected within thirty (30) days, such cure is undertaken within such time period and is thereafter continued diligently until completion.

**8.1.1** For purposes of this Agreement, "Cause" shall mean the occurrence of any of the following:

- a) Any material failure on the part of Centrica Business Solutions to perform or comply with the terms and conditions of this Agreement; or
- b) The commencement by or on behalf of Centrica Business Solutions of any voluntary or involuntary case or matter relating to or associated with the U.S. Bankruptcy Code, or for liquidation, reorganization, or an arrangement pursuant to any other U.S. or state bankruptcy laws, or Centrica Business Solutions being adjudicated a debtor or declared bankrupt or insolvent under the U.S. Bankruptcy Code, or any other U.S. Federal or state laws relating to bankruptcy, insolvency, winding-up, or adjustment of debts, or Centrica Business Solutions making a general assignment for the benefit of creditors, or admitting in writing its inability to pay its debts generally as they become due, and/or if a custodian, receiver, trustee or liquidator of Centrica Business Solutions, all or substantially all of the assets or business of Centrica Business Solutions or of Centrica Business Solutions' interest in this Agreement, is appointed in any proceeding.

**8.1.2** If termination occurs during the Construction and Installation Phase, Owner shall be responsible for paying for all ECM Work performed by Centrica Business Solutions through the effective date of termination, and Owner may deduct from the amount due to Centrica Business Solutions the reasonable cost to Owner of any necessary remediation required with respect to the matters resulting in such termination. In the event that Centrica Business Solutions is terminated by Owner under this provision and it is later determined that such termination was improper, Centrica Business Solutions shall be entitled to the remedies set forth in Section 8.3 below.

**8.1.3** If termination occurs during the MM&V Services Phase, Owner shall be responsible for paying for all reasonable costs and expenses incurred by Centrica Business Solutions under Section 4.4 hereof prior to the effective date of termination, but subject to Owner's right to deduct its remediation costs in the same manner as provided in Section 8.1.2.

## **8.2 TERMINATION BY CENTRICA BUSINESS SOLUTIONS SERVICES, INC.**

**8.2.1** Upon ten (10) days' advance written notice to Owner, Centrica Business Solutions may, in addition to any other rights or remedies, terminate this Agreement for any of the following reasons:

- a) If the ECM Work has been stopped for at least thirty-day period under court order or order of other governmental authorities having jurisdiction, or as a result of the declaration of a national emergency or other governmental act during which, through no fault of Centrica Business Solutions, materials, supplies, tools, and construction equipment and machinery for the ECM Work are not available;
- b) If Owner has failed to pay any compensation due to Centrica Business Solutions in accordance with this Agreement for a period of thirty (30) days or more; provided however, in lieu of immediate termination, Centrica may suspend the Work, in its sole discretion, pending payment and reimbursement of its unavoidable suspension costs from Owner. In the event of such written notice of suspension by Centrica, Centrica shall be required to provide an additional five (5) days' advance written notice to Owner to terminate this Agreement.
- c) If the ECM Work has been suspended for any reason by Owner for a continuous period exceeding sixty (60) days;
- d) If Owner has materially hindered or delayed Centrica Business Solutions in the performance of any of its obligations under this Agreement, or Owner has otherwise has materially breached any covenant, agreement, warranty or representation set forth in this Agreement, and if after giving Owner written notice of thereof Owner fails to cure the same within thirty (30) days following receipt of such notice or, if such cure cannot reasonably be effected within thirty

(30) days, such cure is undertaken within such time period and is thereafter continued diligently until completion.

**8.2.2** Upon such termination, Centrica Business Solutions shall be entitled to recover from Owner as provided in Section 8.3.

Upon the payment of amounts due under this Section 8.2, neither Party shall have any further liability to the other except for those obligations expressly specified in this Agreement to survive its termination.

### **8.3 TERMINATION BY OWNER WITHOUT CAUSE.**

**8.3.1** If Owner terminates this Agreement other than pursuant to Section 8.1, Centrica Business Solutions shall be entitled to recover from Owner as follows:

- a) If termination occurs during the Construction and Installation Phase, Owner shall be responsible for paying for all ECM Work performed by Centrica Business Solutions through the effective date of termination;
- b) If termination occurs during the MM&V Services Phase, Owner shall be responsible for paying for all reasonable costs and expenses incurred by Centrica Business Solutions under Section 4.2 hereof prior to the effective date of termination;
- c) Owner shall pay for all demobilization costs incurred by Centrica Business Solutions, and purchase or rental costs incurred by Centrica Business Solutions, for any equipment acquired by the Centrica Business Solutions in connection with the ECM Work and MM&V Services;

**8.3.2** In addition to the foregoing, Owner shall further assume and become liable for obligations, commitments, and unsettled claims that Centrica Business Solutions has previously undertaken or incurred in good faith on behalf of Owner in connection with the Project hereof.

**8.4 GUARANTEED ENERGY SAVINGS.** Upon the termination of this Agreement pursuant to either Section 8.2 or Section 8.3, all Guaranteed Energy Savings obligations of Centrica Business Solutions under Section 4.3 and elsewhere in this Agreement shall automatically cease and be of no further force or effect.

## **ARTICLE IX** **INDEMNIFICATION/INSURANCE/BONDING/WAIVERS**

### **9.1 INDEMNIFICATION.**

**9.1.1** Centrica Business Solutions shall indemnify and hold Owner and its employees harmless from and against all third party claims, losses, or damages arising from the

performance of the ECM Work or the MM&V Services provided that the same are attributable to bodily injury, death and/or damage to property, but only to the extent caused by the negligent, reckless or wrongful acts or omissions acts or omissions of Centrica Business Solutions or anyone for whose acts Centrica Business Solutions is liable. In no event shall this indemnification apply to liability to the extent caused by the negligence or willful misconduct of the party to be indemnified or held harmless. This indemnification shall not be limited to damages, compensation or benefits payable under insurance policies, any worker's compensation act, or other employee benefit acts.

**9.1.2** Owner shall indemnify and hold Centrica Business Solutions and its employees and subcontractors and agents harmless from and against all third party claims for bodily injury, death, and/or damage to property (excluding damage for which Owner assumes the risk of loss or damage to the ECM Work itself) that may arise in connection with the Project but only to the extent caused by the negligent, reckless or wrongful acts or omissions acts or omissions of Owner or anyone for whose acts Owner is liable. In no event shall this indemnification apply to liability to the extent caused by the negligence or willful misconduct of the party to be indemnified or held harmless. This indemnification shall not be limited to damages, compensation or benefits payable under insurance policies, any worker's compensation act, or other employee benefit acts..

**9.2 CENTRICA BUSINESS SOLUTIONS SERVICES, INC.'S INSURANCE.** At all times during the Term, Centrica Business Solutions shall provide and maintain the insurance set forth in this Section 9.2. All insurers shall be authorized and licensed to provide insurance in the State of California, and shall be rated as A- or better by A.M. Best

**9.2.1 Workers' Compensation.** Centrica Business Solutions shall obtain and maintain Worker's Compensation insurance with statutory limits and Employers' Liability insurance in the amount of \$1,000,000.

**9.2.2 Commercial General Liability.** Centrica Business Solutions shall obtain and maintain Commercial General Liability Insurance written on an occurrence basis, with the following limits:

Each Occurrence Limit: \$1,000,000

General Aggregate Limit: \$2,000,000

Products/Completed  
Operations Aggregate  
Limit: \$2,000,000

Personal and Advertising  
Injury Limit: \$1,000,000

Medical Pay: \$5,000



**9.2.3 Automobile Liability.** Centrica Business Solutions shall obtain and maintain Business Automobile Liability Insurance covering owned, non-owned, and hired automobiles, with the following limits:

Combined Single Limit	
Bodily Injury and	
Property Damage:	\$1,000,000 Each Occurrence

**9.2.4 Professional Liability.** Centrica Business Solutions shall obtain and maintain professional liability or errors & omissions insurance for claims arising from the negligent performance of any professional MM&V Services under this Agreement, which shall be General Office Coverage, with the following limits:

Per claim:	\$1,000,000
Aggregate:	\$2,000,000

**9.2.5 Excess Umbrella.** All liability insurance may be arranged under a single policy for the full limits required or by a combination of primary, excess, and/or umbrella liability policies.

**9.2.6 Policy Terms.** Owner shall be named as an additional insured on all coverage obtained to the extent of the negligence of Centrica Business Solutions under all liability policies except Professional Liability and Workers' Compensation, on a primary and non-contributory with respect to any liability coverage maintained by Owner. Centrica Business Solutions will not cancel coverage without at least thirty (30) days' prior written notice has been given to Owner. Upon request, a certificates of insurance will be provided to Owner.

### **9.3 OWNER'S INSURANCE.**

**9.3.1 Liability Insurance.** Owner shall obtain and maintain its own liability insurance for protection against claims arising out of the performance of this Agreement.

#### **9.3.2 Property Insurance.**

- a) Owner shall obtain and maintain Builder's Risk or equivalent property insurance in a form reasonably acceptable to Centrica Business Solutions upon the entire Project, including the Equipment and the Facilities and all other existing structures in which any of the ECM Work is to be performed, as well as all Project structures that are fully or partially owned or occupied by Owner or its affiliates, for the full cost of replacement at the time of any loss. This insurance shall include as insureds Owner, Centrica Business Solutions, Centrica Business Solutions' subcontractors, and all other subcontractors and suppliers, as their interests may appear. This insurance shall insure against loss from the perils of fire and extended coverage, and shall include "all risk" coverage including at a minimum coverage for theft, vandalism, malicious

mischievous, inland transit, collapse, temporary buildings, debris removal, flood, earthquake, wind, testing, and damage resulting from defective design, workmanship, or material. Owner shall increase limits of coverage, if necessary, to reflect estimated replacement cost. Owner shall be responsible for all premiums and any co-insurance penalties, exclusions, sublimits, or deductibles.

- b) On or before the MM&V Services Commencement Date, Owner shall procure and thereafter maintain at all times during the Term, at its sole cost and expense a policy or policies of property damage insurance on all fixtures and improvements and betterments to the Facilities, including the Equipment, against any peril generally included within the classification "all risks", including, but not limited to, risks covered by fire, extended coverage, vandalism and malicious mischief, in amounts at least equal to the full replacement cost thereof (without deduction for depreciation). Such coverage shall include boiler and machinery and equipment breakdown insurance. Centrica Business Solutions shall be included as an insured or loss payee on all such policies, as its interests may appear.

**9.3.3 Policies.** Upon Centrica Business Solutions' request, Owner shall provide Centrica Business Solutions with a copy of all policies including all endorsements thereto. Centrica Business Solutions shall be given thirty (30) days' prior written notice of cancellation, non-renewal, or any endorsements restricting or reducing coverage.

**9.3.4 Loss Adjustment.** Any insured loss shall be adjusted with Owner and Centrica Business Solutions and made payable to Owner as trustee for the insureds, as their interests may appear, subject to any applicable mortgagee clause.

## **9.4 WAIVER OF CLAIMS AND SUBROGATION.**

**9.4.1 Property Damage.** Owner and Centrica Business Solutions waive all claims and other rights they may have against each other for loss of and/or damage to (i) the Project, including the Equipment and Facilities, (ii) all materials, machinery, equipment, and other items used in accomplishing the ECM Work and/or to be incorporated into the Project, while the same are in transit, at the Project site, during erection, and otherwise, and (c) all property owned by or in the custody of Owner and its affiliates, however such loss or damage shall occur, except the rights each Party has to the proceeds of such insurance held by Owner as trustee in accordance with Section 9.3.4.

**9.4.2 Waiver of Subrogation.** Owner and Centrica Business Solutions shall have their respective insurers waive all rights of subrogation they may have against one another for claims arising thereunder. If the policies of insurance referred to in this Article IX require an endorsement to provide for continued coverage where there is a waiver of subrogation, the Parties will cause them to be so endorsed.

**9.4.3 Damages Waiver.** Except to the extent of applicable insurance coverage under insurance policies procured pursuant to this Agreement, Owner and Centrica Business Solutions agree to waive all claims against the other for all special, indirect, consequential, remote, punitive, exemplary, or similar damages that may arise out of or relate to this Agreement. This waiver includes, but is not limited to, Owner's loss of use of the Facilities, all rental expenses incurred, loss of services of employees, or loss of reputation, and Centrica Business Solutions' loss of business, loss of financing, principal office overhead and profits, loss of profits not related to this Project, or loss of reputation. The provisions of this Section 9.4.3 shall survive the termination of this Agreement.

**9.4.4 Limitation of Liability.** The Parties have discussed the risk and rewards associated with the ECP Work, as well as Centrica Business Solutions' compensation for the MM&V Services. The Parties agree that Centrica Business Solutions shall procure and maintain insurance policies with such coverages and amounts and for such periods of time as required by this Agreement. In light of the foregoing, Owner agrees that Centrica Business Solutions' liability under this Agreement, regardless of the form of action, shall in no event exceed the amount of the compensation actually received by Centrica Business Solutions pursuant to Section 6.1 and Section 6.2 of this Agreement. The provisions of this Section 9.4.4 shall survive the termination of this Agreement.

## **9.5 BONDING.**

**9.5.1** Performance and Payment Bonds are required of Centrica Business Solutions as a condition to the commencement and performance of the ECM Work. All Bonds must be acceptable to Owner, and its reasonable discretion, and shall: i) be issued by good and sufficient sureties licensed in the State of California, ii) The Surety on any bond required under the Contract Documents shall be an Admitted Surety Insurer as that term is defined in California Code of Civil Procedure 995.120.

## **ARTICLE X** **CASUALTY AND CONDEMNATION**

### **10.1 CASUALTY.**

**10.1.1** After the MM&V Services Commencement Date, Owner assumes and shall bear the risk of damage, loss, theft, or destruction, partial or complete, of the Equipment and the Facilities (a "Casualty Loss"), however arising, except to the extent that the same may be caused by the negligent or willful acts or omissions of Centrica Business Solutions that is not covered by insurance to be procured pursuant to this Agreement. If Owner fails to repair or replace any Casualty Loss within a reasonable time, and in no event more than one hundred twenty (120) days from its occurrence (except to the extent that the Casualty Loss is the responsibility of Centrica Business Solutions in accordance with the foregoing), Centrica Business Solutions may, at its option: (i) terminate this Agreement by delivery of a written notice to Owner, and such termination shall be deemed a termination without Cause and will be subject to the provisions of Section 8.3 hereof, or (ii) require Owner to

amend this Agreement in a manner that equitably accounts for the loss of such Equipment and/or Facilities.

**10.1.2** In the event of a Casualty Loss caused by the negligent or willful acts or omissions of Centrica Business Solutions that is not covered by insurance to be procured pursuant to this Agreement, Owner may require Centrica Business Solutions to promptly repair or replace the damaged or destroyed Equipment and/or Facilities, and in the event of Centrica Business Solutions' failure to do so, Owner may, at its option: (i) repair or replace such items and recover the reasonable cost thereof from Centrica Business Solutions, or (ii) terminate this Agreement for Cause pursuant to Section 8.1 hereof.

## **10.2 CONDEMNATION.**

**10.2.1** In the event of the condemnation resulting in a taking of substantially all of the Facilities, this Agreement shall terminate upon the effective date of such taking, and such termination shall be deemed a termination without Cause in accordance with Section 8.3 hereof, provided, however, that the proceeds of such condemnation shall belong to Owner.

**10.2.2** In the event of a condemnation resulting in a taking of less than substantially all of the Facilities, the Parties shall amend this Agreement in a manner that equitably accounts for such taking.

## **ARTICLE XI** **COMPLIANCE OBLIGATIONS**

**11.1 STATUTORY AND REGULATORY COMPLIANCE.** Centrica Business Solutions will comply with all applicable provisions of federal, state and local law when performing the ECM Work AND the MM&V Services. Where required by law, all drawings, plans, reports, and other documents delivered to Owner as part of the ECM Work must bear the stamp or seal of architects or engineers licensed by the State of California

**11.2 FAILURE TO COMPLY.** If Centrica Business Solutions performs and ECM Work or MM&V Services knowing or having reason to know that such ECM Work or MM&V Services are contrary to applicable laws, rules and/or regulations, Centrica Business Solutions shall be responsible for payment of all reasonable costs and expenses arising therefrom.

**ARTICLE XII**  
**GENERAL PROVISIONS**

**12.1 NOTICE.** All notices required under this Agreement shall be in writing and shall be given either by: (i) personal delivery; or (ii) a nationally-recognized overnight delivery service that provides proof of delivery and addressed to the other Party at such Party's address specified below. Such address may be changed by a Party giving notice thereof in accordance with this provision.

To Owner: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

To: Centrica Business Solutions Services, Inc.  
2111 Ellsworth Blvd.  
Malta, New York 12020  
Attn: Business Unit Manager

**12.2 INDEPENDENT CAPACITY.** The Parties agree that Centrica Business Solutions is an independent contractor, and that Centrica Business Solutions and its employees and agents, shall act in an independent capacity in the performance of this Agreement, and shall not be construed as officers, employees, or agents of Owner. In addition, this Agreement shall not be construed as creating any partnership or joint venture between the Parties.

**12.3 FORCE MAJEURE.** If causes beyond a Party's reasonable control delay, impair or prevent the performance of any of such Party's obligations hereunder, expressly excepting, however, the payment of money, the time for such performance shall be extended for a reasonable period of time commensurate with the time and nature of the cause. Such causes shall include, but not be limited to: changes ordered in the ECM Work, acts or omissions of the other Party or others beyond the control of the Party whose performance is required, adverse weather conditions not reasonably anticipated, fire, unusual transportation delays, general labor disputes impacting the ECM Work, acts of governmental agencies, or unavoidable accidents or circumstances, Hazardous Materials or differing site conditions.

**12.4 FURTHER DOCUMENTS.** The Parties agree to execute and deliver all further documents and perform all further acts that may be reasonably necessary to effectuate the provisions of this Agreement.

**12.5 GOVERNING LAW.** This Agreement shall be governed by and interpreted in accordance with the laws of the State of California. The titles of the various Sections of this Agreement and elsewhere in the Contract Documents are used for convenience of reference only and are not intended to, and shall in no way, enlarge or diminish the rights or obligations of the Owner or Contractor and shall have no effect upon the construction or interpretation of the Contract Documents. The Contract Documents shall be construed as a whole in accordance with their fair meaning and not strictly for or against the Owner or Contractor.

**12.6 SEVERABILITY.** The partial or complete invalidity of any one or more provisions of this Agreement shall not affect the validity or continuing force and effect of any other provision.

**12.7 NO WAIVER OF PERFORMANCE.** The failure of either Party to insist, in any one or more instances, on the performance of any of the terms, covenants or conditions of this Agreement, or to exercise any of its rights hereunder, shall not be construed as a waiver or relinquishment of such term, covenant, condition or right with respect to further performance.

**12.8 INTERPRETATION.** The Parties agree that the following shall govern the interpretation of this Agreement:

**12.8.1** Headings and captions are for convenience of reference only and shall not affect the construction or interpretation of this Agreement.

**12.8.2** The grouping of the articles in this Agreement and of specifications under the various headings is solely for the purpose of convenient organization and in no event shall the grouping of provisions, the use of paragraphs or the use of headings be construed to limit or alter the meaning of any provisions.

**12.8.3** The terms “herein,” “hereof” and “hereunder,” and words of similar import, refer to this Agreement as a whole and not to any particular Section, Subsection or Schedule or Exhibit.

**12.8.4** The Parties have participated jointly in the negotiation and drafting of this Agreement, and no presumption or burden of proof shall arise favoring or disfavoring either Party by virtue of the authorship of any of the provisions hereof.

**12.9 CENTRICA BUSINESS SOLUTIONS SERVICES, INC. PROPERTY.** All property used by Centrica Business Solutions in connection with the ECM Work and the MM&V Services, including equipment, tools, drawings, designs, documentation, schematics, test equipment, software, and associated media remain the exclusive property of Centrica Business Solutions. Owner agrees not to use such property for any purpose at any time. Owner agrees to allow Centrica Business Solutions personnel to retrieve and to remove all such materials remaining after the ECM Work has been completed or at the end of the Term. Owner acknowledges that any Centrica Business Solutions software included in the ECM Work is proprietary and will be delivered only after execution of and pursuant to a Centrica Business Solutions standard licensing agreement.

**12.10 BINDING EFFECT.** This Agreement and the Contract Documents shall inure to the benefit of, and be forever binding upon, the Parties and their respective successors, legal representatives and permitted assigns.

**12.11 AMENDMENT.** This Agreement may be amended, modified or supplemented only by written agreement signed by the Parties.

**12.12 ASSIGNMENT.** Centrica Business Solutions acknowledges that Owner seeks to enter into this Agreement by, among other things, the qualifications of Centrica Business Solutions. Accordingly, Centrica Business Solutions agrees that this Agreement shall not be assigned in whole or in part to another person or entity, without the prior written approval of Owner.

**12.13 ENTIRE AGREEMENT.** This Agreement, including all Schedules and Exhibits hereto, constitutes the entire agreement and understanding of the Parties and supersedes all prior agreements and understandings between the Parties with respect to the subject matter hereof. Each Party acknowledges that no Party has made any promises, representations, warranties, covenants or understandings other than those expressly set forth herein.

**12.14 EXECUTION.** This Agreement may be executed in several counterparts, each of which, when executed, shall be deemed to be an original, but all of which together shall constitute one and the same instrument. The transmission of the signature of a Party by facsimile, email or other electronic means shall be deemed an original thereof by the Party receiving such signature.

**12.15 SUCCESSORS AND ASSIGNS.** Except as otherwise expressly provided in the Contract Documents, all terms, conditions and covenants of the Contract Documents shall be binding upon, and shall inure to the benefit of the Owner and Contractor and their respective heirs, representatives, successors-in-interest and assigns.

**12.16 NO WAIVER.** No action or failure to act by the Owner or Centrica Business Solutions is a waiver of a right or remedy under the Contract Documents or at law nor does a Party's failure to act constitute approval of or acquiescence in a breach hereunder.

**12.17 GENDER AND NUMBER.** Whenever the context of the Contract Documents so require, the neuter gender includes the feminine and masculine, the masculine gender includes the feminine and neuter, the singular number includes the plural and the plural number includes the singular.

*[Signature Page Immediately Follows]*



**IN WITNESS WHEREOF**, the Parties have executed this Agreement by their duly authorized representatives as of the Effective Date.

**CENTRICA BUSINESS SOLUTIONS SERVICES, INC.**

By: \_\_\_\_\_  
Name:  
Title:

\_\_\_\_\_

By: \_\_\_\_\_  
Name:  
Title:

## Find out more.

At Centrica Business Solutions Services, Inc., we provide energy expertise and solutions to organizations worldwide to improve their operational efficiency, increase resilience, and help them become a sustainable business.

We are part of Centrica plc, an international energy services and solutions company focused on helping businesses and households live sustainably and affordably.

To find out more about how we can help:

E: [brooklyn.stewart@centrica.com](mailto:brooklyn.stewart@centrica.com)

T: (916) 860-9032

W: [centricabusinesssolutions.com/us](http://centricabusinesssolutions.com/us)

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