

# Welcome to your CDP Climate Change Questionnaire 2023

## C0. Introduction

### C0.1

#### **(C0.1) Give a general description and introduction to your organization.**

**About us** - Centrica is a leading energy services and solutions company focused on helping customers live sustainably, simply and affordably. We've been providing energy for over 200 years and serve over 10m residential and business customers mainly in the UK and Ireland, through strong brands like British Gas, Bord Gáis Energy and Centrica Business Solutions. Our distinctive capabilities are across energy supply, services and solutions, energy trading and optimisation, and supported via our 20,000-strong team which includes 7,000 engineers.

In recent years we have reviewed and evolved our strategy which has led us to a move away from most of our carbon intensive assets to provide low carbon services and solutions. This includes the sale of our joint venture oil and gas assets in Norway as well as our adoption of a run-off strategy for those that remain in the UK. We're now well-positioned to create a more sustainable future by becoming a new type of integrated energy company operating across the value chain – whether developing low carbon and transition assets or providing services and solutions that help our customers live sustainably, simply and affordably.

**Our impact on climate change** - Our direct carbon emissions under scope 1 include those from sources we own or control such as power generation, gas production and storage as well as emissions arising from our property, fleet and travel. Indirect emissions under scope 2 come from electricity purchased and consumed across our offices and assets. Our scope 3 emissions arise from the services and solutions we provide such as electricity and gas sold to customers from wholesale markets alongside products purchased to run our business.

**Reducing our impact** - Climate change is one of the greatest global challenges facing society. The implications are far-reaching, and the energy sector is at the forefront of the need to respond. We believe that decarbonisation is increasingly being driven by decentralisation, digitisation and increased customer control. This changing energy landscape coupled with our distinctive capabilities, helps us play a key role in shaping the energy transition while supporting national and international reduction targets.

**Advancing towards net zero** – Building on progress made under our Responsible Business Ambitions, we introduced our People & Planet Plan in 2021. The Plan aims to create a more inclusive and sustainable future that supports communities, our planet and each other by advancing action through five Group-wide goals that matter deeply to our business and society, and where we can make a world of difference – from accelerating our shift to net zero, to building the engaged and inclusive team we need to get there. We’ve also published our Climate Transition Plan, which sets out our plan for achieving net zero while ensuring a fair and affordable transition for all.

We’re focused on:

- Helping our customers be net zero by 2050 (28% GHG intensity reduction by 2030): With around 90% of our total GHG emissions coming from our customers, the biggest thing we can do is to help them use energy more sustainably. We’ve made good progress against our net zero goal with the GHG intensity of our customers’ energy use reducing by 6% from 2019 – equivalent to the annual emissions of 630,000 homes. This is slightly behind the glidepath of our long-term goal because we had to reintroduce fossil fuels into our electricity mix, due to the escalating cost of green energy certification and the need to keep costs down for customers during the energy crisis. To progress further, we’re exploring all options to decarbonise our energy supply in a robust and affordable way while delivering energy efficiency and optimisation services, alongside low carbon technologies. We’ve set 2025 ambitions towards this, including doubling the number of Hive customers, achieving annual installs of up to 100,000 EV charging points and 20,000 heat pumps.
- Being a net zero business by 2045 (40% GHG reduction by 2034): Towards our net zero target, our total GHG emissions decreased by 6% from 2019 levels which is on track with our long term goal. To build on this and the 70% reduction in our emissions we’ve achieved over the last decade, our ambitions include building a zero-emission road fleet in the UK by 2025 and cutting our UK property emissions by a further 50% by 2030, while exiting remaining activities in oil and gas exploration and production and redirecting investment into assets that drive the transition forward – from securing up to 800MW of low carbon and transition assets like solar, battery storage and peaking plants by 2025, to exploring the conversion of our Rough gas storage facility to store hydrogen.

## C0.2

**(C0.2) State the start and end date of the year for which you are reporting data and indicate whether you will be providing emissions data for past reporting years.**

### Reporting year

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**Start date**

January 1, 2022

**End date**

December 31, 2022

**Indicate if you are providing emissions data for past reporting years**

Yes

**Select the number of past reporting years you will be providing Scope 1 emissions data for**

3 years

**Select the number of past reporting years you will be providing Scope 2 emissions data for**

3 years

**Select the number of past reporting years you will be providing Scope 3 emissions data for**

3 years

## C0.3

**(C0.3) Select the countries/areas in which you operate.**

Belgium  
Denmark  
France  
Germany  
Hungary  
Ireland  
Israel  
Italy  
Mexico  
Netherlands  
Norway  
Singapore  
United Kingdom of Great Britain and Northern Ireland  
United States of America

## C0.4

**(C0.4) Select the currency used for all financial information disclosed throughout your response.**

GBP

## C0.5

**(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.**

Operational control

## C-EU0.7

**(C-EU0.7) Which part of the electric utilities value chain does your organization operate in? Select all that apply.**

Row 1

**Electric utilities value chain**

Electricity generation

**Other divisions**

Gas storage, transmission and distribution

Smart grids / demand response

Battery storage

Micro grids

Gas extraction and production

## C0.8

**(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?**

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, an ISIN code	GB00B033F229

## C1. Governance

### C1.1

**(C1.1) Is there board-level oversight of climate-related issues within your organization?**

Yes

### C1.1a

**(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.**

Position of individual or committee	Responsibilities for climate-related issues
Chief Executive Officer (CEO)	Centrica's Group Chief Executive has overall responsibility for the business' climate related issues, as they are responsible for setting Group objectives and strategy to be approved by the Board, including those related to climate change. Through their membership of the Board and attendance at the relevant Board sub-committees the CEO ensures that issues associated with climate change are

	<p>represented consistently at the highest level. The Safety, Environment and Sustainability Committee (SESC), on which the CEO and Chairman sit, is accountable for oversight on climate change.</p> <p>Our CEO also chairs the Centrica Leadership Team, which meets monthly and which has delegated authority to set objectives, targets and policies for managing issues related to climate change including the design and performance against our climate change targets and ambitions.</p> <p>Climate change is also a key subject matter discussed and reviewed within other lead forums that the CEO hosts, such as the quarterly Risk &amp; Controls meetings held with the Group CFO and BU Managing Directors.</p>
<p>Director on board</p>	<p>The Chair of the Board Safety, Environment and Sustainability Committee (SESC) additionally has oversight for climate-related issues through their role as committee chair. The Chair of the SESC is an independent Non-Executive Director and is therefore well-placed to oversee the adequacy and effectiveness of internal controls and risk management systems relating to climate change, through their leadership of the committee which scrutinises these matters. They typically review climate change information three times a year.</p> <p>The Board is further aided by the Audit and Risk Committee in reviewing stated matters quarterly whilst also overseeing audit and risk matters at CLT meetings. Meanwhile, the Remuneration Committee ensures climate change is considered in remuneration arrangements and in 2022, climate transition KPIs were incorporated into incentive plans for Executive Directors and other key colleagues across the Group. Additionally, they receive and review an annual detailed update on climate-related strategy, risks, opportunities and overall progress against our climate change ambitions.</p>

## C1.1b

**(C1.1b) Provide further details on the board’s oversight of climate-related issues.**

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
<p>Scheduled – all meetings</p>	<p>Reviewing and guiding strategy Overseeing and guiding the development of a transition plan</p>	<p>Centrica has a governance structure which follows best practice, through which the Board has group-wide oversight of climate related issues.</p> <p>Oversight on climate change was provided by the Board Safety, Environment and Sustainability Committee (SESC). The SESC meets 3 times annually to review the groups climate change strategy, action plans and the effectiveness of internal controls and risk</p>

	<p>Monitoring the implementation of a transition plan</p> <p>Overseeing the setting of corporate targets</p> <p>Monitoring progress towards corporate targets</p> <p>Reviewing and guiding the risk management process</p>	<p>management including those relating to climate change. Progress in meeting our Climate Change goals is reported at each meeting and subject to deep-dive review at least annually, using a dashboard of key performance indicators (KPI) relating to our near and long-term climate change targets and ambitions.</p> <p>The SESC Chair provides a report to the Main Board following each meeting; the Board considers climate performance as necessary following each meeting, and climate strategy annually in line with the frequency at which this is discussed by SESC. The Board reviews the recommendations and reports provided by the SESC, and other Board committees.</p> <p>Climate Change is identified as a key risk, within the Group Enterprise Risk Management process feeding into these board meetings. Climate risks are considered, along with all business unit risks as part of the business unit Risk, Assurance and Control Committees (RACC) four times annually to evaluate and challenge material risks, risk appetite and the adequacy of mitigating controls and assurance. The most significant and material risks which determine the Group Principal Risks are then reported to the Centrica Leadership Team (CLT) chaired by the Group Chief Executive Officer, before submission to the Audit and Risk Committee to ensure Board challenge and oversight. Our ERM Framework uses a time horizon of 1–3 years to assess Principal Risks alongside a longer timeframe of 3–20 years to assess Emerging Risks. Following this process, climate change has been a Principal Risk since the 2021 reporting period.</p> <p>A more detailed report is delivered to SESC annually by the Group Head of Environment and then reviewed by the committee providing an update on climate-related strategy, risks, opportunities and overall progress against our climate change goals out to 2050. Performance against, and continued suitability of, climate goals and targets are also reviewed.</p> <p>The Board &amp; Executive have dedicated annual meetings to review and develop strategy. At the annual Board Planning Conference, the external environment and strategic plans are examined, including the group's net</p>
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		zero strategy and longer term risks relating to market, competition, technology, and policy aspects, all of which are influenced by climate change. All businesses assessed net zero and the energy transition as part of their strategic proposals which are presented to the Board annually.
Scheduled – some meetings	Overseeing and guiding employee incentives	The Remuneration Committee ensure that Executive Directors are appropriately rewarded, with climate change considered as part of those arrangements. They meet at least four times a year to review and assess performance across a range of financial and non-financial KPIs which includes our Climate Transition Dashboard.

### C1.1d

**(C1.1d) Does your organization have at least one board member with competence on climate-related issues?**

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues
Row 1	Yes	Our Board and its committees have a range of skills, experience and knowledge relevant to Centrica and its markets. We assess Board skills and expertise using a Skills Matrix covering 11 core skills criteria one of which is Climate Change and Sustainability. The specifics of this criteria have been developed with reference to Chapter Zero’s ‘declaration on climate capabilities in the boardroom’ including a requirement for deep experience of the science around global warming, the international and national debate and evolving stakeholder expectations; and climate-related risks facing businesses and mitigating those risks for progress towards net zero. Whilst our view is that climate change is best addressed as a collective effort across company Boards rather than delegated to an individual, our last Board capability review identified 4 serving board members with deep competence on climate related issues including our Chief Executive Officer and the Chair of the Board Safety, Environment and Sustainability Committee.

### C1.2

**(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.**

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**Position or committee**

Chief Executive Officer (CEO)

**Climate-related responsibilities of this position**

Setting climate-related corporate targets  
Assessing climate-related risks and opportunities  
Managing climate-related risks and opportunities

**Coverage of responsibilities**

**Reporting line**

Reports to the board directly

**Frequency of reporting to the board on climate-related issues via this reporting line**

Quarterly

**Please explain**

The Chief Executive Officer (CEO) chairs the Centrica Leadership Team (CLT) meetings. As Chairman of the CLT, the CEO is ultimately accountable for ensuring that the CLT is effective in discharging its duties. Chairing enables the CEO to assess and monitor climate related issues in detail with relevant technical and business support as required.

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**Position or committee**

Other, please specify  
Centrica Leadership Team

**Climate-related responsibilities of this position**

Implementing a climate transition plan  
Setting climate-related corporate targets  
Assessing climate-related risks and opportunities  
Managing climate-related risks and opportunities

**Coverage of responsibilities**

**Reporting line**

CEO reporting line

**Frequency of reporting to the board on climate-related issues via this reporting line**

Quarterly

**Please explain**

The Centrica Leadership Team (CLT) chaired by the Group Chief Executive has the authority to set objectives, targets, and policies for managing issues related to climate



change. The CLT met monthly during 2022 and at each meeting reviewed and set as appropriate; HSE policies, standards and governance arrangements, reviewed HSE performance and monitored and reported on the effectiveness and operation of HSE management systems and controls, including risk and opportunity management.

Operational environmental performance forms part of the remit of the HSE departments of each business unit and therefore is considered in an integrated manner through the review of these elements of HSE performance. The organisation's performance on HSE is reported at each CLT meeting. Additionally, several environmental deep-dives were undertaken with the Committee, where greater detail was provided and reviewed and any proposals for approval or emerging issues were discussed. As the committee which sets the overall direction, tone from the top and performance expectations for environment in Centrica, it is responsible for the management of issues related to climate change, for example, in 2022 they reviewed strategic options on green energy supply and the results of TCFD aligned scenario analysis.

The CLT membership comprised of the Group Chief Executive, Group Chief Financial Officer, Managing Director British Gas, Managing Director Centrica Business Solutions, Managing Director Bord Gais, Managing Director Trading, Group Chief People Officer, Group General Counsel & Company Secretary, and the Executive Vice President - Strategy. Other senior leaders for the business units and relevant Group functions also attended as appropriate, including the Group Head of Environment. As climate-related issues have an impact across the business and all its geographies, and require relevant expertise, this committee was chosen to be responsible for climate related issues, due to its comprehensive business representation and appropriate climate expertise.

### C1.3

**(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?**

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	

### C1.3a

**(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).**

**Entitled to incentive**

Board/Executive board

**Type of incentive**

Monetary reward

**Incentive(s)**

Bonus - % of salary

**Performance indicator(s)**

Achievement of climate transition plan KPI

**Incentive plan(s) this incentive is linked to**

Short-Term Incentive Plan

**Further details of incentive(s)**

Centrica’s Executives are granted a Restricted Share Plan. This award is underpinned by financial and non-financial measures. For the 2023 award, the remuneration committee considered "whether there has been failure to make appropriate progress against our Climate Transition Plan" which sets out our ambition. The metrics used to determine progress against our CTP are reported in our annual report, and include our two emissions targets for Centrica and our Customers.

**Explain how this incentive contributes to the implementation of your organization’s climate commitments and/or climate transition plan**

Our board and senior execs recognise the strategic importance of delivering our climate transition plan, and they are in a unique position to influence our progress via their decision-making power. Establishing an incentive simply furthers their commitment to making top-level decisions aligned to our carbon transition plan, ensures near-term accountability and helps apply pressure to the business to accelerate the delivery of the plan.

## C2. Risks and opportunities

### C2.1

**(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?**

Yes

### C2.1a

**(C2.1a) How does your organization define short-, medium- and long-term time horizons?**

	From (years)	To (years)	Comment
Short-term	0	1	We consider short-term risks & opportunities (R&O) to be those with the potential to be realised in the immediate term, i.e. 1-year time period. Such R&O would be considered through the monthly Business Unit performance reviews, where delivery of the Group Operating Plan is monitored. Climate R&O over this timescale would be included in the Business Unit reporting to the Group Enterprise Risk process.

Medium-term	1	3	Our Group-wide Enterprise Risk process looks over a period of up to 3 years and includes relevant climate risks as part of our assessment of Principal Risks that have the potential to impact our strategy. In 2022 climate change remained a Principal Risk. Climate R&O over this timescale are integrated into the Group Enterprise Risk Management process.
Long-term	3		<p>Longer term external trends are monitored and reviewed annually as emerging risks in our Enterprise Risk process. Longer term trends and risks are also reviewed through our strategic planning processes, including our annual Board Planning Conference.</p> <p>In 2022, we refreshed our climate change scenario analyses, using a 2021 baseline, out to 2050. Due to the nature of climate change risks, the TCFD scenario analysis time frames are all 'long-term', however, we have considered them in three sub-time frames: 'near long-term' (2022 to 2025), 'medium long-term' (2026 to 2035), and 'far long-term' (2036 to 2050). This aligns to our Climate Transition Plan.</p>

## C2.1b

### (C2.1b) How does your organization define substantive financial or strategic impact on your business?

Risks related to, or influenced by, climate change are assessed alongside other business risks. A substantive financial or strategic impact on our business is defined through our Risk Assessment Criteria.

In the Risk Assessment Criteria, risks are assessed using potential impact severity alongside the likelihood of materialisation. A 1-5 impact and 1-5 likelihood scale is used, with the overall risk rating (1-25) being the product of impact multiplied by likelihood. The impact score is derived using several criteria including Financial impact.

Financial impact is scored on a scale of 1-5 from negligible to severe and is normally derived through consideration of lifetime or in-year operating cash flow impact. **A substantive financial impact** on 'in-year operating cashflow' is defined as severity level 4 'Significant' (£40–60m) and severity level 5 'Severe' (>£60m) .

## C2.2

### (C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

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#### Value chain stage(s) covered

Direct operations  
Upstream

Downstream

**Risk management process**

Integrated into multi-disciplinary company-wide risk management process

**Frequency of assessment**

More than once a year

**Time horizon(s) covered**

Short-term

Medium-term

Long-term

**Description of process**

Climate change is included as a key risk within the Group Enterprise Risk management (ERM) processes, which addresses risks over short and medium-term horizons on a quarterly basis at the group level. Climate-related risks are also identified and assessed under other Principal Risks across our Risk Universe, reflecting how climate change affects many aspects of our business (upstream, downstream and direct operations) and the external environment. Each identified risk from asset to company level, is consistently assessed and reported according to 'Our Approach to Enterprise Risk' guidance. Substantive risks that could threaten the business under a severe but plausible scenario, undergo robust assessment and form the basis of our annual viability statement.

Risks are prioritised by assessing potential impacts alongside likelihood, quarterly, by each business unit. A 1-5 impact and 1-5 likelihood scale is used, with the overall rating (1-25) being their product. The impact score is derived using several criteria including HSE (Health, Safety, Environment), Regulatory, Legal, Stakeholder and Financial impact.

Financial impact is scored on a scale of 1-5 from negligible to severe and is normally derived through consideration of lifetime or in-year operating cash flow impact. A substantive financial impact on 'in-year operating cashflow' is defined as severity level 4 'Significant' (£40–60m) and severity level 5 'Severe' (>£60m)

For the purposes of quantifying potential financial impacts from transition and physical climate risks, in line with the recommendations of the TCFD, we also used percentage of Gross Margin (GM) as the quantifiable indicator. This enables a holistic assessment to be made.

Likelihood is scored on a scale of 1-5 based, from 1 being remote (rarely happened in industry or sector), through, to almost certain (there is a history of common occurrence across the Group, sector and / or external market).

Risk ratings are represented on a risk heat map and ranked as low, moderate, or high according to the overall risk rating. The moderate and high risks are compared to the risk appetite the business has set for that risk. Where there are out-of-appetite risks, the

BU or Functional Risk manager facilitates the design and implementation of controls and mitigation actions to manage the potential impacts. The control and mitigations might be in the form of implementing standards and management systems; or an external risk might be controlled through scenario and contingency planning with little ability to reduce likelihood; or we may accept the risk to execute our business strategy, for example to capitalise on an identified opportunity. The Risk owner, supported by the risk managers, will identify an appropriate owner for new controls and mitigation activities, review existing controls and mitigation actions to ensure they are effective and continuously improved; and ensure that controls and action plans are implemented as part of their BU Risks and Controls forum..

An example of a transitional risk managed through this process is 'mandates on, and regulation of, existing products and services increasing operating costs'. Regulatory risks are identified at both an asset and group level through our business unit and enterprise risk management processes. Failing to comply with our ECO obligations, which requires energy suppliers to reduce heating costs for low-income households, is an example which was identified at the business level by British Gas. It was assigned a likelihood score of 3 and an impact score of 3, meaning it was categorised as a medium risk. Mitigating actions over the prior 3 years meant that we successfully met last year's mandate (ECO3).

The physical risk of extreme weather events, such as flooding at Easington terminal for our UK gas storage business, has been identified through our risk management processes at CSL business level and classified as an external risk. The potential impact of such flooding could prevent access to operational areas, forcing a site shut down and loss of revenue. This was assigned a likelihood score of 1, due to the area being a '1/1000 year' flood location, and an impact score of 3, meaning it is not categorised as a substantive risk, and does not require mitigation nor escalation.

The top risks for each business unit (BU) or function are reported to Group Enterprise Risk and each of these risks is allocated to one of the Group Key Risks. Quarterly Risk & Controls meetings are held with the Group Chief Financial Officer (CFO), Chief Risk Officer, Head of Internal Audit, and BU Managing Directors. The risks presented to them are the substantive financial or strategic risks to the business, whether climate related or otherwise.

The Top 10 risks impacting the Group are presented as the Group Principal Risks. Each Principal Risk is rated using the same 1-25 scoring based on the reported BU or function risks. The ratings of the Principal Risks are reported to the Centrica Leadership Team (CLT) and the Audit and Risk Committee (ARC). This ensures a clear understanding of our risk profile, whether the risks are within our risk appetite, the risk mitigations in place, and the related assurance activities.

The Principal Risks used in 2022 are listed and described in the Annual Report and included climate change.

To support the short-, medium- and long-term risk identification, assessment, and

response processes described above Centrica undertakes annual climate change scenario analysis. The scenario analysis models the potential (unmitigated) climate change risks over plausible pathways, identifying inherent substantive climate related financial and strategic impacts over the different time horizons. The results help inform the business view of how risks might evolve and the effectiveness of the mitigating actions we are taking. The output from this work feeds into the ERM process.

## C2.2a

### (C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	As an energy company, we are subject to many regulatory requirements relating to climate change, including the EU Emissions Trading Scheme (ETS), Energy Savings Opportunity Scheme (ESOS) and Energy Company Obligation (ECO). Due to the significance of such regulations to our business, we closely monitor and assess risks associated with any changes through their inclusion in our enterprise risk management (ERM) process. This would usually be raised by our Legal, Regulatory, Ethics and Compliance, Health, Safety and Environment and Corporate Affairs Functions and discussed under our "Political, Legal, Regulatory or Ethical Intervention / Compliance Principal Risk". For example, to ensure compliance for ECO3 which closed at the end of March 2023, we delivered beyond 100% to allow for any unexpected losses through the closedown process.
Emerging regulation	Relevant, always included	Due to the long-term nature of investments in the energy sector, new regulations have the potential to impact the economics of our projects and hinder investment and thus we continually monitor, review and assess proposed and incoming regulatory change as part of our ERM framework to mitigate and manage potential impacts on our business. Emerging regulation is monitored on an ongoing basis by our Legal and Regulatory, Ethics and Compliance, Strategy, Environment & Reputation and Corporate Affairs Functions; and is usually discussed under our "Political, Legal, Regulatory or Ethical Intervention / Compliance" Principal Risk.
Technology	Relevant, always included	The need to develop new technologies and innovate is vital to meeting our purpose of helping our customers live sustainably, simply and affordably. Decarbonisation is a significant driver of technology development within the energy sector, including distributed energy products and services, such as demand response and energy optimisation. New technology presents both risks and opportunities to our business and the external market is highly competitive and changing. These risks are regularly assessed through our ERM process to ensure competitive threats are identified and that we are

		<p>focused on designing new product offerings which are attractive to customers. For example, our current UK energy services business revenue in British Gas Services &amp; Solutions relies heavily on the skills and supply chains established to maintain and install natural gas boilers at scale. As the UK decarbonises this sector in the coming decades, we have modelled that under certain scenarios, there is a long-term risk that this will result in a material reduction in our Gross Margin (GM). To mitigate the potential adverse impact to the GM, we will need to transition these skills and supply chains towards alternative technology, whether electrified or hydrogen based.</p>
Legal	Relevant, always included	<p>Failure to comply with our legal obligations in relation to climate change is a key risk to our business, as Safety, Compliance and Conduct is a core strategic priority for Centrica. There is a wide range of climate-related legislation that is applicable to the energy sector, including the EU ETS, Energy Savings Opportunity Scheme (ESOS), and ECO. The effectiveness of our processes to identify and manage compliance with this legislation is regularly assessed and reported quarterly by our Legal and Regulatory, Ethics and Compliance Function through our ERM process. This would usually be discussed under our “Political, Legal, Regulatory or Ethical Intervention / Compliance” Principal Risk. For example, failure to deliver our obligations under ECO (legislation that requires energy companies to improve domestic energy efficiency and invest in reducing heating costs for vulnerable customers) could lead to enforcement action, including fines to compensate for consumer detriment. As a consequence, ECO is overseen by a senior monthly forum (ECO Board), attendees include the Energy Managing Director and Energy CFO.</p>
Market	Relevant, always included	<p>Our strategy has been informed by analysis of key market trends, which includes changing consumer behaviour due to factors such as energy efficiency and climate change, leading to reduced energy per customer in some markets. With a significant proportion of our total revenue coming from energy supply, the risk from reduced demand is a potential reduction in revenue. Demand reduction has been driven by improved energy efficiency, achieved through successful decarbonisation initiatives, and changing customer behaviour as a result of greater environmental awareness, alongside reaction to price changes and economic downturn. Given that we have identified decarbonisation as a key market trend influencing the energy sector, this is monitored through our ERM process, within our “Managing Fluctuations in Demands and Markets and Innovation” Key Risks, to ensure we are successfully responding to external drivers and delivering on our strategy.</p>



<p>Reputation</p>	<p>Relevant, always included</p>	<p>The risk of damage to our brand, trust, and reputation due to failure to manage our impact on society including climate change could have a negative impact on consumer sentiment. Our strategy is focused on delivering our Purpose to help our customers ‘live sustainably, simply and affordably’ and ensuring our reputation aligns with this is therefore vital to its delivery and is regularly assessed and reported by our Corporate Affairs Function and assessed quarterly through our ERM process, within our “Competitive Position of Centrica Brands” Key Risk. Reputation is also assessed through the Stakeholder impact criteria on our Risk Assessment Matrix and so can form part of the scoring for any risk.</p> <p>For example, involvement in hydrocarbon production may be viewed adversely by some stakeholders, as not being aligned with the Paris Agreement, considering the need to reduce fossil fuel consumption in the coming decades. This in-turn could result in a loss of investors or customers. However, it is widely accepted that natural gas will be a key transition fuel for the next 2 or 3 decades. Given this context and the need to counter the reputational risk, Centrica’s joint venture, Spirit Energy, has published plans to run down their remaining assets in the next decade and committed to no further oil and gas exploration for new fields.</p>
<p>Acute physical</p>	<p>Relevant, always included</p>	<p>Acute climate risks, such as extreme weather events, can pose a number of challenges to our operations and assets, due to the potential for disruption to critical processes and/or infrastructure, as well as the potential for increased customer demand for our services. For example, our 2022 TCFD assessment considered whether flooding events would affect our assets, such as power stations and gas terminals. Since 2015 we have significantly reduced our portfolio of large scale assets, materially reducing our risk exposure. The remaining assets have had flood assessments and the risk is considered immaterial with low exposure to flooding in their remaining operation lifetimes across all modelled scenarios. We continue to assess weather risks through our ERM process to ensure the continued resilience of our business to these events. These assessments are conducted within our “Customer”, “Safety” and “Security” Key Risks and reported quarterly to the SESC and Audit and Risk Committee.</p>
<p>Chronic physical</p>	<p>Relevant, sometimes included</p>	<p>Rising mean temperatures and changing weather patterns can present a risk to our business. The Chronic physical risks and opportunities of climate change were assessed in 2022 as part of our TCFD scenario analysis. For example, the impact of increased temperatures, including milder winters, was assessed and could potentially have an impact on long-term demand for natural gas and electricity for heating in the UK and Ireland, resulting in a corresponding fall in supply revenue. These chronic physical risks and their impacts are</p>



		<p>considered through our annual strategic planning processes. The impacts are partly countered by Centrica's natural hedge, whereby decreased demand for heating is countered by increased cooling demand.</p> <p>Changes to weather patterns causing global uncertainties are considered by our Demand Forecasting teams and are assessed and reported as part of our "Global Uncertainties" Key Risk to the Audit and Risk Committee.</p>
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## C2.3

**(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?**

Yes

## C2.3a

**(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.**

### Identifier

Risk 1

### Where in the value chain does the risk driver occur?

Direct operations

### Risk type & Primary climate-related risk driver

Emerging regulation

Mandates on and regulation of existing products and services

### Primary potential financial impact

Decreased revenues due to reduced demand for products and services

### Company-specific description

Reduced GM from the sale of less energy, particularly natural gas.

In the long term, unabated natural gas consumption needs to be reduced significantly to achieve the UK's net zero commitments. The rate and depth of the phasing out of natural gas is uncertain and depends on many factors.

Decarbonising heating systems is one of the UK's biggest challenges on the journey to net-zero by 2050. Heat accounts for approximately a third of UK emissions, with this proportion likely to increase in the short term.

The vast majority of UK domestic consumers (85%) are connected to the gas (methane) grid and use it for heating, along with an additional 65% of non-domestic buildings. As

UK heating systems decarbonise the source of energy for most, if not all, systems will change to lower carbon alternatives, and therefore methane gas sales could decrease for Centrica. This risk of reduced energy sales will be compounded by a likely reduction in energy consumption due to increased energy efficiency measures.

These reductions could be partially, to fully, offset by an increase in demand for low carbon hydrogen and electricity for heating, as well as planned growth in customer numbers. Any changes in regulatory environment (e.g. the price cap) due to changing consumer behaviour will also affect the magnitude of the impact on our business and could provide some mitigation.

Energy supply is a material business area for Centrica. British Gas Energy, which supplies energy to residential and small business customers in the UK, generates ~£13bn in revenue (approximately 40% of Centrica's total). The proportion of this revenue which is due to heating is also roughly half.

**Time horizon**

Long-term

**Likelihood**

Likely

**Magnitude of impact**

High

**Are you able to provide a potential financial impact figure?**

Yes, an estimated range

**Potential financial impact figure (currency)****Potential financial impact figure – minimum (currency)**

0

**Potential financial impact figure – maximum (currency)**

425,000,000

**Explanation of financial impact figure**

Centrica's revenue from gas sales was just under a fifth of company revenue at £5.9bn in 2022, against a total revenue of £33.6bn. Therefore a material proportion of Centrica's activity is at risk in a deep decarbonisation scenario without mitigation.

Our TCFD scenario analysis mapped our energy sales operations out to 2050 against four Future Energy Scenarios (FES) from National Grid (ranging from 1.5 to >2 degree scenarios). This provided potential scale ranges for the decrease in revenue from natural gas heating, as well as to the increased sales of electricity and green/low carbon fuels for new low carbon heating systems.

The gross margin in energy sales (excluding transport) were modelled in line with our

current strategic plans. They were extrapolated out to 2050 with a static market share, against the FES scenarios. The resulting financial figures represent the highest and lowest net position from the 4 different FES scenarios. They are the potential net annual gross margins at risk for this activity in 2050.

In the long term (2050) the smallest financial impact, in the 'falling short' scenario, is calculated as zero due to minimal impact on existing natural gas sales. There were certain instances in our analysis where scenarios resulted in a net opportunity for energy sales. We have not included these here due to the opportunities not being driven by climate factors but instead population and market share growth

In the long term (2050), in the most aggressive decarbonisation scenario, the magnitude of the impact could be 'high'. The inherent risk (with no mitigation measures) is that the natural gas sales would nearly cease, with the destruction loss of the associated GM. However, these reductions will be partially offset by an increase in demand for low carbon hydrogen and electricity for heating, as well as planned growth in Centrica's customer numbers. Our analysis in this scenario suggests a potential maximum loss of £425m net annual gross margin in 2050.

Note, these figures are indicative only. We have held unit margin static, which is unlikely as markets evolve. We may also choose to increase or lower the modelled market shares. The FES scenarios used are not necessarily in line with what Centrica actually expects to occur, rather they offer a range of plausible pathways to model.

### **Cost of response to risk**

0

### **Description of response and explanation of cost calculation**

Situation: Current legislation (e.g., the UK banning gas boilers for new builds from 2025) and potential regulation, (including the banning of new gas boilers in all homes) will result in potentially significant reductions in consumer demand for natural gas.

Centrica's revenue from gas sales was just under a fifth of the total company revenue at approximately £5.9bn in 2022, against a total business figure of £33.6bn. Therefore this is an inherent substantive financial risk for Centrica, in the absence of mitigation strategies.

To counter this, there is an opportunity for Centrica to sell more low carbon energy, including electricity, for heating which will replace methane.

Task: Centrica sells both natural gas and electricity to end user customers. As the UK pivots away from natural gas, customers will need to switch to alternative energy sources, likely in the form of hydrogen gas and electricity. Centrica already sells electricity and will be able to offer hydrogen gas when it becomes available. We need to ensure that we are equipped, and the supply chains are in place, to seize these growing low carbon energy supplies.

Action: Energy switching in the short and medium term is likely to be in the form of switching from natural gas to electricity. As an established business selling electricity to customers, there will be no material OPEX and CAPEX costs associated with greater

electricity sales. The software, processes and staff resources will stay broadly the same. In the longer term, the energy switching could include switching from natural gas to hydrogen. This is likely to be in the form of increasing hydrogen blends being delivered to customers. From Centrica's perspective this will not require additional systems or staff.. The activity of procuring and trading in an established hydrogen market does not have any inherent increase in CAPEX or OPEX costs on the trading side versus incumbent fuels such as methane.. There is a risk that some assets and infrastructure may need to be replaced, e.g. non-hydrogen compatible meters, although - depending on the scale and pace of transition - any obligations falling on us as a supplier may be deliverable through existing activity programmes.

Result: Therefore, while the potential financial impact of the inherent risk of reduced natural gas sales is modelled as low to high, costs to mitigate the risk are considered low to zero, with the potential for the mitigation to result in an opportunity for increased GM.

### Comment

## C2.4

**(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?**

Yes

### C2.4a

**(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.**

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#### Identifier

Opp1

#### Where in the value chain does the opportunity occur?

Direct operations

#### Opportunity type

Products and services

#### Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

#### Primary potential financial impact

Increased revenues through access to new and emerging markets

#### Company-specific description

Decarbonising heating systems is one of the UK's biggest challenges on the journey to net-zero by 2050. Heat accounts for approximately a third of UK emissions, with this proportion likely to increase.

The UK Government has made clear, through its Heat and Buildings Strategy, that transitioning away from the methane gas grid is a necessity for achieving net zero. The current strategy, especially in the short term, focuses on electrification. The plan includes an ambition to grow the heat pump market to 600k installations per year by 2028 to support this transition. The Government is launching efforts to support this ambition such as the new obligation on manufacturers to sell low-carbon heat pumps as a proportion of total heating technology sales, and the established Boiler Upgrade Scheme to incentivise consumers to purchase a heat pump.

Centrica's British Gas Services and Solutions (BG S&S) business unit is the largest servicer and installer of gas boilers in the UK with approx. 7,000 engineers. In 2022 BG S&S had 3.4 million service customers and undertook 282,000 natural gas (methane) boiler install and on-demand jobs, generating ~£1.5bn in revenue, the vast majority being generated from the servicing and installation of gas boilers. This equates to approximately 4% of Centrica's total revenue.

Future legislation banning the installation of new natural gas boilers clearly puts this revenue at risk. However, growth in the low carbon heating market, through the proliferation of heat pumps, other electrified solutions, and hydrogen technology will be a material opportunity for Centrica – one which we expect to exceed the revenue at risk. British Gas Services for instance, which generates ~£1.5bn in revenue (~4% of Centrica's total) derives the vast majority of this revenue from heating system installation and servicing and will grow sales in these low carbon technologies.

Despite the low-carbon heating market being nascent, British Gas Services is already scaling up the number of installs of heat pumps via a new dedicated department known as BG Zero. This resource commitment to the installation of high-quality, affordable, low-carbon technology demonstrates our ambition and ability to be a market leader.

**Time horizon**

Long-term

**Likelihood**

Likely

**Magnitude of impact**

High

**Are you able to provide a potential financial impact figure?**

Yes, an estimated range

**Potential financial impact figure (currency)****Potential financial impact figure – minimum (currency)**

25,000,000

**Potential financial impact figure – maximum (currency)**

140,000,000

**Explanation of financial impact figure**

In 2022 BG S&S had an adjusted gross margin of £504m, ~70% associated with the installation and servicing of natural gas appliances. In the long term, unabated domestic natural gas appliances will need to be phased out to achieve the UK's net zero commitment. The rate and depth of the phasing is dependent on the transition scenario that plays out and on numerous factors including government policy, technology, cost curves and public attitudes.

Our TCFD scenario analysis modelled our UK&I operations (>90% of group GM) to 2050 against 4 different Future Energy Scenarios (FES) from National Grid (1.5 to >2 °). This quantified the potential scale in net growth from pivoting towards low carbon solutions and growing market share.

Decreasing sales of boiler installations and servicing, a corresponding increase in sales and servicing of electric and hydrogen fuelled heating systems, plus associated enabling opportunities in fabric upgrades, were modelled in line with current strategic plans for the next 5 years. They were then extrapolated out to 2050 with a static market share, against FES scenarios to provide the quoted financial figures, which are the potential net change in annual gross margins for this opportunity in 2050. No scenarios resulted in a net risk.

By 2050 in the least decarbonised scenario (falling short, >2°), the impact on boiler operations is small, as they maintain a proportion of the UK's technology stock, with a potential increase of £25m in gross margin (GM) compared with a 2021 baseline. This is our minimum potential financial impact figure.

In the deepest decarbonisation scenario (1.5°), the magnitude of the impact is higher. The inherent risk (with no mitigation measures) is that the natural gas installation and servicing business would cease, with the loss of associated GM. However, with BG S&S looking to maintain its position as a market leader (installing future low-carbon heating systems rather than incumbent tech) in a higher capital market, there is a significant net opportunity. The maximum potential net impact being £140m gross margin gain in 2035.

These figures are indicative only. We have held unit margin static, which is unlikely as market regulation and learning rates evolve. We may also change market share. The FES scenarios are not necessarily in line with what Centrica expect to occur, rather they offer a broad range of plausible pathways.

**Cost to realize opportunity**

26,500,000

**Strategy to realize opportunity and explanation of cost calculation**

Situation: Centrica's workforce capability is currently mainly focused on incumbent technology in line with current market conditions and customer demand. However, we are technology agnostic.

**Task:** We believe that a range of solutions will be deployed, with regional considerations influencing the technology chosen, and stand ready to play a critical role in any and all pathways. We will need to upskill our workforce with the capabilities required to service and install future low-carbon technologies and meet the needs of future customers.

**Action:** In line with the National Grids' Future Energy Scenarios (FES) most aggressive decarbonisation scenario in which heat pumps are the most likely technology for the majority of UK households, we have modelled the costs to re-skill our existing engineering workforce to install and maintain heat pumps. The approximate direct cost to upskill a trained gas engineer to be able to survey, design, maintain, and install a basic mono block heat-pump is currently, and provisionally, ~ £3000. With an additional indirect cost of lost margin opportunity for this training period of ~ £2500 per engineer. . With ~7k engineers in service at present, and requirement to upskill ~70% in the most bullish scenario, the reskilling of British gas' work force would cost a total of ~£26.5m.. This initial training cost is currently embedded within our forward-looking financial plans to maintain a fully trained workforce of our size.

The costs to realise this opportunity, as per the above calculation will fall into OPEX rather than CAPEX.

The timeframes for this upskilling is heavily contingent on different decarbonisation pathways. The UK government has introduced legislation which will ban the installation of gas boilers in new builds from 2025 – this is a clear market signal which will result in heat pump capability being required by then. However, in line with the average FES scenarios, methane boilers are expected to stay as the most common heating technology for at least another decade.

**Result:** This reskilling would leave us with a workforce that could install and service heat pumps, which are typically seen as the most likely majority technology for future UK heating.

Note that our current workforce will require minimal retraining to manage hydrogen boiler installation and maintenance, and this could well play a meaningful role in the technology mix. This would result in a reduced cost to realise.

## Comment

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### Identifier

Opp2

### Where in the value chain does the opportunity occur?

Direct operations

### Opportunity type

Products and services

**Primary climate-related opportunity driver**

Development and/or expansion of low emission goods and services

**Primary potential financial impact**

Increased revenues resulting from increased demand for products and services

**Company-specific description**

The uptake of electric vehicles (EVs) by individuals and businesses has continued to rapidly expand during the past few years in the UK. While transport still accounts for ~30% of the UK's CO2 emissions, 2022 was a significant year for EVs with car registrations reaching 369,000 (fully electric and plug-in hybrid cars), equal to 23% of all car registrations. With a 2030 ban on new petrol and diesel vehicle sales in place, external forecasts, including the National Grid's Future Energy Scenarios, predict significant ramp up in EVs on the road, to the millions over the next decade.

This growth in EVs creates opportunities in several areas for Centrica. The principal areas are new and growing value pools related to home EV charger installs, the operation and maintenance (O&M) of these chargers, and energy supply and demand-side response services to run EVs cost-effectively.

Centrica has been operating in the home charger installation market since 2013, installing over 30,000 chargers since entering. We've created partnerships with over 10 companies within the car manufacturing, leasing company and roadside assistance markets – including Ford, Toyota, Vauxhall, RAC and Leaseplan amongst others. With these partners we have begun to deliver charge points and tariffs at scale, and we're developing technology for consumers to be rewarded for using their EV battery to store and trade energy to better balance the grid. The EV market is still developing and we're keeping our plans under review. However, favourable market conditions could see us install up to 100,000 EV charge points a year by 2025. Centrica has also committed to make its own fleet of 9,000 vehicles fully electric. By the end of 2022, Centrica had received 2,500 Vauxhall Vivaro-e vans. We are currently in the process on phasing them into our fleet.

Through our existing energy supply customer base, along with planned growth in customer numbers, we are well placed to capture the opportunity that will arise from supplying the energy to run EVs. And with the development of our new internal department dedicated to the install of low-carbon technology, including EVs, in customer homes, we are prepared to scale up our operations.

**Time horizon**

Long-term

**Likelihood**

More likely than not

**Magnitude of impact**

High

**Are you able to provide a potential financial impact figure?**



Yes, an estimated range

**Potential financial impact figure (currency)**

**Potential financial impact figure – minimum (currency)**

400,000,000

**Potential financial impact figure – maximum (currency)**

490,000,000

**Explanation of financial impact figure**

Our TCFD scenario analysis modelled our UK&I operations (>95% group gross margin) out to 2050 against four different Future Energy Scenarios (FES) from National Grid (ranging from 1.5 to >2 degree scenarios). This provided indicative scale to the potential growth in revenue and margin from our EV associated activities.

The financial benefit from this EV associated activities, from both new and growing value pools relating to EV charger installs, the operation and maintenance (O&M) of these charge points, and concurrent energy supply and demand-side response services for the EVs themselves, was modelled in line with our current strategic plans for the next 5 years. They were then extrapolated out to 2050 with a static market share to provide the given financial figures. These represent the highest and lowest figures from the 4 different plausible FES scenarios. They are potential growth in annual gross margins for this opportunity in 2050, and do not represent the entire gross margin for these business areas.

There is minimal variation expected between the four scenarios due to similar outcomes across them all, with the electrification of transport a very likely occurrence. With the “falling short” scenario (2 degrees) having most EVs on roads at 2050.

It should be noted that these figures are indicative of scale only. We have held unit margin static, which is unlikely as markets evolve. We may also choose to increase or lower market shares from that which was modelled. The FES scenarios used are also not necessarily in line with what Centrica actually expect to occur, rather they offer a broad range of plausible pathways to model.

**Cost to realize opportunity**

2,500,000

**Strategy to realize opportunity and explanation of cost calculation**

Situation: British Gas are looking to make the customer experience of installing and operating an EV charger at home as simple as possible and provide ways for consumers to reduce costs related to EV charging.

Task: To enable this we need to ensure our product is first-rate, drive demand via marketing spend and improve customer experience by developing our website, app and backend systems.

Action: There are a number of digital and hardware projects in-flight to enhance our current EV offerings for customers, for example:

- Develop and launch a new Hive-branded EV charger
- Satisfy new EV regulatory requirements such as Distribution Connected and Use of System Agreement (DCUSA)
- Optimise in-life customer journeys and warranty processes for our existing EV charging customers to ensure best in class experience
- Expand our current service to include new features to enhance experience and improve useability
- Enhance the charging control, security and usage insight features within our Hive app
- Continue to invest in the integration of our Hive platform with third party charger manufacturers and partners
- Build out backing and management systems at speed to aid launch of new offerings such as demand-side response services which will deliver cost-savings to EV customers

We also need to allocate media spend in direct channels and through partners to market these services.

The £2.5 million is an approximate annual total of costs required to move these projects forward in line with business plans over the next year, with similar annual sums required over the coming years'

Result: Reduced cost and improved experience for BG electric vehicle customers, increasing our revenue in our target EV value pools.

## Comment

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### Identifier

Opp3

### Where in the value chain does the opportunity occur?

Direct operations

### Opportunity type

Products and services

### Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

### Primary potential financial impact

Increased revenues resulting from increased demand for products and services

### Company-specific description

The UK government has unveiled a plan to ensure that Britain's homes and businesses are powered by affordable, clean and secure electricity by 2035. Home-grown, green technologies will support the UK to transition away from reliance on fossil fuels.

This, and the required market conditions to enable full decarbonisation of the electricity grid, will provide a significant increase in demand for low carbon electricity generation.

As the market demand for low carbon generation technology continues to increase, Centrica is growing its investment and capabilities to meet both customer demand for assets and to increase its own asset portfolio. Investments will be across a range of transition and low carbon generation technologies, both behind and in front of the meter, with solar and batteries being specific areas of focus, as well as flexible assets such as peaking generators. The increase in demand, and Centrica's capability and ambition to deliver in this area, will result in increased revenue.

**Time horizon**

Long-term

**Likelihood**

More likely than not

**Magnitude of impact**

High

**Are you able to provide a potential financial impact figure?**

Yes, an estimated range

**Potential financial impact figure (currency)**

**Potential financial impact figure – minimum (currency)**

90,000,000

**Potential financial impact figure – maximum (currency)**

200,000,000

**Explanation of financial impact figure**

Our TCFD scenario analysis mapped our UK&I operations (>90% group gross margin) out to 2050 against four different Future Energy Scenarios (FES) from National Grid (ranging from 1.5 to >2 degrees scenarios). This provided indicative scale to the growth from Centrica's increased activity due to the growth in demand from low carbon generation assets.

To provide plausible financial impact we modelled the gross margin expected from the installation, O&M and ownership of transition and low carbon generation technologies, in line with our current strategic plans for the next 5 years. We then extrapolated out to 2050 with a static market share to provide the given financial figures. These represent the highest and lowest figures from our interpretation of the 4 different plausible FES scenarios. They are potential growth in annual gross margins for this opportunity in 2050, and do not represent the entire gross margin for these business areas.

The low and high scenarios vary based on the scale of build out of technologies that we

are focusing on, these include battery storage, solar generation, and peaking gas generation, among others. Different scenarios have different build out profiles for the UK&I energy system.

It should be noted that these figures are indicative of scale only. We have held unit margin static, which is historically unreliable for generation assets, particularly those such as batteries which operate in an extremely flexible and unpredictable manner. We may also choose to increase or lower market shares from that which was modelled or focus on deploying capital in different geographies as we see opportunities arise. The FES scenarios used are also not necessarily in line with what Centrica actually expect to occur, rather they offer a broad range of plausible pathways to model.

### **Cost to realize opportunity**

100,000,000

### **Strategy to realize opportunity and explanation of cost calculation**

**Situation:** In order to support Britain's transition to a clean energy system by 2035 home-grown, green technologies are needed to replace large scale carbon intensive generation assets. Small scale flexible generation to help support the proliferation of intermittent renewables will also be required.

**Task:** Delivering this strategy, particularly the asset ownership component of Centrica's ambitions, will require significant capital to allow the construction of such assets, as well as resource and capability.

**Action:** This is well understood, and Centrica have publicly announced plans to invest up to £100 million a year by 2025, with the ambition of securing up to 800MW of low carbon and transition assets such as solar and battery. This will be deployed through our established sub-business unit 'Centrica Energy Assets' where we have developed the expertise to deliver in this area.

This figure is an annual one rather than the cumulative total to achieve the targeted 800MW by 2025.

**Result:** Home-grown, green technologies will support the UK to transition away from reliance on fossil fuels and Centrica's investment will ensure we play a meaningful role in facilitating this. There will be a corresponding growth in revenue from this investment.

A specific example of previous investment in this area was our commissioning of one of the largest battery storage facilities in Europe. The 49MW Roosecote battery in Cumbria is able to come online in less than a second to meet fluctuations in demand. It is able to hold enough power for around 50,000 homes.

### **Comment**

## C3. Business Strategy

### C3.1

**(C3.1) Does your organization's strategy include a climate transition plan that aligns with a 1.5°C world?**

Row 1

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**Climate transition plan**

Yes, we have a climate transition plan which aligns with a 1.5°C world

**Publicly available climate transition plan**

Yes

**Mechanism by which feedback is collected from shareholders on your climate transition plan**

Our climate transition plan is voted on at AGMs and we also have an additional feedback mechanism in place

**Description of feedback mechanism**

During 2021 we engaged extensively with institutional investors whilst scoping out our first Climate Transition Plan (CTP) in order to understand their views on what information they would expect to see and find useful in the CTP. We shared the draft CTP with a number of ESG focussed investors including the climate coalition Climate Action 100+ and held detailed feedback sessions, taking their input into account prior to publishing the CTP in November 2021. In order to continue to collect feedback from shareholders, we committed to hold an advisory vote on the CTP at our AGM starting in 2022 and at every review stage at least every 3 years. Additionally, to collect shareholder feedback on our progress in delivering to the CTP, we publish performance reports in our Annual Report and separate People & Planet update reports and hold ESG focussed investor meetings throughout the year. In 2022 we held 17 shareholder meetings of this type, including with the Chairs of our Board Sustainability and Remuneration Committees, gaining valuable feedback and insights on our climate transition planning.

**Frequency of feedback collection**

More frequently than annually

**Attach any relevant documents which detail your climate transition plan (optional)**

 Climate Transition Plan 2021-23.pdf

### C3.2

**(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?**

Use of climate-related scenario analysis to inform strategy	
Row 1	Yes, qualitative and quantitative

### C3.2a

**(C3.2a) Provide details of your organization’s use of climate-related scenario analysis.**

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Transition scenarios Customized publicly available transition scenario	Company-wide	1.5°C	National Grid, Future Energy Scenarios 2022 – Leading the Way. Scenario used to quantitatively assess transition risks and opportunities for Centrica in its core business activities of energy supply, services and solutions in an aggressive decarbonisation pathway towards 1.5°C. The scenario was selected as it provides a very granular data set through which the potential impact on Centrica’s gross margin (GM) and capital expenditure assessed out to 2050 can be assessed through trends such as complete replacement of fossil based domestic heating solutions with a mix of electrified and hydrogen based alternatives by 2050, strong growth in electric vehicles and energy efficiency. Almost complete cessation of the use of unabated natural gas, significant increase in the demand for renewable electricity and low carbon hydrogen and material growth in solar generation are also assumed. Centrica’s market share and unit GM was kept flat beyond current 5 year strategic plans.
Transition scenarios Customized publicly available transition scenario	Company-wide	1.6°C – 2°C	National Grid, Future Energy Scenarios 2022 – System Transformation. Scenario used to quantitatively assess transition risks and opportunities for Centrica in its core business activities of energy supply, services and solutions in a high-Hydrogen decarbonisation pathway keeping to well-below 2°C. The scenario was selected as it provides a very granular data set through which the potential impact on Centrica’s gross margin (GM) and capital expenditure assessed out to 2050 can be assessed through trends such as complete replacement of fossil based domestic heating solutions primarily with hydrogen based alternatives by 2050, strong growth in electric vehicles and energy efficiency. The enduring use of natural gas

			for Hydrogen production, increase in the demand for renewable electricity including solar generation are also assumed. Centrica's market share and unit GM were kept flat beyond current 5 year strategic plans.
Transition scenarios Customized publicly available transition scenario	Company-wide	1.6°C – 2°C	National Grid, Future Energy Scenarios 2022 – Consumer transformation. Scenario used to quantitatively assess transition risks and opportunities for Centrica in its core business activities of energy supply, services and solutions in a high-electrification decarbonisation pathway keeping to well-below 2°C. The scenario was selected as it provides a very granular data set through which the potential impact on Centrica's gross margin (GM) and capital expenditure assessed out to 2050 can be assessed through trends such as complete replacement of fossil based domestic heating solutions primarily with electric based alternatives by 2050, strong growth in electric vehicles and energy efficiency. Almost complete cessation of the use of unabated natural gas, with very significant increase in demand for renewable electricity including solar generation are also assumed. Centrica's market share and unit GM were kept flat beyond current 5 year strategic plans.
Transition scenarios Customized publicly available transition scenario	Company-wide	2.1°C - 3°C	National Grid, Future Energy Scenarios 2022 – Falling Short. Scenario used to quantitatively assess transition risks and opportunities for Centrica in its core business activities of energy supply, services and solutions in a low decarbonisation pathway leading to over 2°C of warming. The scenario was selected as it provides a very granular data set through which the potential impact on Centrica's gross margin (GM) and capital expenditure assessed out to 2050 can be assessed through trends such as reduced but enduring use of fossil based domestic heating solutions with partial replacement with electrified alternatives by 2050. Strong growth in electric vehicles and to a lesser extent energy efficiency. Enduring use of natural gas to 2050, with modest increase in the demand for renewable electricity including solar generation are also assumed. Centrica's market share and unit GM were kept flat beyond current 5 year strategic plans.

Transition scenarios IEA NZE 2050	Company-wide		Global energy sector net zero by 2050. Scenario was selected and used to test potential risk of asset impairment on Centrica's hydrocarbon production division, Spirit Energy in a 1.5 °C scenario. Impact on asset Net Present Value (NPV) through changes in commodity demand and prices through the following key trends was quantified: ban on fossil boilers by 2025, 60% car sales EV and 850GW of Hydrogen electrolyzers by 2030, net zero power in our key markets by 2035, 50% heating from Heat pumps by 2045. Liquid prices were used for first 4 years and then blended to external Net zero price scenarios out to 2050.
Transition scenarios Customized publicly available transition scenario	Business division	1.5°C	Aurora Net Zero – Mixed. Scenario was selected and used to test potential risk of asset impairment on Centrica's 20% interest in the UK Nuclear fleet in a 1.5 °C scenario. Impact on asset Net Present Value (NPV) through changes in commodity demand and prices through the following key trends was quantified: decarbonisation achieved by 2050 through a combination of increasing total carbon price and greater nuclear, renewables, hydrogen and gas CCS capacities. Liquid prices were used for first 4 years and then blended to external Net zero price scenarios out to 2050.
Transition scenarios Customized publicly available transition scenario	Business division	1.5°C	Aurora Net Zero High – RES. Scenario was selected and used to test potential risk of asset impairment on Centrica's 20% interest in the UK Nuclear fleet in a 1.5 °C scenario. Impact on asset Net Present Value (NPV) through changes in commodity demand and prices through the following key trends was quantified: decarbonisation achieved by 2050 through significant increases in renewable capacities without having any additional nuclear capacity. Liquid prices were used for first 4 years and then blended to external Net zero price scenarios out to 2050.
Physical climate scenarios RCP 2.6	Company-wide		IPCC Representative Concentration Pathway (RCP) 2.6. The scenario was used to assess physical risks and opportunities for Centrica in a 1.5°C pathway. The RCP pathways were selected as a credible description of different climate futures linked to the radiative forcing values and we used them to assess the potential risks from aspects including rising mean temperatures and sea levels, flooding,



			extreme and volatile weather, droughts and heatwaves on our material activities and assets out to 2050. Potential impacts were assessed both quantitatively such as impact on gross margin or sea level rise and qualitatively such as potential impacts on supply chains.
Physical climate scenarios RCP 4.5	Company-wide		IPCC Representative Concentration Pathway (RCP) 4.5. The scenario was used to assess physical risks and opportunities for Centrica in an intermediate pathway aligned with 2.4°C of warming. The RCP pathways were selected as a credible description of different climate futures linked to the radiative forcing values and we used them to assess the potential risks from aspects including rising mean temperatures and sea levels, flooding, extreme and volatile weather, droughts and heatwaves on our material activities and assets out to 2050. Potential impacts were assessed both quantitatively such as impact on gross margin or sea level rise and qualitatively such as potential impacts on supply chains.
Physical climate scenarios RCP 8.5	Company-wide		IPCC Representative Concentration Pathway (RCP) 8.5. The scenario was used to assess physical risks and opportunities for Centrica in an extreme warming future aligned with a 4.3°C pathway. The RCP pathways were selected as a credible description of different climate futures linked to the radiative forcing values and we used them to assess the potential risks from aspects including rising mean temperatures and sea levels, flooding, extreme and volatile weather, droughts and heatwaves on our material activities and assets out to 2050. Potential impacts were assessed both quantitatively such as impact on gross margin or sea level rise and qualitatively such as potential impacts on supply chains.

### C3.2b

**(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.**

Row 1

**Focal questions**

1. What are the key transition and physical attributes or macro-trends across a range of plausible climate pathways under different warming futures that have the potential to materially impact Centrica, its activities, products, assets and value-chain in the short, medium and long term out to 2050?

2. Considering the above and given Centrica's current strategic plans what is the range of potential, quantifiable impacts both negative and positive, to earnings (gross margin) asset values (Net Present Value), investment (Capex) and operations (disruption through physical impacts) and where appropriate, qualitative impacts across the range of selected pathways?

3. Given the above what are the key transition and physical risks and opportunities and the potential financial implications that Centrica faces relating to climate change across a range of plausible scenarios, how resilient is our current strategy and how can the findings be used to inform and improve our strategic and financial planning to deliver growth in a net zero future?

The 10 independent scenarios listed in C3.2a were carefully selected to ensure they contained data sets of sufficient relevance to Centrica's core activities and granularity to enable the potential implications on Centrica to be meaningfully and robustly modelled and answer the focal questions listed above. As an example, although the IEA Net Zero Emissions scenario is suitable for assessing the impacts of a 1.5 degree future on our major oil and gas assets exposed to globally priced commodities, it is not sufficiently granular to allow a detailed analysis of the impact on individual product lines such as gas boilers within the UK&I region. For this the National Grid Future Energy Scenarios are more suitable.

### **Results of the climate-related scenario analysis with respect to the focal questions**

1. Scenario analysis identified potential physical trends driven by differing levels of climate change and transition trends which might occur as society acts to mitigate. This allows us to understand how the pace and scale of change might vary and the potential financial risks and opportunities for Centrica.

Key transition trends were the gradual phase out of unabated natural gas by 2050, an increase in demand for electricity and rapid build out of wind and solar generation in the next decade and beyond. Heat could be decarbonised primarily by electrification to 2035 then increasingly hydrogen to 2050 and electric vehicles could dominate mobility by the 2040's. Physical trends included potential increases in mean temperatures and decreased demand for gas & electricity for heating. Increases in extreme weather, flooding and sea level rise were also observed with increased warming.

2. We tested the potential implications of these attributes on our gross margin for services and solutions and asset valuations over the short to long term across global warming futures of 1.5°C to 4°C. Our analysis showed that we're potentially exposed to transitional risks and opportunities such as policy and regulatory changes that could range from 'low to high' significance in the long term. Risks primarily relate to the

gradual phase out of natural gas in heating, which although an essential transition fuel, could require a shift in the range of products and services we offer. Decarbonisation also presents significant opportunity for the group including low carbon heating, energy optimisation and EV charging and development of new low carbon and transition assets. Risks associated with extreme weather and rising mean temperatures have potential to impact energy supply chains and customer supply and demand. Quantitative and qualitative analysis indicated that these risks are likely to be lower with increased levels of decarbonisation and we manage through defined hedging strategies and collaboration with counter parties.

All scenarios contain significant opportunities for capital investment into new and existing assets and technologies required by decarbonisation. The requirement for capex to manage potential risks was assessed as being in-line with current plans. The risk of asset impairment or stranding across differing climate scenarios was assessed as immaterial considering the short life of our assets and value at risk.

3. Overall, our modelling suggests an overall net financial benefit for the group across the scenarios as we continue to evolve in line with the needs of the energy transition. These insights have been factored into our strategic and financial planning process, for example our analysis of the emergence of electrified heating a mobility solution in the near term informed our decision in 2022 to establish British Gas Zero, a new business unit supporting customers on the journey to net-zero and services in heat pumps and electric vehicles.

### C3.3

**(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.**

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	Our latest product and services strategic plans have been heavily influenced by our assessment of climate risks and opportunities and the energy transition out to 2025 and beyond. Centrica Business Solutions has created an integrated solutions platform to help customers better manage their energy use, through insights using our Panoramic Power sensors, optimisation through our demand side response platform and generation or storage with solar or battery, effectively creating clean 'virtual power plants'. In 2020 we developed and launched an 'Net Zero Pathways' service for customers mapping out a pathway to net zero for their energy needs. In 2022, our Board approved investment of up to £100m p.a. to build over 1GW

		<p>of solar, battery and transition assets.</p> <p>For domestic customers, we are developing a suite of low carbon and smart home energy management products and services allowing them to take greater control of their energy use and lower their emissions. We have recently launched British Gas Zero, a new business unit to support customers with the journey to net-zero and services in solar, home energy efficiency, insulation and electric vehicles. An example product is our remote heating control Hive Active Heating, which enables significant reduction in energy usage simply through greater control with just a tap on the app.</p> <p>Another substantial strategic decision was to build electric vehicle (EV) enablement capabilities for domestic and business customers. This is a relatively new market for the company driven by our view of the opportunities in low carbon transport. We have built capability through acquisition and re-training in-house engineers working with car manufacturers to support their customers and dealership networks, providing a one stop shop for charging solutions including charger infrastructure, energy management, financing, and optimisation.</p> <p>Recognising the need to decarbonise heating, we launched a commercial proposition for Air Source Heat Pumps in 2021. Having now installed more heat pumps than any other UK supplier to date, we have recently launched a lowest price-match guarantee and an innovative Warm Home performance promise to drive up demand.</p> <p>Finally, the Board approved the development of a low-carbon certification and offsetting business within our energy trading arm, to help customers with their net zero goals.</p>
<p>Supply chain and/or value chain</p>	<p>Yes</p>	<p>Research indicates that energy efficiency and decarbonisation is a priority for business and that concern on climate change is changing individuals' values and actions. Responding to these opportunities, in 2021 we upgraded our climate targets as part of our People and Planet Plan and set science-based targets for around 95% of our value chain covering our own emissions (scope 1&amp;2) and our customers emissions (scope 3). Our most substantive strategic focus area across our value chain is helping our customers reduce their emissions.</p>

		<p>We have committed to helping our customers reduce their emissions by 28% by 2030 and to net zero by 2050. We aim to do this in the areas of power, heat and transport through providing customers with energy efficiency and optimisation services, clean energy generation and storage, clean energy supply and fuel switching solutions.</p> <p>On efficiency and optimisation , Centrica Business Solutions has created an integrated solutions platform which helps business customers better manage their energy use, through insights, optimisation via demand side response and generation or storage with solar or battery, effectively creating clean ‘virtual power plants.’</p> <p>We have also developed a suite of home energy management tools such as Hive Active Heating which allow customers to take control of their energy like never before.</p> <p>On clean energy, we provide zero carbon power to many of our UK customers and ensure our standard tariffs remain significantly cleaner than the UK average.</p> <p>On fuel switching, we are working with car manufacturers to support their customers and dealership networks on EV readiness, including charger infrastructure, energy management, financing, and optimisation. To date we have announced partnerships with Ford, Vauxhall and Honda to offer a dedicated home charging and dealership installation services and EV tariffs and Lotus to develop a new model for EV ownership that fully integrates future mobility and energy through connected vehicles, connected homes and connected customers. We are also enabling our customers to switch to cleaner heating solutions through our newly created air source heat pump capability.</p> <p>In 2022 we continued our climate focus in our upstream supply chain, reviewing the Carbon Reduction Plans submitted as part of our requirements for large contract partners and entering into dialogue with them.</p>
Investment in R&D	Yes	<p>Our 2015 strategic review identified a significant need for innovation &amp; technology advancement to drive de-carbonisation across the energy sector out to 2035. In response, we established a £100m fund to identify, incubate &amp; accelerate technologies that can help deliver products &amp; services that meet our customers’ needs that are changing due to climate change and that enable the low carbon</p>

		<p>transition. Key investments included:</p> <ul style="list-style-type: none"> <li>• Driivz, a start-up that offers end-to-end software solutions for electric vehicle charging</li> <li>• Greencom, developer of a platform which integrates distributed energy resources to create clean virtual power plants.</li> <li>• Mixergy, developer of a smart water tank that efficiently heats and stores hot water providing energy savings.</li> </ul> <p>• HiiROC, developer of hydrogen production technology helping to combat climate change with affordable hydrogen produced at scale but without CO2 emissions</p> <p>One example of low-carbon R&amp;D was our work with over 200 homes and businesses in our £17m local energy market trial in Cornwall, concluding in late 2020. In the biggest trial of its type in the UK we tested how flexible demand, generation and storage can reduce pressure on the electricity grid, enable the growth of renewables and avoid expensive network upgrades.</p> <p>In 2022 we continued a significant R&amp;D programme exploring the feasibility of converting our Rough gas storage facility into a Hydrogen storage facility as part of the Zero Carbon Humber project which aims to create the world's first net zero carbon industrial cluster by 2040, located in the Humber region, with the potential to capture and store around 10% of UK carbon dioxide emissions per year.</p> <p>We are also a key delivery partner in the establishment of the UK's first Hydrogen village to trial the potential transition of Britain's gas network to clean hydrogen and are soon to commence a 12-month trial to generate electricity from a blend of methane and clean hydrogen.</p> <p>Finally, Centrica's social impact grant programme, Energy for Tomorrow, is helping to build more inclusive and sustainable communities through innovation, support and funding. We aim to invest ~£1.5m over the next 3 years into community projects that are working towards net zero and can demonstrate a social impact.</p>
Operations	Yes	<p>Scenario analysis has identified risks and opportunities related to climate change with the potential to impact our operations in several ways, including physical risks related to extreme weather and transitional risks related to adapting our operations to deliver lower-carbon solutions for customers.</p>

		<p>For our remaining energy generation and production assets, we have identified risks relating to the increasing frequency and intensity of extreme weather events, such as flooding. Whilst these risks remain unlikely, there is precedent, for example, in 2008 our Brigg power station was closed for a short duration due to flooding leading to reduced output impacting profitability (there have been no more recent climate driven events for our assets). The time horizon for these risks relate primarily to the individual asset life and is most relevant for Centrica out to the mid 2030's. To mitigate these risks, flood and extreme weather risks assessments are undertaken to ensure preparedness for such events.</p> <p>More strategically, we have identified that decarbonisation of the power sector will reduce the need for centralised, gas-fired power generation in our key markets leading to the decision that central power generation is no longer core to our strategy. We have subsequently divested or decommissioned the majority of our centralised power assets. Similarly in 2021 we announced the sale of the Norwegian assets of our oil and gas joint venture Spirit Energy and developed a run-off strategy for the remaining UK and Dutch assets..</p> <p>Transitional risks and opportunities have also influenced our operational strategy. We have identified a need to re-train sections of our customer facing engineer workforce to deliver technology that we believe will play a key role in the energy transition. As a result, in 2021 we committed to recruit 3,500 apprentices by the end 2030 and successfully recruited over 1000 by the end of 2022. Many of these apprentices will become Smart Energy Experts, installing smart meters and providing energy efficiency advice, with the potential to then cross-skill into areas such as installing EV charging points or installing and servicing low carbon heating technologies such as heat pumps.</p> <p>Finally, we have announced a target to be net zero by 2045. This will ensure our operational emissions decline in line with Paris.</p>
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### C3.4

**(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.**



	Financial planning elements that have been influenced	Description of influence
Row 1	<p>Revenues</p> <p>Direct costs</p> <p>Capital expenditures</p> <p>Capital allocation</p> <p>Acquisitions and divestments</p> <p>Assets</p>	<p>In responding to the macro-trends driving the energy transition, including risks &amp; opportunities (R&amp;O) relating to climate change, we have fundamentally repositioned our business. Specifically, we expect significant growth in low carbon energy sources, with an attendant reduction in demand for fossil-based energy over the coming decades. In turn this is driving significant opportunity in decentralised and low carbon energy solutions. In response, we are shifting capital expenditures from our legacy asset businesses of centralised power generation and oil &amp; gas exploration and production (E&amp;P) to our customer-facing businesses, including British Gas and Centrica Business Solutions and low carbon assets. From 2015-2022, we planned to re-direct over £1 billion of operating and capital resources to our growth areas and reduce our resource allocation to our legacy asset portfolio by about the same amount.</p> <p>As part of this we have materially repositioned our portfolio through divestments and acquisitions. Examples include the acquisition of Restore, Europe’s leading demand response aggregator, helping energy markets become more flexible and efficient and the acquisition of Vista Solar, a US based solar engineering company. We acquired Neas Energy, a provider of enhanced energy optimisation for decentralised energy assets and SmartWatt, a leading US energy services and solutions company.</p> <p>Moreover, we have divested all our centralised gas fired power assets in NA and UK and re-focussed our investment into small, peaking plants providing balancing services to intermittent renewables. Additionally, having placed our E&amp;P business into the 69% owned joint venture Spirit Energy we have now announced the sale of the Norwegian assets and confirmed we will not be making any further capital investment into exploring for new oil and gas fields.</p> <p>During our recent strategic and financial planning process, the Board approved management’s proposed capital allocation out to 2028. Our assessment of climate R&amp;O has significantly influenced our plans with major new areas of funding including plans to invest up to £100m per year into grid-scale renewable and energy transition assets. These strategic choices and actions as outlined in our Climate Transition Plan would see the portion of our capital expenditure invested in eligible green activities grow from less than 5% to over 50% by 2025.</p> <p>Climate-related R&amp;O have the potential to impact our revenues in the near and long term. Decreased revenues may occur due to reduced</p>



		<p>energy demand, driven by improved efficiency and changing consumer behaviour; customers in the UK with smart meters reduce their consumption by 3% on average. Conversely, we expect increased revenues from our focus growth areas in distributed energy, smart connected energy solutions, low carbon heating and transportation.</p> <p>Direct costs can increase, including through reduced accuracy of energy demand forecasting, due to increased weather and climate variability. Demand prediction and management is estimated to cost our business over £150K per year.</p>
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### C3.5

**(C3.5) In your organization’s financial accounting, do you identify spending/revenue that is aligned with your organization’s climate transition?**

	Identification of spending/revenue that is aligned with your organization’s climate transition
Row 1	No, but we plan to in the next two years

## C4. Targets and performance

### C4.1

**(C4.1) Did you have an emissions target that was active in the reporting year?**

- Absolute target
- Intensity target

#### C4.1a

**(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.**

**Target reference number**

Abs 1

**Is this a science-based target?**

Yes, we consider this a science-based target, and we have committed to seek validation of this target by the Science Based Targets initiative in the next two years

**Target ambition**

Other, please specify

The trajectory for this target is aligned to well below 2 degrees Celsius for the first 15 years, and then 1.5 degrees Celsius for the latter 15 years (NZ1)

**Year target was set**

2020

**Target coverage**

Company-wide

**Scope(s)**

Scope 1

Scope 2

**Scope 2 accounting method**

Market-based

**Scope 3 category(ies)**

**Base year**

2019

**Base year Scope 1 emissions covered by target (metric tons CO2e)**

2,115,701

**Base year Scope 2 emissions covered by target (metric tons CO2e)**

16,979

**Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Other (upstream) emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Other (downstream) emissions covered by target (metric tons CO2e)**

**Base year total Scope 3 emissions covered by target (metric tons CO2e)**

**Total base year emissions covered by target in all selected Scopes (metric tons CO2e)**

2,132,680

**Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1**

100

**Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2**

100

**Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO<sub>2</sub>e)**

**Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO<sub>2</sub>e)**

**Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO<sub>2</sub>e)**

**Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO<sub>2</sub>e)**

**Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO<sub>2</sub>e)**

**Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO<sub>2</sub>e)**

**Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO<sub>2</sub>e)**

**Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO<sub>2</sub>e)**

**Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO<sub>2</sub>e)**

**Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO<sub>2</sub>e)**

**Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO<sub>2</sub>e)**

**Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO<sub>2</sub>e)**

**Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO<sub>2</sub>e)**

**Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO<sub>2</sub>e)**

**Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO<sub>2</sub>e)**

**Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO<sub>2</sub>e)**

**Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO<sub>2</sub>e)**

**Base year total Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)**

**Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes**

100

**Target year**

2034

**Targeted reduction from base year (%)**

40

**Total emissions in target year covered by target in all selected Scopes (metric tons CO<sub>2</sub>e) [auto-calculated]**

1,279,608

**Scope 1 emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

1,995,085

**Scope 2 emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

13,494

**Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

**Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

**Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

**Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

**Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

**Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

**Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

**Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)**

**Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)**

**Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)**

**Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)**

**Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)**

**Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)**

**Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)**

**Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)**

**Scope 3, Other (upstream) emissions in reporting year covered by target (metric tons CO2e)**

**Scope 3, Other (downstream) emissions in reporting year covered by target (metric tons CO2e)**

**Total Scope 3 emissions in reporting year covered by target (metric tons CO2e)**

**Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)**

2,008,579

**Does this target cover any land-related emissions?**

No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

**% of target achieved relative to base year [auto-calculated]**

14.547541122

**Target status in reporting year**

Underway

**Please explain target coverage and identify any exclusions**

In 2021, we launched our People & Planet Plan to strengthen our scope 1 & 2 targets following Board approval in 2020. This resulted in an interim target to reduce our emissions by 40% by 2034, towards our ambition of being a net zero business by 2045 (see ABS2 and NZ1). The target encompasses 100% of our global scope 1 and 2 emissions. It's also normalised for divestments and acquisitions in line with the 2019 base year and is based on operational control which now includes all emissions from our shipping activities relating to Liquefied Natural Gas (LNG) alongside the retained Spirit Energy assets in the UK and Netherlands. Our target therefore tracks our progress in shifting away from carbon intensive activities as we redirect investment into assets that drive the transition forward whilst providing services and solutions that help our customers live sustainably, simply and affordably. This empowers us to innovate and trial new technologies that aid our ability to provide market-leading customer offerings, while engaging colleagues on mitigating environmental impact. We consider our target to be science-based and have committed to secure validation by the SBTi.

Unfortunately, the delayed publication of the SBTi's oil & gas guidance that they believe will apply to Centrica, has slowed the process.

**Plan for achieving target, and progress made to the end of the reporting year**

As set out in our Climate Transition Plan which we published in 2021, we plan for reductions in emissions to be delivered across a variety of measures. This includes our ambition to build a zero-emission road fleet in the UK by 2025 and drive emissions out of colleague commuting. We're making good progress towards this, having placed the largest commercial electric vehicle (EV) order in the UK at the time during 2020-21, and introduced an all-electric company car policy in 2021. We also plan to cut our UK property emissions by a further 50% by 2030 through continued efficiencies across our property portfolio, including energy efficiency and low carbon technologies and tariffs. Meanwhile, we'll progress our strategic transformation to reduce activities in oil and gas production, cease exploration, and redirect investment into assets that drive the transition forward – from securing up to 800MW of low carbon and transition assets like solar, battery storage and peaking plants by 2025, to exploring the conversion of our Rough gas storage facility to store hydrogen.

In 2022, we saw a 6% reduction against our baseline which is on track with our long-term goal. Savings were secured in 2022 via a variety of proactive measures, with the main driver arising from our oil and gas operations. This included closing our Hummingbird oil production offshore facility in the UK North Sea which was our last remaining oil production facility. Sustainable savings were also delivered by making our fleet lower carbon and more efficient with the roll-out of EVs and smaller vehicles, alongside optimising how we serve our customers to reduce mileage and encouraging more colleagues into zero emission company cars. We also maintained focus on energy efficiency and optimisation across our property and assets with the installation and



maintenance of solutions like solar, LED lighting and green tariffs, alongside property rationalisation and flexible working.

**List the emissions reduction initiatives which contributed most to achieving this target**

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**Target reference number**

Abs 2

**Is this a science-based target?**

Yes, we consider this a science-based target, and we have committed to seek validation of this target by the Science Based Targets initiative in the next two years

**Target ambition**

Other, please specify

The trajectory for this target is aligned to well below 2 degrees Celsius for the first 15 years, and then 1.5 degrees Celsius for the latter 15 years (NZ1).

**Year target was set**

2020

**Target coverage**

Company-wide

**Scope(s)**

Scope 1

Scope 2

**Scope 2 accounting method**

Market-based

**Scope 3 category(ies)**

**Base year**

2019

**Base year Scope 1 emissions covered by target (metric tons CO<sub>2</sub>e)**

2,115,701

**Base year Scope 2 emissions covered by target (metric tons CO<sub>2</sub>e)**

16,979

**Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO<sub>2</sub>e)**

**Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Other (upstream) emissions covered by target (metric tons CO2e)**

**Base year Scope 3, Other (downstream) emissions covered by target (metric tons CO2e)**

**Base year total Scope 3 emissions covered by target (metric tons CO2e)**

**Total base year emissions covered by target in all selected Scopes (metric tons CO2e)**

2,132,680

**Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1**

100

**Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2**

100

**Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)**

**Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)**

**Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)**

**Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)**

**Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)**

**Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)**

**Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)**

**Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)**

**Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)**

**Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)**

**Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)**

**Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)**

**Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)**

**Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)**

**Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)**

**Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)**

**Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)**

**Base year total Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)**

**Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes**

100

**Target year**

2045

**Targeted reduction from base year (%)**

100

**Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]**

0

**Scope 1 emissions in reporting year covered by target (metric tons CO2e)**

1,995,085

**Scope 2 emissions in reporting year covered by target (metric tons CO2e)**

13,494

**Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)**

**Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)**

**Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

**Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

**Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

**Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

**Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

**Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

**Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

**Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

**Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

**Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

**Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

**Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO<sub>2</sub>e)**

**Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)**

**Scope 3, Other (upstream) emissions in reporting year covered by target (metric tons CO2e)**

**Scope 3, Other (downstream) emissions in reporting year covered by target (metric tons CO2e)**

**Total Scope 3 emissions in reporting year covered by target (metric tons CO2e)**

**Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)**

2,008,579

**Does this target cover any land-related emissions?**

No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

**% of target achieved relative to base year [auto-calculated]**

5.8190164488

**Target status in reporting year**

Underway

**Please explain target coverage and identify any exclusions**

In 2021, we launched our People & Planet Plan to accelerate our ambition to be a net zero business by 2045 alongside an interim target of 40% carbon reduction by 2034 (see Abs1). This is five years earlier than our previous net zero goal, as well as the UK Government's target for net zero. The goal includes 100% of our scope 1 and 2 global emissions with a 2019 base year. It's also normalised for divestments and acquisitions and based on operator boundary, which now includes all emissions from our shipping activities relating to LNG alongside the retained Spirit Energy assets in the UK and Netherlands.

Note, our approach when reporting base year emissions (as reported in Question C5.2), is to report our 'gross' emissions which are not normalised for divestments or acquisitions. We believe this provides an accurate picture of the year-on-year impact of our strategic decarbonisation process that our business is undergoing, which involves divesting high emitting assets alongside closures and efficiencies. The 100% base year coverage referred to above, is the coverage of the 'target' base-year which is normalised for divestments and acquisitions in line with best practice and is therefore different to the gross base year emissions.

We consider the target to be science-based and have committed to have it validated.

The process has been prolonged due to the delayed publication of the SBTi's oil & gas guidance, which they believe will apply to Centrica.

### **Plan for achieving target, and progress made to the end of the reporting year**

As set out in our Climate Transition Plan which we published in 2021, we plan for reductions in emissions to be delivered through a variety of measures. This includes our ambition is to build a zero-emission road fleet in the UK by 2025 and drive down emissions from colleague commuting which we're making good progress against having placed the largest commercial EV order in the UK during 2020-21 and introduced an all-electric company car policy. We also plan to cut our UK property emissions by a further 50% by 2030 through continued efficiencies across our property portfolio, including energy efficiency and low carbon technologies and tariffs. Meanwhile, we'll additionally aim to progress our strategic transformation to reduce remaining activities in oil and gas production, cease all new exploration, and redirect investment into assets that drive the transition forward – from securing up to 800MW of low carbon and transition assets like solar, battery storage and peaking plants by 2025, to exploring the conversion of our Rough gas storage facility to store hydrogen.

In 2022, we saw a 6% reduction against our baseline which is on track with our long-term goal. Savings were secured in 2022 via a variety of proactive measures. The main driver of reductions arose from our oil and gas operations, which included closing our Hummingbird oil production offshore facility in the UK North Sea which was our last remaining oil production facility. Sustainable savings were further achieved by making our fleet lower carbon and more efficient with the roll-out of EVs and smaller vehicles alongside optimising how we serve our customers to reduce mileage, while encouraging more colleagues into zero emission company cars. We also maintained focus on energy efficiency and optimisation across our property and assets with the installation and maintenance of solutions like solar, LED lighting and green tariffs, as well as property rationalisation and flexible working.

### **List the emissions reduction initiatives which contributed most to achieving this target**

## **C4.1b**

**(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).**

---

#### **Target reference number**

Int 1

#### **Is this a science-based target?**

Yes, we consider this a science-based target, and we have committed to seek validation of this target by the Science Based Targets initiative in the next two years

#### **Target ambition**



Well-below 2°C aligned

**Year target was set**

2020

**Target coverage**

Company-wide

**Scope(s)**

Scope 3

**Scope 2 accounting method**

**Scope 3 category(ies)**

Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)

Category 11: Use of sold products

**Intensity metric**

Other, please specify

Grams CO<sub>2</sub>e per kWh of energy sold

**Base year**

2019

**Intensity figure in base year for Scope 1 (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 2 (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 1: Purchased goods and services (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 2: Capital goods (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO<sub>2</sub>e per unit of activity)**

179.1

**Intensity figure in base year for Scope 3, Category 4: Upstream transportation and distribution (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 5: Waste generated in operations (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 6: Business travel (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 7: Employee commuting (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 8: Upstream leased assets (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 9: Downstream transportation and distribution (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 10: Processing of sold products (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 11: Use of sold products (metric tons CO<sub>2</sub>e per unit of activity)**

183.8

**Intensity figure in base year for Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 13: Downstream leased assets (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 14: Franchises (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Category 15: Investments (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Other (upstream) (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for Scope 3, Other (downstream) (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for total Scope 3 (metric tons CO<sub>2</sub>e per unit of activity)**

182.7

**Intensity figure in base year for all selected Scopes (metric tons CO<sub>2</sub>e per unit of activity)**

182.7

**% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure**

**% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure**

**% of total base year emissions in Scope 3, Category 1: Purchased goods and services covered by this Scope 3, Category 1: Purchased goods and services intensity figure**

**% of total base year emissions in Scope 3, Category 2: Capital goods covered by this Scope 3, Category 2: Capital goods intensity figure**

**% of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) covered by this Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) intensity figure**

94

**% of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution covered by this Scope 3, Category 4: Upstream transportation and distribution intensity figure**

**% of total base year emissions in Scope 3, Category 5: Waste generated in operations covered by this Scope 3, Category 5: Waste generated in operations intensity figure**

**% of total base year emissions in Scope 3, Category 6: Business travel covered by this Scope 3, Category 6: Business travel intensity figure**

**% of total base year emissions in Scope 3, Category 7: Employee commuting covered by this Scope 3, Category 7: Employee commuting intensity figure**

**% of total base year emissions in Scope 3, Category 8: Upstream leased assets covered by this Scope 3, Category 8: Upstream leased assets intensity figure**

**% of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution covered by this Scope 3, Category 9: Downstream transportation and distribution intensity figure**

**% of total base year emissions in Scope 3, Category 10: Processing of sold products covered by this Scope 3, Category 10: Processing of sold products intensity figure**

**% of total base year emissions in Scope 3, Category 11: Use of sold products covered by this Scope 3, Category 11: Use of sold products intensity figure**

100

**% of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products covered by this Scope 3, Category 12: End-of-life treatment of sold products intensity figure**

**% of total base year emissions in Scope 3, Category 13: Downstream leased assets covered by this Scope 3, Category 13: Downstream leased assets intensity figure**

**% of total base year emissions in Scope 3, Category 14: Franchises covered by this Scope 3, Category 14: Franchises intensity figure**

**% of total base year emissions in Scope 3, Category 15: Investments covered by this Scope 3, Category 15: Investments intensity figure**

**% of total base year emissions in Scope 3, Other (upstream) covered by this Scope 3, Other (upstream) intensity figure**

**% of total base year emissions in Scope 3, Other (downstream) covered by this Scope 3, Other (downstream) intensity figure**

**% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this total Scope 3 intensity figure**

98

**% of total base year emissions in all selected Scopes covered by this intensity figure**

98

**Target year**

2030

**Targeted reduction from base year (%)**

28

**Intensity figure in target year for all selected Scopes (metric tons CO<sub>2</sub>e per unit of activity) [auto-calculated]**

131.544

**% change anticipated in absolute Scope 1+2 emissions**

0

**% change anticipated in absolute Scope 3 emissions**

-6

**Intensity figure in reporting year for Scope 1 (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 2 (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 1: Purchased goods and services (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 2: Capital goods (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO<sub>2</sub>e per unit of activity)**

139.5

**Intensity figure in reporting year for Scope 3, Category 4: Upstream transportation and distribution (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 5: Waste generated in operations (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 6: Business travel (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 7: Employee commuting (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 8: Upstream leased assets (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 9: Downstream transportation and distribution (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 10: Processing of sold products (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 11: Use of sold products (metric tons CO<sub>2</sub>e per unit of activity)**

182.4

**Intensity figure in reporting year for Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 13: Downstream leased assets (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 14: Franchises (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Category 15: Investments (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Other (upstream) (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for Scope 3, Other (downstream) (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for total Scope 3 (metric tons CO<sub>2</sub>e per unit of activity)**

171.3

**Intensity figure in reporting year for all selected Scopes (metric tons CO<sub>2</sub>e per unit of activity)**

171.3

**Does this target cover any land-related emissions?**

No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

**% of target achieved relative to base year [auto-calculated]**

22.2847759794

**Target status in reporting year**

Underway

**Please explain target coverage and identify any exclusions**

As part of our continued commitment to follow best practice, we reviewed our scope 3 target in 2020 and launched a new and improved target via our People & Planet Plan in 2021. We aligned the new target methodology and ambition in line with science, which will enable our customers to achieve net zero energy use by 2050 at the latest (see NZ2), with an interim target to reduce the GHG intensity of their energy use by 28% by 2030. The target coverage is based on our emissions relating to the two relevant scope 3 categories (fuel and energy related activities as well as use of sold product) and normalised for acquisitions and divestments based on operational control. We consider our target to be science-based and have committed to gain SBTi validation in the next two years. Unfortunately, the delayed publication of the SBTi's oil & gas guidance that they believe will apply to Centrica, has slowed the process.

**Plan for achieving target, and progress made to the end of the reporting year**

As set out in our Climate Transition Plan, we plan to help our customers be net zero by encouraging their take-up of new and existing low carbon services and solutions that transform the way they live, work and move. This includes delivering energy efficiency and optimisation services alongside low carbon technologies and cleaner energy, with 2025 ambitions to drive change - from doubling the number of Hive customers to 2.5 million and delivering 6 million additional smart meters, to achieving annual installs of up to 100,000 EV charging points and 20,000 heat pumps.

In 2022, we provided energy, services and solutions that enabled the GHG intensity of our customers' energy use to reduce by 6% against our 2019 base year, which is equivalent to the annual emissions of 630,000 homes. Savings achieved were mainly driven by renewable and low carbon energy tariffs alongside energy efficiency and optimisation solutions. Our performance is slightly behind the glidepath for our long-term goal following the reintroduction of fossil fuels into our electricity mix due to the escalating cost of green energy certification, and the need to keep costs down for customers during the energy crisis. The zero-carbon content of our reported electricity fuel mix did, however, remain high at 75% versus the 55% UK average and we're

exploring all options to decarbonise our energy supply in robust and affordable way, whilst investing in clean generation and customer efficiency.

**List the emissions reduction initiatives which contributed most to achieving this target**

## C4.2

**(C4.2) Did you have any other climate-related targets that were active in the reporting year?**

Net-zero target(s)

### C4.2c

**(C4.2c) Provide details of your net-zero target(s).**

---

**Target reference number**

NZ1

**Target coverage**

Company-wide

**Absolute/intensity emission target(s) linked to this net-zero target**

Abs1

**Target year for achieving net zero**

2045

**Is this a science-based target?**

Yes, we consider this a science-based target, and we have committed to seek validation of this target by the Science Based Targets initiative in the next two years

**Please explain target coverage and identify any exclusions**

In 2021, we launched our People & Planet Plan to accelerate our ambition to be a net zero business by 2045, with an interim target of 40% carbon reduction by 2034 (see Abs1). This is five years earlier than our previous net zero goal, as well as the UK Government's target for net zero. It includes 100% of our scope 1 and 2 global emissions with a 2019 base year. It's also normalised for divestments and acquisitions and based on operational control, which now includes all emissions from our shipping activities relating to LNG alongside the retained Spirit Energy assets in the UK and Netherlands. We consider the target to be science-based and have committed to have it validated. The process to have it validated has, however, been prolonged due to the delayed publication of the SBTi's oil & gas guidance, which they believe will apply to Centrica.

In 2021, we shared our plans to achieve net zero via our Climate Transition Plan. And as set out in Abs1, we plan to become a net zero business by continuing to drive



emissions out of our property, fleet and travel while shifting our wider operations to focus on low carbon and transition assets, with specific 2025 ambitions to help ensure we make the progress we want and need against each of these areas. We've committed to review our Climate Transition Plan in full every three years and publish an update in 2024, which will enable us to continue to adjust our plans and ensure we advance action in line with the evolving technology, policy and wider socio-economic landscape.

**Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?**

Yes

**Planned milestones and/or near-term investments for neutralization at target year**

Our Energy Marketing and Trading (EM&T) business has a 'Green-Desk' that provides certificates, offsets, neutralisation products and other 'green' products to our customers. We're able to harness the power of our EM&T Green-Desk, to purchase the necessary instruments to ensure net zero by 2045. In the near term this may be in the form of certificates, such as Renewable Energy Guarantees of Origin (REGO) certificates for electricity consumption and Renewable Gas Guarantees of Origin (RGGO) certificates for gas consumption.

In parallel, we'll develop our strategy for neutralising the residual emissions at our target year 2045, and onwards. However, given our big focus on emissions reduction, we don't anticipate having significant residual emissions. For the residual emissions that we anticipate will remain, we plan to use neutralisation tools that provide the greatest stakeholder, environmental and community benefit relative to the cost. This includes progressive purchases of Pending Issuance Units (PIUs) from nature-based solutions, such as woodlands. These will be planned to convert to Woodland Carbon Units (WCUs) in the appropriate years, to neutralise the modelled residual emissions released.

**Planned actions to mitigate emissions beyond your value chain (optional)**

No further details to disclose at this stage.

**Target reference number**

NZ2

**Target coverage**

Company-wide

**Absolute/intensity emission target(s) linked to this net-zero target**

Int1

**Target year for achieving net zero**

2050

**Is this a science-based target?**

Yes, we consider this a science-based target, and we have committed to seek validation of this target by the Science Based Targets initiative in the next two years

**Please explain target coverage and identify any exclusions**

As part of our continued commitment to follow best practice, we fully reviewed our scope 3 customer target in 2020 and the Board approved an enhanced version as part of our People & Planet Plan which we launched in 2021. We aligned the new target methodology and ambition in line with science and set a target to enable our customers to achieve net zero energy use by 2050, with an interim target to reduce the carbon intensity of their energy use by 28% by 2030 (see Int1). Our target covers 98% of our entire scope 3 emissions and 100% of our customers energy emissions focused on our use of sold products in relation to electricity and gas. As such, we consider this target to be science based and have committed to get it validated by the SBTi, although this process has been impacted by the delayed publication of the SBTi's oil & gas guidance which they believe will apply to us.

To help our customers' homes and businesses transition to net zero, we'll encourage their take-up of new and existing low carbon services and solutions that'll help them live sustainably simply and affordably. As set out in our Climate Transition Plan and Int1, we'll expand energy efficiency and home energy management tools, encourage the take up of optimisation technology, support fuel switching and a cleaner energy supply, with 2025 ambitions to galvanise action and progress. To ensure we continue to accelerate action that's aligned to the changing technological, policy and social-economic landscape, we've committed to review our Climate Transition Plan in full every three years and publish our next update in 2024.

**Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?**

Yes

**Planned milestones and/or near-term investments for neutralization at target year**

Our EM&T 'Green-Desk' provides certificates, offsets, neutralisation products and other 'green' products to our customers, both directly and via our consumer businesses. The Green-Desk will therefore play an important role in purchasing the necessary instruments to ensure our customers' energy is net zero by 2050. In the near term this may be in the form of certificates, such as Renewable Energy Guarantees of Origin (REGO) certificates for electricity consumption and Renewable Gas Guarantees of Origin (RGGO) certificates for gas consumption.

At the same time, we'll develop our strategy for neutralising the residual emissions from our customer target year, 2050 and beyond. We don't anticipate having significant residual emissions given our focus is on emissions reduction including zero carbon electricity, fuel switching, and zero carbon gas (biomethane and hydrogen). For the residual emissions that we have modelled, however, we'll use neutralisation tools that provide the greatest stakeholder, environmental and community benefit relative to the cost. This may be in the form of progressive purchases of Pending Issuance Units (PIUs) from nature-based solutions, such as woodlands. These will be planned to

convert to Woodland Carbon Units (WCUs) in the appropriate years, to neutralise the modelled residual emissions expected.

**Planned actions to mitigate emissions beyond your value chain (optional)**

No further details to disclose at this stage.

**C4.3**

**(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.**

Yes

**C4.3a**

**(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.**

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	20	1,173,026
To be implemented*	10	760,161
Implementation commenced*	0	0
Implemented*	9	167,082
Not to be implemented	0	0

**C4.3b**

**(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.**

**Initiative category & Initiative type**

Energy efficiency in buildings

Other, please specify

Insulation and upgrade of heating measures

**Estimated annual CO2e savings (metric tonnes CO2e)**

15,000

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 3 category 11: Use of sold products

**Voluntary/Mandatory**

Mandatory

**Annual monetary savings (unit currency – as specified in C0.4)**

6,500,000

**Investment required (unit currency – as specified in C0.4)**

149,000,000

**Payback period**

16-20 years

**Estimated lifetime of the initiative**

>30 years

**Comment**

Energy Company Obligation (ECO) - In 2013, the UK Government introduced ECO which requires major energy suppliers to fund the installation of energy efficiency products, such as insulation and boilers, to reduce residential energy use and carbon emissions. In the 2018-22 obligation phase, measures are directed towards fuel poor homes with more expensive measures and less carbon savings compared to the former obligation phase. Payback will be over 10-20 years on average depending on the measures employed, with typically a much longer period for solid wall insulation.

In 2022, we invested £149m\* and installed over 49,000 measures to around 25,000 households. We estimate this will deliver total lifetime savings of around 0.4mtCO<sub>2</sub>e, equating to an annual saving of around 15,000tCO<sub>2</sub>e.

\*Costs include administration fees.

**Initiative category & Initiative type**

Energy efficiency in buildings

Other, please specify

Smart home solutions

**Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)**

106,311

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 3 category 11: Use of sold products

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

39,578,702

**Investment required (unit currency – as specified in C0.4)**

2,544,000,000

**Payback period**

1-3 years

### Estimated lifetime of the initiative

Ongoing

### Comment

Connected and smart products - Home solutions like smart meters\* and Hive Active Heating, can generate carbon savings by giving customers greater understanding and control over their energy. In 2022, we installed around 597,700 smart meters in homes and businesses as part of the mandated smart meter roll-out. We estimate this saved around 57,280tCO<sub>2</sub>e by providing customers with greater insight into energy consumption and costs, enabling them to target reductions. By the end of 2022, we'd installed nearly 9.4m smart meters since 2009 which is more than any other energy supplier in the UK.

Meanwhile, customers using our Hive connected home solutions can enjoy greater control over their energy with just a tap on the app – from smart thermostats, radiator valves, plugs and EV charging, to lights and cameras as well as contact and motion sensors. We calculate that the 354,100 smart thermostats installed in 2022 saved customers around 49,031tCO<sub>2</sub>e collectively, and around £300 a year per customer.

As part of our Climate Transition Plan, we've set ambitions to deliver 6m more smart meters in homes by 2030 and double our Hive heating customers to 2.5m by 2025.

\*While the smart meter roll-out is a supplier mandated initiative, 'voluntary' has been selected for the overall row response. This is because smart meters are only one aspect of our offering, coupled with the continued focus for growth on providing voluntary Hive products.

### Initiative category & Initiative type

Low-carbon energy generation

Solar PV

### Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)

18,548

### Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)

### Voluntary/Mandatory

Voluntary

### Annual monetary savings (unit currency – as specified in C0.4)

6,474,256

### Investment required (unit currency – as specified in C0.4)

35,340,000

### Payback period

4-10 years

**Estimated lifetime of the initiative**

16-20 years

**Comment**

Solar products - Solar energy generation can radically improve an energy users' carbon footprint and in 2022, solar formed a core part of our Centrica Business Solutions offering. This is because solar can typically replace around 50% of grid consumption with renewable energy. Customers can then use their own generated solar in real-time, store it for later use to lower energy costs during peak demand, or feed it back into the grid to create an additional revenue stream. In 2022, we completed solar installations that totalled around 33MWp. We estimate that this will help customers save around 18,548tCO<sub>2</sub>e and nearly £6.5m annually. The majority of installs were delivered to large scale businesses and are a key part of helping them deliver targeted carbon and cost savings, enabling them to turn energy into an opportunity by making them more resilient, competitive and sustainable.

We see significant opportunities for onsite solar and aim to materially grow our market share in the UK and US over the next five years. Towards this, we've additionally launched British Gas Zero to supercharge the UK's transition to net zero and from 2023 as part of its offering, solar installation will be available to homes across the county.

**Initiative category & Initiative type**

Energy efficiency in production processes  
 Combined heat and power (cogeneration)

**Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)**

4,727

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)  
 Scope 3 category 11: Use of sold products

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

8,660,264

**Investment required (unit currency – as specified in C0.4)**

145,000,000

**Payback period**

4-10 years

**Estimated lifetime of the initiative**

11-15 years

**Comment**

Combined Heat and Power (CHP) generators - By reaching efficiencies of more than 80%, CHPs can help many of our energy intensive customers meet their near-term carbon targets while improving resilience and cost. This high efficiency means CHPs will be one of the most enduring technologies using unabated fossil fuels and features in many net zero scenarios well into the 2040s. In 2022, we installed nearly 140 CHPs which we calculate reduced customer emissions by around 4,727tCO<sub>2</sub>e. We estimate the CHPs will also save nearly £8.7m on the annual energy bills of our commercial customers.

To further future proof our offering for customers, we partnered with 2G Energy AG at the start of 2023, to provide customers with 100% hydrogen-ready CHP systems.

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### **Initiative category & Initiative type**

Low-carbon energy generation

Other, please specify

Air-source heat pumps

### **Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)**

1,798

### **Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 3 category 11: Use of sold products

### **Voluntary/Mandatory**

Voluntary

### **Annual monetary savings (unit currency – as specified in C0.4)**

378,780

### **Investment required (unit currency – as specified in C0.4)**

30,000,000

### **Payback period**

11-15 years

### **Estimated lifetime of the initiative**

21-30 years

### **Comment**

Heat pumps - As we transition to net zero, we want to maintain our market leading position in home heating and we see heat pumps as one of the key technologies that'll help us do that. This is because it's the best immediate option for many homes to decarbonise, especially those that are either off-grid or well insulated. In 2021, we launched a new heat pump business and in 2022, we installed around 650 air source heat pumps which saved around 1,798tCO<sub>2</sub>e. This brings our total installation tally to over 2,300 heat pumps, which is more than any other UK company.

We expect to ramp up our heat pump installations significantly with our market-leading

price and performance guarantee launched at the start of 2023. Actions like this will be key in helping us build toward our ambition of installing up to 20,000 heat pumps a year by 2025.

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**Initiative category & Initiative type**

Transportation

Other, please specify

Company fleet efficiency, replacement and travel policy

**Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)**

3,183

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 1

**Voluntary/Mandatory****Annual monetary savings (unit currency – as specified in C0.4)**

370,792

**Investment required (unit currency – as specified in C0.4)**

4,200,000

**Payback period**

1-3 years

**Estimated lifetime of the initiative**

6-10 years

**Comment**

Fleet and company cars - To achieve our ambition to have a zero-emission road fleet by 2025, we continued to implement our global low carbon fleet roadmap in 2022 which resulted in 3,183tCO<sub>2</sub>e avoided. This was primarily driven by an increase of nearly 990 electric commercial vans replacing older diesel vans in the UK, which contributed to us being able to drive 11.5m electric miles in 2022 – that's comparable to driving around the world more than 460 times. To build on this, we'll continue to gradually roll-out approximately 3,000 Vauxhall Vivaro-e vans ordered during 2020-21 which was the largest commercial EV order in the UK at the time, and we'll order more in the future.

Efforts like these have saved around £370,792 during 2022, based on netting off the cost of electricity as well as calculating litres of diesel fuel saved, and applying the average price per litre.

On top of this, having upgraded our company car policy in 2021 to only allow EVs, we were able to add over 480 electric company cars to our portfolio in 2022. This has boosted the proportion of EVs from 9% to 43% in our company car fleet. To reduce our commuting and business travel emissions further, we also continued to offer a salary



sacrifice scheme to help make owning an EV more affordable, provided free electric charging at many of our sites and continued our FlexFirst policy which enables colleagues to choose when they want to work from home or come into the office to connect and collaborate.

**Initiative category & Initiative type**

Low-carbon energy generation  
Solar PV

**Estimated annual CO2e savings (metric tonnes CO2e)**

17,500

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

0

**Investment required (unit currency – as specified in C0.4)**

12,500,000

**Payback period**

16-20 years

**Estimated lifetime of the initiative**

>30 years

**Comment**

Codford solar farm - We completed our first Centrica-owned solar farm in Codford in 2022, which forms part of our commitment to secure up to 800MW of low carbon and transition assets by 2025, and thereby provide cleaner energy to customers. The 72-acre site is equivalent in size to 24 football pitches and can generate enough renewable energy to power 5,000 homes. Annually we expect our 18MW solar farm to save around 17,500tCO2e.

**Initiative category & Initiative type**

Energy efficiency in buildings  
Other, please specify  
HVAC and uninterruptable power supply (UPS)

**Estimated annual CO2e savings (metric tonnes CO2e)**

8

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 2 (market-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

21,400

**Investment required (unit currency – as specified in C0.4)**

399,900

**Payback period**

16-20 years

**Estimated lifetime of the initiative**

11-15 years

**Comment**

HVAC and uninterruptable power supply (UPS) - In pursuit of being a net zero company, we installed energy efficiency improvements during 2022 at our offices. In the UK, this included air conditioning and UPS upgrades at Thatcham and Hamilton training academies as well as at our national distribution centre in Leicester. These improvements have resulted in an annual reduction of around 8tCO<sub>2</sub>e and £21,400.

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**Initiative category & Initiative type**

Energy efficiency in buildings

Other, please specify

Boiler

**Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)**

8

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 2 (market-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

6,900

**Investment required (unit currency – as specified in C0.4)**

119,300

**Payback period**

16-20 years

**Estimated lifetime of the initiative**

16-20 years

**Comment**

Boiler replacement – To keep our Leicester office warm and efficient, three new 250KW boilers were installed during 2023. Together, the boilers will enable around 8tCO2e and £6,900 to be saved each year.

**C4.3c**

**(C4.3c) What methods do you use to drive investment in emissions reduction activities?**

Method	Comment
<p>Other Corporate Strategy</p>	<p>Corporate strategy - Our strategy is driven by our purpose of helping our customers live sustainably, simply and affordably, which is underpinned by our People &amp; Planet Plan goals. As the pace of change continues to accelerate, we're responding by focusing colleagues and technology on helping homes and businesses across three integrated areas – 1) Retail – providing leading customer service and solutions that help people save money and decarbonise, 2) Optimisation – supporting the responsible buying and selling of energy and accessing value from green generation in our trading business as we continue to build the flexibility that the future energy system needs, and 3) 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.</p> <p>As part of this, in 2022 we created British Gas Zero to supercharge the UK's journey to net zero by helping to make green home solutions more accessible and affordable, completed the sale of Spirit Energy's Norwegian oil and gas exploration and production assets, and progressed our ambition to increase investment in low carbon and transition assets. For example, through Centrica Energy Assets we're investing up to £100m annually in low carbon and transition assets from 2020 to 2025 and we're exploring investing up to £3bn in the mid-term to convert assets that'll play an important role in the transition to net zero, including carbon capture and storage as well as hydrogen storage.</p> <p>All of this is delivered through strong customer-facing brands such as British Gas, Hive, Bord Gáis Energy and Centrica Business Solutions.</p>
<p>Dedicated budget for low-carbon product R&amp;D</p>	<p>Dedicated budgets for technology and innovation R&amp;D - We have R&amp;D budgets to support low carbon development because we know that to get to net zero, we need a mix of new and existing technologies.</p> <p>Some R&amp;D budgets directly support the innovation of low carbon services and solutions for our customers. As an example, we've</p>

	<p>invested over £1bn since 2015 to create and develop new customer-facing businesses which included R&amp;D budget to expand Hive’s family of products that has grown since its creation in 2013 to now include smart thermostats, radiator valves, plugs lights and EV charging amongst other technology.</p> <p>We also use R&amp;D budgets to trial and roll-out new or untested solutions that could enable the energy transition. Over the last couple of years for instance, we’ve been involved in cross-sector collaborations to realise the potential of hydrogen and carbon capture and storage by partnering to build the world’s first industrial hydrogen cluster. And in 2022, we announced our involvement in a first-of-a-kind trial to create the first ‘hydrogen village’ which will enable us to gain vital learning to increase adoption across the UK. Our not-for-profit social impact fund, Energy for Tomorrow (EfT), also uses funds through feed-in-tariffs from solar panels we installed on nearly 300 schools, to advance innovative ideas that help communities transition to net zero in an affordable way. The fund has an annual income of around £600,000 with grants of up to £100,000 available, which has so far helped 26 community initiatives progress their journey to net zero including seven new ones in 2022.</p>
<p>Compliance with regulatory requirements/standards</p>	<p>Mandatory schemes - We and many of our customers are required to comply with regulations such as the Energy Company Obligation (ECO), the smart meter roll-out, the Energy Savings Opportunity Scheme (ESOS) and the EU Emissions Trading Scheme. We’ve used the platforms provided by legislation to underpin the strategic shift in our business towards becoming an energy services company, in addition to focusing on broader energy efficiency within our own operations.</p> <p>Within these areas we have dedicated budget and teams to support delivery. For example, our ECO obligation is delivered by our Services &amp; Solutions business on behalf of the Energy Portfolio. This enables us to deliver the obligation on time and in the most cost-effective way so that we can minimise the cost per lifetime bill savings which often correlates with carbon savings.</p>
<p>Dedicated budget for energy efficiency</p>	<p>Internal carbon emission reduction targets - Setting and publishing carbon reduction targets and plans that have executive and Board support, has stimulated our investment and focus on delivering low carbon technologies that reduce our GHG emissions and will help us become a net zero company by 2045 – from installing energy efficient and low carbon products across our property portfolio, to transitioning our fleet to be fully electric. Towards this, we invested in an order for nearly 3,000 electric vehicles (EVs) in 2020-21 with Vauxhall, which was the largest commercial EV order in the UK at the time.</p>

## C4.5

**(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?**

Yes

## C4.5a

**(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.**

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### **Level of aggregation**

Group of products or services

### **Taxonomy used to classify product(s) or service(s) as low-carbon**

The EU Taxonomy for environmentally sustainable economic activities

### **Type of product(s) or service(s)**

Other

Other, please specify

Smart Home Energy Management

### **Description of product(s) or service(s)**

We provide smart products that can reduce energy's impact on the environment by giving customers greater control over their entire home (customers' scope 1 and 2). From smart thermostats, radiator valves, lights and plugs to EV charging, our Hive ecosystem of products can be controlled conveniently with just a few taps on the app which means that customers never have to heat an empty home or light an empty room. In 2022, we sold 354,100 smart thermostats which has the ability to save around £300 and 25% on carbon emissions each year. Another key technology are smart meters which support the connected home and help customers cut their carbon emissions by providing increased visibility over how much energy is being used and its costs in real-time through the smart energy monitor or via the British Gas app. In 2022, we installed 597,670 smart meters which helps dual fuel consumption drop by around 4% and save £56 on average per annum.

### **Have you estimated the avoided emissions of this low-carbon product(s) or service(s)**

Yes

### **Methodology used to calculate avoided emissions**

Guidelines for Assessing the Contribution of Products to Avoided Greenhouse Gas Emissions (ILCA)

### **Life cycle stage(s) covered for the low-carbon product(s) or services(s)**

Use stage

**Functional unit used**

Smart meters with an average lifetime of 25 years and Hive Active Heating smart thermostats with an average lifetime of 15 years.

**Reference product/service or baseline scenario used**

Annual electricity and gas consumption in an average UK household (i.e. average energy consumption in a home without a smart meter or smart thermostat (Source: Ofgem)).

**Life cycle stage(s) covered for the reference product/service or baseline scenario**

Use stage

**Estimated avoided emissions (metric tons CO<sub>2</sub>e per functional unit) compared to reference product/service or baseline scenario**

2.28

**Explain your calculation of avoided emissions, including any assumptions**

The calculation is based on the difference in household energy consumption, and hence emissions over a 25-year period for smart meters and a 15-year period for Hive Active Heating smart thermostats. Our calculation therefore excludes the emissions associated with smart meter and smart thermostat production, storage, and end-of-life. This is a limitation to our current methodology, and we are working to cover the full life cycle of Hive in the future.

We obtain the average UK residential gas and electricity consumption figures from Ofgem. Percentage savings per install for both gas and electricity are calculated using pre and post 1-year consumption data from customers with smart installations (smart group) and compared with a similar control group using a matched pair technique. The percentage of annual savings per new install is then used to calculate the energy savings per install and converted into carbon using DEFRA gas and electricity emission factors. We then calculate the difference, thus taking an attributional approach to the estimation.

Based on this, we calculate avoided emissions of 1.34tCO<sub>2</sub>e/smart meter installation over a 25-year lifetime. And 0.94tCO<sub>2</sub>e/Hive Active Heating smart thermostat installation over a 15-year lifetime.

**Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year**

0.6

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**Level of aggregation**

Group of products or services

**Taxonomy used to classify product(s) or service(s) as low-carbon**

The EU Taxonomy for environmentally sustainable economic activities

**Type of product(s) or service(s)**

Other

Other, please specify

Zero carbon electricity and green tariffs

**Description of product(s) or service(s)**

We want to offer customers different types of tariffs that meet their different needs and provide peace of mind that they're making a positive contribution toward tackling climate change (customers' scope 2). That's why, we strive to provide low carbon electricity to all of our UK customers. While we provided zero carbon electricity in 2019-21, we had to reintroduce fossil fuels into our electricity mix due to the escalating cost of green energy certification, and the need to keep costs down for customers during the energy crisis. The zero-carbon content of our electricity fuel mix did, however, remain high at 75% versus the 55% UK average and going forward we're exploring all options to decarbonise our energy supply in a robust and affordable way whilst investing in clean generation and energy efficiency. We've also introduced a range of green tariffs and bespoke energy deals. In 2020, British Gas introduced its Green Future renewable energy residential tariff. The tariff offers customers green gas as well as renewable electricity and is classified by Uswitch as being 'gold standard' – one of only three to receive this accreditation. Additionally, to make electric vehicles (EVs) even greener, we've introduced a green EV tariff that encourages customers to charge at night for less when the grid isn't under pressure. We'll then match 100% of the electricity used by buying the same amount from renewable sources with Guarantees of Origin.

**Have you estimated the avoided emissions of this low-carbon product(s) or service(s)**

Yes

**Methodology used to calculate avoided emissions**

Guidelines for Assessing the Contribution of Products to Avoided Greenhouse Gas Emissions (ILCA)

**Life cycle stage(s) covered for the low-carbon product(s) or services(s)**

Use stage

**Functional unit used**

Green tariff electricity delivered to customer (MWh) (business and residential)

**Reference product/service or baseline scenario used**

Grid electricity

**Life cycle stage(s) covered for the reference product/service or baseline scenario**

Use stage

**Estimated avoided emissions (metric tons CO<sub>2</sub>e per functional unit) compared to reference product/service or baseline scenario**

0.19

**Explain your calculation of avoided emissions, including any assumptions**

This calculation is based on the difference in carbon emissions between the sale of zero carbon electricity and UK grid electricity delivered in the UK, and Irish grid electricity delivered in Ireland. We therefore only include the emissions associated with electricity generation.

The UK and Ireland Defra grid-average electricity emission factors are applied to Centrica's total green tariff electricity sales in the UK and Ireland respectively to calculate emissions from our baseline scenario. This value is then equal to our total emissions avoided as all green tariff electricity sold to customers in 2022 was zero carbon.

**Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year**

19.65

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**Level of aggregation**

Product or service

**Taxonomy used to classify product(s) or service(s) as low-carbon**

The EU Taxonomy for environmentally sustainable economic activities

**Type of product(s) or service(s)**

Power

Solar PV

**Description of product(s) or service(s)**

We help customers reduce reliance on fossil fuels by investing in alternative renewable energy sources like solar energy (customers' scope 1 and 2). We see solar as a key technology for getting to net zero. So in 2022, we installed around 33MW of solar for commercial, industrial and public sector customers via Centrica Business Solutions. In 2022, we also established British Gas Zero which will extend solar installation to our residential customers from 2023.

On top of this, Centrica Energy Assets is increasing our investment and focus in assets that can drive the transition forward with the ambition of securing up to 800MW in low carbon and transition assets by 2025, including solar, battery storage and gas-fired peakers. We're on track with this goal having installed 101MW so far, with plans to accelerate delivery.

**Have you estimated the avoided emissions of this low-carbon product(s) or service(s)**

Yes

**Methodology used to calculate avoided emissions**

Guidelines for Assessing the Contribution of Products to Avoided Greenhouse Gas Emissions (ILCA)



**Life cycle stage(s) covered for the low-carbon product(s) or services(s)**

Use stage

**Functional unit used**

MW of solar PV installed in 2022 with an estimated lifetime of 25 years

**Reference product/service or baseline scenario used**

Grid electricity

**Life cycle stage(s) covered for the reference product/service or baseline scenario**

Use stage

**Estimated avoided emissions (metric tons CO<sub>2</sub>e per functional unit) compared to reference product/service or baseline scenario**

4,447

**Explain your calculation of avoided emissions, including any assumptions**

The calculation is based on the difference in emissions between solar PV generation and grid electricity emissions, thus taking an attributional approach to the estimation. The UK solar PV load factor is multiplied by the install capacity and maximum likely number of operational hours in 2022. This provides the total kWh from installations and using the Defra grid electricity emission factor, the equivalent kgCO<sub>2</sub>e/MW is calculated. This value is consequently equivalent to the total emissions avoided as solar PV generation is a zero-emission electricity source. We intend to cover a full life cycle analysis in the future.

**Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year**

0.03

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**Level of aggregation**

Product or service

**Taxonomy used to classify product(s) or service(s) as low-carbon**

Other, please specify

FTSE Russell Green Revenues Classification System

**Type of product(s) or service(s)**

Power

Other, please specify

Combined Heat and Power (CHPs)

**Description of product(s) or service(s)**

CHPs enable the energy demands of commercial properties to be met in an efficient manner (customers' scope 1 and 2). The units generate electricity on site while capturing usable heat produced in the process, rather than drawing electricity off the grid and using a traditional gas boiler for the equivalent heat. In doing so, CHPs are

typically 80% more efficient than conventional heating and supply, thereby saving up to 40% on energy costs while cutting emissions by up to 30%. CHP's also remove transition and distribution losses and can enable flexible grid services which support the transition to a low carbon energy mix. To date, we've installed over 3,000 CHPs mainly in the UK, Europe and Mexico, equating to more than 700MW in operation. To build on our CHP offering, we've also partnered with 2G Energy AG to provide 100% hydrogen-ready CHP units.

**Have you estimated the avoided emissions of this low-carbon product(s) or service(s)**

Yes

**Methodology used to calculate avoided emissions**

Guidelines for Assessing the Contribution of Products to Avoided Greenhouse Gas Emissions (ILCA)

**Life cycle stage(s) covered for the low-carbon product(s) or services(s)**

Use stage

**Functional unit used**

MW of CHP installed in 2022 with an estimated lifetime of 20 years

**Reference product/service or baseline scenario used**

80% efficient gas boiler

**Life cycle stage(s) covered for the reference product/service or baseline scenario**

Use stage

**Estimated avoided emissions (metric tons CO<sub>2</sub>e per functional unit) compared to reference product/service or baseline scenario**

1,658

**Explain your calculation of avoided emissions, including any assumptions**

The calculation is based on the difference in emissions between using a CHP unit instead of an 80% efficient boiler against the grid, thereby taking an attributional approach to the estimation. Our calculation includes the emissions avoided through the utilisation of heat produced, as well as the avoided grid electricity emissions. The heat equivalent of carbon avoided is calculated using the ratio of kWh heat output to gas used, alongside the Defra gas emission factor. The grid electricity emissions avoided are calculated using the ratio of electricity output to gas used, alongside the Defra grid electricity emission factor. The two values are then added together and multiplied by the average lifetime of a CHP unit which is 20 years, to calculate the total avoided emissions during this period.

**Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year**

0.2

**Level of aggregation**

Product or service

**Taxonomy used to classify product(s) or service(s) as low-carbon**

The EU Taxonomy for environmentally sustainable economic activities

**Type of product(s) or service(s)**

Heating and cooling

Other, please specify

Heat pumps (Air, ground, wate, waste-sourced and hybrid)

**Description of product(s) or service(s)**

Heat pumps are thought to be the best immediate option for decarbonising millions of homes and businesses. For example, hybrid heat pumps could help up to a third of all homes cut carbon emissions by around 60% while heat pumps can help organisations significantly lower their carbon emissions by up to 80%. In recognition of these benefits, we installed around 650 air source heat pumps in 2022 and are looking to accelerate uptake with our market-leading price guarantee launched at the start of 2023, as we build toward our ambition of delivering 20,000 heat pumps a year by 2025. We'll continue to review this ambition in line with market growth to maintain our market leading position in home heating as the world transitions to net zero.

**Have you estimated the avoided emissions of this low-carbon product(s) or service(s)**

Yes

**Methodology used to calculate avoided emissions**

Guidelines for Assessing the Contribution of Products to Avoided Greenhouse Gas Emissions (ILCA)

**Life cycle stage(s) covered for the low-carbon product(s) or services(s)**

Use stage

**Functional unit used**

Heat pump installed in 2022 with an estimated lifetime of 15 years

**Reference product/service or baseline scenario used**

Old (G-rated) gas boiler

**Life cycle stage(s) covered for the reference product/service or baseline scenario**

Use stage

**Estimated avoided emissions (metric tons CO<sub>2</sub>e per functional unit) compared to reference product/service or baseline scenario**

42

**Explain your calculation of avoided emissions, including any assumptions**

The calculation is based on the difference in emissions between the use of a heat pump and the use of an old (G-rated) gas boiler, thus taking an attributional approach to the

estimation. Avoided emissions are calculated by taking the average annual savings from replacing an old gas boiler to a heat pump in an average sized, four-bedroom detached home (2,800kgCO<sub>2</sub>/year) and multiplying this by the average lifetime of a heat pump (15 years).

**Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year**

0

## C-EU4.6

**(C-EU4.6) Describe your organization's efforts to reduce methane emissions from your activities.**

Reducing methane emissions is an important part of how we manage our energy assets. In doing so, we can not only reduce the impact on climate change but also ensure the safety of our people and assets.

**Power Generation:** In 2022, Centrica had one power station which had a bespoke management system in place with procedures for operation and maintenance, which incorporated hydrocarbon leak prevention, detection and mitigation. The power station operates under an ISO 14001:2015 certified management system and has an accurate understanding of aspects, impacts and the necessary requirements to monitor and prevent methane emissions. While there is a minimal risk of methane leakage overall, any locations where a leak is considered higher risk such as in the gas turbine room and gas 'Above Ground' installations or at the entrance to risk areas, we employ an autonomous, high accuracy methane leak detection system. When triggered, the system is set up to notify the control room immediately, so that the relevant area can be isolated, and the leak stopped as soon as possible. In 2022, no leaks were detected at our power stations.

**Exploration & Production (E&P) and Storage:** Over the years, robust hydrocarbon leak reduction measures have been embraced at all installations which are managed through an emissions management framework. At E&P operations, these measures include monitoring the integrity of subsea wells as well as active inspection and management of process equipment at offshore installations, alongside those at the onshore terminal with efforts focused on improving Asset Integrity and higher risk areas for leaks like small bore tubing, flexible hoses and bolted joints. The framework which was introduced in 2021 facilitates real-time intra-day emissions monitoring, interventions, and management that were conservatively estimated to result in approximately a 5-10% reduction in emissions. In 2022, due to these activities as well as asset shutdown periods and natural production decline which included the cessation of production at the Chestnut Field in the Central North Sea, the only routine flare in the E&P portfolio was removed. This meant that our E&P business met the World Bank "Zero Routine Flaring by 2030" target. During 2022, a project was also initiated to operationalise GHG emissions reductions whereby an emissions management standard was created and implemented on a pilot basis at the Morecambe Bay offshore upstream and onshore midstream assets. The standard aligns with the existing production management system, and facilitates real-time intra-day emissions monitoring, interventions, and management. Following the successful pilot and roll out phases, it's intended to be adopted at all remaining operated assets in 2023. Across our

Storage operations, there is an equally robust focus on reducing methane leakage and emissions. For example, this part of the business is currently commissioning a Low Pressure Flash Gas Compressor that's expected to reduce the amount of methane vented on site by around 5% as well as the amount of gas flared by around 15-20%, with the aim to be fully operational by mid-Summer 2023. Also commissioned, is a Front End Engineering Design study for the introduction of a new vent header. This is designed to capture methane which is currently vented to atmosphere, to send for compression and subsequent injection into the main gas flow. If successful, the initiative will be installed in 2024-25.

## C5. Emissions methodology

### C5.1

**(C5.1) Is this your first year of reporting emissions data to CDP?**

No

### C5.1a

**(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?**

Row 1

**Has there been a structural change?**

Yes, other structural change, please specify  
Change of Operational Control scope

**Name of organization(s) acquired, divested from, or merged with**

Spirit Energy Joint Venture

**Details of structural change(s), including completion dates**

In 2022, Spirit Energy was incorporated into our Operational Control scope. This Scope change followed the sale of Spirit Energy's Norwegian assets; the decision to retain and run down the remaining assets; and the CEO of Centrica becoming chair of Spirit's Board. The structural change is reflected from 1st January 2022. Historical Spirit Energy emissions have been incorporated into earlier years in the same manner as an acquisition.

### C5.1b

**(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?**

Change(s) in methodology, boundary, and/or	Details of methodology, boundary, and/or reporting year definition change(s)
--	--

	reporting year definition?	
Row 1	Yes, a change in boundary	We have continued with the Operational Control boundary reporting approach that we used in 2021. However, we have undertaken a review of our LNG shipping operations and whilst the ships are leased we determined that the activities should be categorised as operated. As such we have incorporated LNG shipping emissions into our Operational Control boundary for both 2022 and historically.

### C5.1c

**(C5.1c) Have your organization’s base year emissions and past years’ emissions been recalculated as a result of any changes or errors reported in C5.1a and/or C5.1b?**

	Base year recalculation	Scope(s) recalculated	Base year emissions recalculation policy, including significance threshold	Past years’ recalculation
Row 1	Yes	Scope 1 Scope 2, location-based Scope 2, market-based	We have updated our base year and our historical years to reflect Spirit Energy's change in Operational Control status. We have also updated the base year and historical years to reflect the inclusion of LNG Shipping into the Operational Control Boundary.  We have an informal materiality threshold of 5%, however this has not been used in any of the recalculation assessments.	Yes

### C5.2

**(C5.2) Provide your base year and base year emissions.**

#### Scope 1

**Base year start**

January 1, 2019

**Base year end**

December 31, 2019

**Base year emissions (metric tons CO2e)**

2,299,580

**Comment**

#### Scope 2 (location-based)

**Base year start**

January 1, 2019

**Base year end**

December 31, 2019

**Base year emissions (metric tons CO2e)**

33,343.35

**Comment**

**Scope 2 (market-based)**

---

**Base year start**

January 1, 2019

**Base year end**

December 31, 2019

**Base year emissions (metric tons CO2e)**

24,153.463

**Comment**

**Scope 3 category 1: Purchased goods and services**

---

**Base year start**

January 1, 2019

**Base year end**

December 31, 2019

**Base year emissions (metric tons CO2e)**

1,025,744

**Comment**

This is based on OPEX spend and using the classification of the spend, the emissions are calculated using the Quantis Suite tool. In recent years, we have moved to a more accurate methodology.

**Scope 3 category 2: Capital goods**

---

**Base year start**

January 1, 2019

**Base year end**

December 31, 2019

**Base year emissions (metric tons CO2e)**

82,600

**Comment**

This is based on CAPEX spend and using the classification of the spend, the emissions are calculated using the Quantis Suite tool.

### **Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)**

---

**Base year start**

January 1, 2019

**Base year end**

December 31, 2019

**Base year emissions (metric tons CO<sub>2</sub>e)**

52,168,395

**Comment**

This covers sub categories 3a, 3b, 3c, and 3d. Category 3d 'Customer electricity emissions' is by far the most significant (51,995,467TCO<sub>2</sub>e), relating to the emissions associated with the power we sell to our cutomers

### **Scope 3 category 4: Upstream transportation and distribution**

---

**Base year start**

**Base year end**

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

The emissions associated with this category are immaterial and not relevant. The emissions will be captured in Category 1

### **Scope 3 category 5: Waste generated in operations**

---

**Base year start**

January 1, 2019

**Base year end**

December 31, 2019

**Base year emissions (metric tons CO<sub>2</sub>e)**

1,912

**Comment**

This is calculated based on the volume, type and fate of the waste generated. It also includes the voluntary addition of emissions from the wastewater we generate.

### **Scope 3 category 6: Business travel**

---



**Base year start**

January 1, 2019

**Base year end**

December 31, 2019

**Base year emissions (metric tons CO2e)**

11,319

**Comment**

This includes rail, flights and grey fleet emissions. It includes WTT emissions.

**Scope 3 category 7: Employee commuting**

---

**Base year start**

January 1, 2019

**Base year end**

December 31, 2019

**Base year emissions (metric tons CO2e)**

6,728

**Comment**

This includes employee commuting and the optional working from home emissions.

**Scope 3 category 8: Upstream leased assets**

---

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

This category is not relevant

**Scope 3 category 9: Downstream transportation and distribution**

---

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

The emissions associated with this category are immaterial and not relevant. The emissions will be captured in Category 1.

### **Scope 3 category 10: Processing of sold products**

---

**Base year start**

**Base year end**

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

This Category is not relevant.

### **Scope 3 category 11: Use of sold products**

---

**Base year start**

January 1, 2019

**Base year end**

December 31, 2019

**Base year emissions (metric tons CO<sub>2</sub>e)**

69,234,770

**Comment**

These are the emissions associated with the gas sold to our customers which they in-turn burn.

### **Scope 3 category 12: End of life treatment of sold products**

---

**Base year start**

**Base year end**

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

This Category is not relevant

### **Scope 3 category 13: Downstream leased assets**

---

**Base year start**

**Base year end**

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

This Category is not relevant

**Scope 3 category 14: Franchises**

---

**Base year start**

**Base year end**

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

This Category is not relevant

**Scope 3 category 15: Investments**

---

**Base year start**

January 1, 2019

**Base year end**

December 31, 2019

**Base year emissions (metric tons CO<sub>2</sub>e)**

8,502

**Comment**

The emissions associated with our interests (equity) in UK nuclear. The emissions from Spirit Energy joint venture are now included in Scope 1 & 2 following their inclusion in the Operational Control boundary.

**Scope 3: Other (upstream)**

---

**Base year start**

**Base year end**

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

This Category is not relevant

### Scope 3: Other (downstream)

---

**Base year start**

**Base year end**

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

This Category is not relevant

## C5.3

**(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.**

Defra Environmental Reporting Guidelines: Including streamlined energy and carbon reporting guidance, 2019

European Union Emission Trading System (EU ETS): The Monitoring and Reporting Regulation (MMR) – General guidance for installations

IPCC Guidelines for National Greenhouse Gas Inventories, 2006

IPIECA's Petroleum Industry Guidelines for reporting GHG emissions, 2nd edition, 2011

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

The Greenhouse Gas Protocol: Scope 2 Guidance

The Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Standard

## C6. Emissions data

### C6.1

**(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO<sub>2</sub>e?**

**Reporting year**

---

**Gross global Scope 1 emissions (metric tons CO<sub>2</sub>e)**

1,995,085

**Start date**

January 1, 2022

**End date**

December 31, 2022

**Comment**

n/a

**Past year 1**

---

**Gross global Scope 1 emissions (metric tons CO2e)**

1,018,887.562

**Start date**

January 1, 2021

**End date**

December 31, 2021

**Comment**

Low Scope 1 emissions in 2021 due to an outage at our Whitegate Power station for most of 2021. Whitegate typically generates nearly 50% of Centrica's scope 1 emissions

**Past year 2**

---

**Gross global Scope 1 emissions (metric tons CO2e)**

1,924,516

**Start date**

January 1, 2020

**End date**

December 31, 2020

**Comment**

n/a

**Past year 3**

---

**Gross global Scope 1 emissions (metric tons CO2e)**

2,299,580

**Start date**

January 1, 2019

**End date**

December 31, 2019

**Comment**

n/a

**C6.2**

**(C6.2) Describe your organization's approach to reporting Scope 2 emissions.**

**Row 1**

---

**Scope 2, location-based**

We are reporting a Scope 2, location-based figure

**Scope 2, market-based**

We are reporting a Scope 2, market-based figure

**Comment**

In 2021 we moved our default reporting approach to being market-based; however, we also calculate and report the Location-based approach.

**C6.3**

**(C6.3) What were your organization’s gross global Scope 2 emissions in metric tons CO2e?**

**Reporting year**

---

**Scope 2, location-based**

16,252.659

**Scope 2, market-based (if applicable)**

13,493.651

**Start date**

January 1, 2022

**End date**

December 31, 2022

**Comment**

n/a

**Past year 1**

---

**Scope 2, location-based**

19,591.796

**Scope 2, market-based (if applicable)**

13,919.187

**Start date**

January 1, 2021

**End date**

December 31, 2021

**Comment**

n/a

**Past year 2**

---

**Scope 2, location-based**

28,996.42

**Scope 2, market-based (if applicable)**

22,386.479

**Start date**

January 1, 2020

**End date**

December 31, 2020

**Comment**

n/a

**Past year 3**

---

**Scope 2, location-based**

33,343.345

**Scope 2, market-based (if applicable)**

24,153.463

**Start date**

January 1, 2019

**End date**

December 31, 2019

**Comment**

n/a

## C6.4

**(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1, Scope 2 or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure?**

No

## C6.5

**(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.**

**Purchased goods and services**

---

**Evaluation status**

Relevant, calculated

**Emissions in reporting year (metric tons CO<sub>2</sub>e)**

795,503

**Emissions calculation methodology**

Hybrid method

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

21

**Please explain**

Our Category 1 emissions are calculated on a hybrid approach that includes the spend-based method using the Quantis Suite tool as well as supplier-specific method. In 2021 we launched an initiative to improve our Supplier emission data quality. This involved identifying the potential top 50 emitting suppliers and requesting actual supplier specific data from them. We have continued this approach in 2022. Where data is provided by the suppliers, we substitute it for the estimated data. To date we have been able to substitute 21% of the estimated data for Category 1 supplier specific data.

**Capital goods**

---

**Evaluation status**

Relevant, calculated

**Emissions in reporting year (metric tons CO2e)**

148,904

**Emissions calculation methodology**

Spend-based method

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

**Please explain**

Our Category 2 emissions are calculated on the spend-based method using the Quantis Suite tool. We plan to move to a hybrid method in future, using the supplier-specific method from the potential top emitting suppliers and requesting supplier-specific data from them. But in 2022 zero percent of the data for Capital Goods was based on supplier-specific data.

**Fuel-and-energy-related activities (not included in Scope 1 or 2)**

---

**Evaluation status**

Relevant, calculated

**Emissions in reporting year (metric tons CO2e)**

5,190,161

**Emissions calculation methodology**Supplier-specific method  
Average data method**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

95



**Please explain**

The power we sell to our customers (category 3d) has known emissions based on the generation origin of the power (gas, nuclear, coal, renewables, etc). This is sourced from the seller/ value chain partner. This equates to 95% of Category 3 and therefore 95% of the emissions are calculated using data obtained by the suppliers.

**Upstream transportation and distribution**

---

**Evaluation status**

Not relevant, explanation provided

**Please explain**

Centrica's main products sold are gas and electricity. These are transported through pipes and wires as opposed to vehicles. They do not naturally fit in this category. The small volume of actual upstream transportation is not relevant from a materiality perspective. Where there are emissions these will be captured in Category 1.

**Waste generated in operations**

---

**Evaluation status**

Relevant, calculated

**Emissions in reporting year (metric tons CO2e)**

2,251

**Emissions calculation methodology**

Waste-type-specific method

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

**Please explain**

We capture our waste volumes by type (office versus operational) and by disposal method (recycling, landfill, incineration). We apply the relevant DEFRA emission factors to the waste based on their category. We also capture the voluntary option of emissions associated with wastewater. These emissions are wastewater volumes multiplied by emission factor.

**Business travel**

---

**Evaluation status**

Relevant, calculated

**Emissions in reporting year (metric tons CO2e)**

1,780

**Emissions calculation methodology**

Hybrid method

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

46

**Please explain**

Business Travel includes 4 components: grey fleet, flights, rail and helicopter travel to our offshore facilities. The helicopter fuel emissions (12%) are based on actual fuel consumption from the service operator; the grey fleet emissions (34%) are based on actual mileage claims from employees using their own vehicles; flights are based on distance between departure and destination for the more expensive flights, but based on spend for the cheaper flights; and rail is purely based on spend. All WTT emissions are emission factor based.

**Employee commuting**

---

**Evaluation status**

Relevant, calculated

**Emissions in reporting year (metric tons CO2e)**

9,115

**Emissions calculation methodology**

Average data method

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

**Please explain**

Employee commuting includes both commuting emissions and employee working from home emissions. These are based on number of employee visits to the office and number of employees working from home. The emissions are estimated using country specific estimates and emission factor data

**Upstream leased assets**

---

**Evaluation status**

Not relevant, explanation provided

**Please explain**

Centrica's reporting approach means it includes all its leased assets in its Scope 1 and Scope 2 inventories, therefore this category is not relevant and not calculated.

**Downstream transportation and distribution**

---

**Evaluation status**

Not relevant, explanation provided

**Please explain**

Centrica's main products sold are gas and electricity. These are transported through pipes and wires as opposed to vehicles. They do not naturally fit in this category. The

small volume of actual downstream transportation is not relevant from a materiality perspective. Where there are emissions these will be captured in Category 1.

### Processing of sold products

---

#### Evaluation status

Not relevant, explanation provided

#### Please explain

As Centrica's primary products are electricity and gas that are used as end products, the emissions from the processing of sold intermediate products is not relevant.

### Use of sold products

---

#### Evaluation status

Relevant, calculated

#### Emissions in reporting year (metric tons CO<sub>2</sub>e)

18,173,909

#### Emissions calculation methodology

Fuel-based method

#### Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

#### Please explain

This is a relevant component of our scope 3 emissions in respect to its size (75% of our scope 3) and is relevant to the sector.

### End of life treatment of sold products

---

#### Evaluation status

Not relevant, explanation provided

#### Please explain

We sell negligible volumes of product that requires end of life treatment, relative to the quantity of gas, electricity and services that we supply. These emissions are therefore not relevant.

### Downstream leased assets

---

#### Evaluation status

Not relevant, explanation provided

#### Please explain

Centrica only leases a few properties. The emissions have previously been calculated to be immaterial at approximately 0.00004%. They, do not expose the organisation to risk and hence, are not considered relevant.

### Franchises

---

**Evaluation status**

Not relevant, explanation provided

**Please explain**

Centrica operates a Franchise in the UK, the Dyno Franchise. We do not track franchisee carbon emissions; however, previously these calculated emissions equated to less than 0.001% of our scope 3 .

**Investments**

---

**Evaluation status**

Relevant, calculated

**Emissions in reporting year (metric tons CO2e)**

8,585

**Emissions calculation methodology**

Investment-specific method

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

100

**Please explain**

In 2021, Centrica moved from an equity approach to an operational control reporting boundary approach. As a result, our non-operated investments are now no longer included in Scope 1 & 2, but in the Investment category of Scope 3. This includes our 20% interest in UK nuclear power assets. We have calculated the emissions based on actual emission data from our investments.

In 2021, we included Spirit Energy in Investments, however following a change in Spirit Energy's operational control status in 2022, these are now no longer part of Investments.

**Other (upstream)**

---

**Evaluation status**

**Please explain**

**Other (downstream)**

---

**Evaluation status**

**Please explain**

## C6.5a

**(C6.5a) Disclose or restate your Scope 3 emissions data for previous years.**

### Past year 1

---

**Start date**

January 1, 2021

**End date**

December 31, 2021

**Scope 3: Purchased goods and services (metric tons CO2e)**

622,964

**Scope 3: Capital goods (metric tons CO2e)**

49,624

**Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)  
(metric tons CO2e)**

1,566,133

**Scope 3: Upstream transportation and distribution (metric tons CO2e)**

**Scope 3: Waste generated in operations (metric tons CO2e)**

3,617

**Scope 3: Business travel (metric tons CO2e)**

961

**Scope 3: Employee commuting (metric tons CO2e)**

10,500

**Scope 3: Upstream leased assets (metric tons CO2e)**

**Scope 3: Downstream transportation and distribution (metric tons CO2e)**

**Scope 3: Processing of sold products (metric tons CO2e)**

**Scope 3: Use of sold products (metric tons CO2e)**

19,930,321

**Scope 3: End of life treatment of sold products (metric tons CO2e)**

**Scope 3: Downstream leased assets (metric tons CO2e)**

**Scope 3: Franchises (metric tons CO2e)**

**Scope 3: Investments (metric tons CO2e)**

10,491

**Scope 3: Other (upstream) (metric tons CO2e)**

**Scope 3: Other (downstream) (metric tons CO2e)**

**Comment**

Continual improvements in our Scope 3 data methodologies have resulted in minor changes to our Scope 3 emissions.

The 2022 change of Spirit Energy's status to within Centrica's operation control boundary has resulted in a material re-statement of historical Investment emissions

**Past year 2**

---

**Start date**

January 1, 2020

**End date**

December 31, 2020

**Scope 3: Purchased goods and services (metric tons CO2e)**

925,973

**Scope 3: Capital goods (metric tons CO2e)**

84,248

**Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)**

47,458,093

**Scope 3: Upstream transportation and distribution (metric tons CO2e)**

**Scope 3: Waste generated in operations (metric tons CO2e)**

5,443

**Scope 3: Business travel (metric tons CO2e)**

1,618

**Scope 3: Employee commuting (metric tons CO2e)**

5,130

**Scope 3: Upstream leased assets (metric tons CO2e)**

**Scope 3: Downstream transportation and distribution (metric tons CO2e)**

**Scope 3: Processing of sold products (metric tons CO<sub>2</sub>e)**

**Scope 3: Use of sold products (metric tons CO<sub>2</sub>e)**

67,419,101

**Scope 3: End of life treatment of sold products (metric tons CO<sub>2</sub>e)**

**Scope 3: Downstream leased assets (metric tons CO<sub>2</sub>e)**

**Scope 3: Franchises (metric tons CO<sub>2</sub>e)**

**Scope 3: Investments (metric tons CO<sub>2</sub>e)**

8,756

**Scope 3: Other (upstream) (metric tons CO<sub>2</sub>e)**

**Scope 3: Other (downstream) (metric tons CO<sub>2</sub>e)**

**Comment**

Continual improvements in our Scope 3 data methodologies have resulted in minor changes to our Scope 3 emissions.

The 2022 change of Spirit Energy's status to within Centrica's operation control boundary has resulted in a material re-statement of historical Investment emissions

**Past year 3**

---

**Start date**

January 1, 2019

**End date**

December 31, 2019

**Scope 3: Purchased goods and services (metric tons CO<sub>2</sub>e)**

1,025,744

**Scope 3: Capital goods (metric tons CO<sub>2</sub>e)**

82,600

**Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO<sub>2</sub>e)**

52,168,382

**Scope 3: Upstream transportation and distribution (metric tons CO<sub>2</sub>e)**

**Scope 3: Waste generated in operations (metric tons CO2e)**

1,912

**Scope 3: Business travel (metric tons CO2e)**

11,319

**Scope 3: Employee commuting (metric tons CO2e)**

6,728

**Scope 3: Upstream leased assets (metric tons CO2e)**

**Scope 3: Downstream transportation and distribution (metric tons CO2e)**

**Scope 3: Processing of sold products (metric tons CO2e)**

**Scope 3: Use of sold products (metric tons CO2e)**

69,234,770

**Scope 3: End of life treatment of sold products (metric tons CO2e)**

**Scope 3: Downstream leased assets (metric tons CO2e)**

**Scope 3: Franchises (metric tons CO2e)**

**Scope 3: Investments (metric tons CO2e)**

8,502

**Scope 3: Other (upstream) (metric tons CO2e)**

**Scope 3: Other (downstream) (metric tons CO2e)**

**Comment**

## **C6.7**

**(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?**

Yes



## C6.7a

**(C6.7a) Provide the emissions from biogenic carbon relevant to your organization in metric tons CO2.**

	<b>CO2 emissions from biogenic carbon (metric tons CO2)</b>	<b>Comment</b>
Row 1	1,187	This includes the emissions associated with the biofuel component of forecourt fuel, biomass and biofuel in our offices.

## C6.10

**(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.**

**Intensity figure**

0.00008456

**Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)**

2,008,579

**Metric denominator**

unit total revenue

**Metric denominator: Unit total**

23,741,000,000

**Scope 2 figure used**

Market-based

**% change from previous year**

21

**Direction of change**

Increased

**Reason(s) for change**

Change in output

**Please explain**

2021 emissions were not reflective of Centrica's typical emissions due to the outage of our large emitting asset, WhiteGate Power station. 2022 emissions were more consistent with the norm, however this resulted in an increase in the emission intensity.

**Intensity figure**

0.379

**Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)**

960,705

**Metric denominator**

megawatt hour transmitted (MWh)

**Metric denominator: Unit total**

2,537,399

**Scope 2 figure used**

Market-based

**% change from previous year**

11

**Direction of change**

Decreased

**Reason(s) for change**

Change in output

**Please explain**

Note the numerator relates to the combustion emissions related to power generation only, as is consistent with the industry norm. Hence, emissions from other sectors of the business, such as oil and gas production, are excluded.

In 2021, our base-load gas power station, Whitegate, had an outage for most of the year. Therefore the 2021 power generation carbon intensity was heavily influenced by the less efficient Brigg Peaking Plant. In 2022, Whitegate had a normal running profile, resulting in a reduction in the overall organisational carbon intensity

## C7. Emissions breakdowns

### C7.1

**(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?**

Yes

#### C7.1a

**(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).**

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
----------------	---	---------------

SF6	0	IPCC Fourth Assessment Report (AR4 - 100 year)
HFCs	0	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	3,479	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	48,263	IPCC Fourth Assessment Report (AR4 - 100 year)
CO2	1,943,296	IPCC Fourth Assessment Report (AR4 - 100 year)
PFCs	0	IPCC Fourth Assessment Report (AR4 - 100 year)
NF3	0	IPCC Fourth Assessment Report (AR4 - 100 year)

## C-EU7.1b

**(C-EU7.1b) Break down your total gross global Scope 1 emissions from electric utilities value chain activities by greenhouse gas type.**

	Gross Scope 1 CO2 emissions (metric tons CO2)	Gross Scope 1 methane emissions (metric tons CH4)	Gross Scope 1 SF6 emissions (metric tons SF6)	Total gross Scope 1 emissions (metric tons CO2e)	Comment
Fugitives	0	177.4	0	4,432	These emissions relate to fugitive emissions from the gas turbines (unburnt hydrocarbons in turbine exhaust)
Combustion (Electric utilities)	960,705	52.5	0	962,019	The methane and carbon dioxide from the combustion of gas and diesel at our power stations
Combustion (Gas utilities)	0	0	0	0	We do not operate gas utilities
Combustion (Other)	0	0	0	0	n/a
Emissions not	0	0	0	2,109	The other emissions are N2O and therefore cannot be categorised in the

elsewhere classified					CH4, SF6 or CO2 options above
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## C7.2

**(C7.2) Break down your total gross global Scope 1 emissions by country/area/region.**

Country/area/region	Scope 1 emissions (metric tons CO2e)
United Kingdom of Great Britain and Northern Ireland	725,422
North America	238,839
Ireland	942,736
Netherlands	87,350
Hungary	325
Italy	249
Denmark	20
Belgium	97

## C7.3

**(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.**

By business division

### C7.3a

**(C7.3a) Break down your total gross global Scope 1 emissions by business division.**

Business division	Scope 1 emissions (metric ton CO2e)
British Gas Energy	322
Bord Gais Energy	942,736
Centrica Business Solutions (CBS)	28,870
Centrica Storage Ltd (CSL)	116,073
British Gas Solutions & Services (BG S&S)	24,962
Energy Marketing & Trading (EM&T)	238,628
Functions	356
Spirit Energy	643,092

## C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

**(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.**

	Gross Scope 1 emissions, metric tons CO2e	Comment
Electric utility activities	968,560	This is the sum of our power generation emissions. We do not offset therefore the gross and net are the same

### C7.7

**(C7.7) Is your organization able to break down your emissions data for any of the subsidiaries included in your CDP response?**

No

### C7.9

**(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?**

Increased

### C7.9a

**(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.**

	Change in emissions (metric tons CO2e)	Direction of change in emissions	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	1,096	Increased	0.11	Due to 'changes in renewable energy consumption' during the year, there has been a 0.11% increase in total Scope 1 & 2 emissions compared to 2021. Our on-site generation decreased by 17 MWh in 2022 compared to 2021 (14.2MWh decrease in on-site solar electricity generation and 2.8 MWh decrease in solar heat generation), the decrease of on-site consumption of this renewable energy means an overall increase in the consumption of non-renewable energy. Using the average emission factors for electricity and gas, this equates to an increase of 3.3tCO2e. The proportion of purchased renewable power consumption decreased by 32% in

				<p>2022, from 34% on a green tariff in 2021 to 27% on a green tariff in 2022. This equates to 5,652 MWh less renewable power being consumed in 2022. Using a grid average emission factor for electricity, this equates to 1093 tCO<sub>2</sub>e increase in emissions in 2022 compared to 2021</p> <p>Centrica's total 2021 emissions were 1,032,807 therefore, combined, these emission reductions equate to a 0.11% increase as a result of a change in renewable consumption compared to 2021. Therefore as per the calculation methodology stipulated: <math>=(\text{sum}(-3.3, -1093)/1032807)*100 = -0.11\%</math></p>
Other emissions reduction activities	3,198	Decreased	0.31	<p>To achieve our ambition to have a zero-emission road fleet by 2025, we continued to implement our global low carbon fleet roadmap in 2022 which resulted in 3183 tCO<sub>2</sub>e avoided. This was primarily driven by an increase of 987 electric commercial vans replacing older diesel vans in the UK.</p> <p>Improvements in our property portfolio, including new air condition units and boilers, as well as more efficient UPS units resulted in 14 tonnes of emission savings</p> <p>Centrica's total 2021 emissions were 1,032,807, therefore, a 3,198 tCO<sub>2</sub>e emission reduction equates to a 0.31% reduction as a result of emission saving initiatives compared to 2021. Therefore as per the calculation methodology stipulated: <math>(\text{sum}(-3183,-14)/1,032,807)*100 = -0.31\%</math></p>
Divestment	23,506	Decreased	2.28	<p>In 2021, Centrica sold Peterborough power station and Peterborough gas engine. This resulted in a 23,506 tonne decrease in emissions in 2022 compared to 2021</p> <p>Centrica's total 2021 emissions were 1,032,807, therefore, a 23,506 tCO<sub>2</sub>e emission reduction equates to a 2.28% reduction as a result of emission saving</p>

				initiatives compared to 2021. Therefore as per the calculation methodology stipulated: $(-23,506/1,032,807)*100 = -2.28\%$
Acquisitions	0	No change	0	No acquisitions in 2022
Mergers	0	No change	0	No mergers in 2022
Change in output	100,453	Increased	96.87	<p>Due to 'changes in output' during the year, there has been a 96.87% increase in total Scope 1 &amp; 2 emissions compared to 2021</p> <p>Our main emitting asset, Whitegate power station, had an outage for most of 2021, but resumed a normal running pattern in 2022, resulting in an increase of 877,362 tCO<sub>2</sub>e compared to 2021.</p> <p>British Gas Services and Solutions increased its operational activity in 2022 compared to 2021. This resulted in a 2,236 tCO<sub>2</sub>e increase in emissions in 2022 compared to 2023</p> <p>EM&amp;T increased its LNG shipping activity in 2022 compared to 2021. This resulted in a 96,318 tCO<sub>2</sub>e increase in emissions in 2022 compared to 2022</p> <p>Spirit Energy decreased its operational activity in 2022 compared to 2021. This resulted in a 2,552 tCO<sub>2</sub>e decrease in emissions in 2022 compared to 2022</p> <p>CSL increased its operational activity in 2022 compared to 2021. This resulted in a 39,417 tCO<sub>2</sub>e increase in CSL's emissions in 2022 compared to 2021</p> <p>Centrica's total 2021 emissions were 1032807, therefore, combined, these emission reductions equate to a 96.87% increase as a result of a change in output compared to 2021. Therefore as per the calculation methodology stipulated:</p> $(\text{sum}(39417, -12328, 877,362, -2552, 2236, 96318)/1032807)*100 = 96.87\%$
Change in methodology	0	No change	0	No change in methodology
Change in boundary	0	No change	0	While we did not change our boundary, in 2022, we incorporated LNG and Spirit Energy into the Operational Control

				Boundary, however we also incorporated them into historical years. As such, their incorporation has not made any change to year-on-year emissions.
Change in physical operating conditions	0	No change	0	No change from physical operating conditions
Unidentified	881	Increased	0.08	Due to 'Unidentified changes' during the year, there has been a 0.08% increase in total Scope 1 & 2 emissions compared to 2021. 881 tCO2e of additional emissions occurred in 2022 but the cause is unidentified. Therefore as per the calculation methodology stipulated: $(881/1032807)*100 = 0.08\%$
Other	0	No change	0	No change as a result of other activity

### C7.9b

**(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?**

Market-based

## C8. Energy

### C8.1

**(C8.1) What percentage of your total operational spend in the reporting year was on energy?**

More than 0% but less than or equal to 5%

### C8.2

**(C8.2) Select which energy-related activities your organization has undertaken.**

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes



Consumption of purchased or acquired heat	Yes
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

## C8.2a

**(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.**

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	5,527	8,957,177	8,962,705
Consumption of purchased or acquired electricity		20,503	62,320	82,823
Consumption of purchased or acquired heat		0	493	493
Consumption of self-generated non-fuel renewable energy		1,418		1,418
Total energy consumption		27,352	9,020,087	9,047,439

## C8.2b

**(C8.2b) Select the applications of your organization's consumption of fuel.**

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	No

Consumption of fuel for the generation of cooling	Yes
Consumption of fuel for co-generation or tri-generation	No

## C8.2c

**(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.**

### Sustainable biomass

#### Heating value

Unable to confirm heating value

#### Total fuel MWh consumed by the organization

96

#### MWh fuel consumed for self-generation of electricity

0

#### MWh fuel consumed for self-generation of heat

0

#### MWh fuel consumed for self-generation of cooling

0

#### Comment

This includes wood pellets used in our office biomass boilers.

### Other biomass

#### Heating value

Unable to confirm heating value

#### Total fuel MWh consumed by the organization

5,431

#### MWh fuel consumed for self-generation of electricity

0

#### MWh fuel consumed for self-generation of heat

5,431

#### MWh fuel consumed for self-generation of cooling

0

#### Comment

This equates to the biofuel component in the forecourt fuel we purchase. As its already blended with mineral diesel on purchase, we have no way of knowing if it is sustainable

certified or not, so have taken the precautionary approach and assumed its not sustainable certified

### **Other renewable fuels (e.g. renewable hydrogen)**

---

#### **Heating value**

Unable to confirm heating value

#### **Total fuel MWh consumed by the organization**

0

#### **MWh fuel consumed for self-generation of electricity**

0

#### **MWh fuel consumed for self-generation of heat**

0

#### **MWh fuel consumed for self-generation of cooling**

0

#### **Comment**

We do not use hydrogen or other renewable fuels

### **Coal**

---

#### **Heating value**

Unable to confirm heating value

#### **Total fuel MWh consumed by the organization**

0

#### **MWh fuel consumed for self-generation of electricity**

0

#### **MWh fuel consumed for self-generation of heat**

0

#### **MWh fuel consumed for self-generation of cooling**

0

#### **Comment**

We do not consume coal

### **Oil**

---

#### **Heating value**

Unable to confirm heating value

#### **Total fuel MWh consumed by the organization**

456,024

#### **MWh fuel consumed for self-generation of electricity**

5,749

**MWh fuel consumed for self-generation of heat**

450,275

**MWh fuel consumed for self-generation of cooling**

0

**Comment**

This includes vehicle combustion engine oils and shipping marine oils under the heat category, as well as some oil used for onsite power generation.

**Gas**

---

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

8,501,249

**MWh fuel consumed for self-generation of electricity**

5,254,532

**MWh fuel consumed for self-generation of heat**

3,243,490

**MWh fuel consumed for self-generation of cooling**

3,227

**Comment**

The majority of gas consumed is in our power stations and gas engines (Whitetgate and Brigg). The CSL and Spirit Energy gas consumed is categorised as heat because it is mainly used in compressors as opposed to for elec generation. Our LNG Ships partially run on LNG, this is included in self-generation of heat.

**Other non-renewable fuels (e.g. non-renewable hydrogen)**

---

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

0

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of cooling**

0

**Comment**

We do not use other non renewable fuels

## Total fuel

---

### Heating value

Unable to confirm heating value

### Total fuel MWh consumed by the organization

8,962,801

### MWh fuel consumed for self-generation of electricity

5,260,281

### MWh fuel consumed for self-generation of heat

3,699,293

### MWh fuel consumed for self-generation of cooling

3,227

### Comment

Unable to specify a heating value as this is a total, that combines different heating values.

## C-EU8.2d

**(C-EU8.2d) For your electric utility activities, provide a breakdown of your total power plant capacity, generation, and related emissions during the reporting year by source.**

### Coal – hard

---

#### Nameplate capacity (MW)

0

#### Gross electricity generation (GWh)

0

#### Net electricity generation (GWh)

0

#### Absolute scope 1 emissions (metric tons CO<sub>2</sub>e)

0

#### Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)

0

### Comment

No coal

### Lignite

---

#### Nameplate capacity (MW)

0

#### Gross electricity generation (GWh)

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO<sub>2</sub>e)**

0

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

0

**Comment**

No Lignite

**Oil**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO<sub>2</sub>e)**

0

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

0

**Comment**

No oil

**Gas**

---

**Nameplate capacity (MW)**

494

**Gross electricity generation (GWh)**

2,605

**Net electricity generation (GWh)**

2,588

**Absolute scope 1 emissions (metric tons CO<sub>2</sub>e)**

986,560

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

372

**Comment**

We have two remaining gas fuelled power generators, Brigg gas engine (49MW) and Whitegate Power station (450MW). Whitegate was fully operational in 2022, following an extended outage in 2021

### Sustainable biomass

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

No biomass generation

### Other biomass

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

No other biomass generation

### Waste (non-biomass)

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO<sub>2</sub>e)**

0

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

0

**Comment**

No waste fuelled generation

**Nuclear**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO<sub>2</sub>e)**

0

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

0

**Comment**

Following our move to an Operational Boundary approach in 2021, our nuclear interests are no longer included in our scope

**Fossil-fuel plants fitted with CCS**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO<sub>2</sub>e)**

0

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

0

**Comment**

We have no fossil fuelled plants fitted with CCS

**Geothermal**

---



**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

We have no geothermal

**Hydropower**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

We have no hydro power

**Wind**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

We have no wind power

**Solar**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO<sub>2</sub>e)**

0

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

0

**Comment**

We had no commercial solar in 2022, 18MW of Solar started generating in Q1 2023

**Marine**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO<sub>2</sub>e)**

0

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

0

**Comment**

We have no marine

**Other renewable**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO<sub>2</sub>e)**

0

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

0

**Comment**

We have no other renewables

**Other non-renewable**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO<sub>2</sub>e)**

0

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

0

**Comment**

We have no other non-renewables

**Total**

---

**Nameplate capacity (MW)**

494

**Gross electricity generation (GWh)**

2,605

**Net electricity generation (GWh)**

2,588

**Absolute scope 1 emissions (metric tons CO<sub>2</sub>e)**

968,560

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

372

**Comment**

This just constitutes our gas fired power generation

## C8.2g

**(C8.2g) Provide a breakdown by country/area of your non-fuel energy consumption in the reporting year.**

---

**Country/area**

United Kingdom of Great Britain and Northern Ireland

**Consumption of purchased electricity (MWh)**

70,623

**Consumption of self-generated electricity (MWh)**

1,415

**Consumption of purchased heat, steam, and cooling (MWh)**

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

4

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

72,042

---

**Country/area**

Other, please specify

North America

**Consumption of purchased electricity (MWh)**

249

**Consumption of self-generated electricity (MWh)**

0

**Consumption of purchased heat, steam, and cooling (MWh)**

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

249

---

**Country/area**

Belgium

**Consumption of purchased electricity (MWh)**

95

**Consumption of self-generated electricity (MWh)**

0

**Consumption of purchased heat, steam, and cooling (MWh)**

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

95

---

**Country/area**

Denmark

**Consumption of purchased electricity (MWh)**

1,071

**Consumption of self-generated electricity (MWh)**

0

**Consumption of purchased heat, steam, and cooling (MWh)**

481

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

1,552

---

**Country/area**

Germany

**Consumption of purchased electricity (MWh)**

15

**Consumption of self-generated electricity (MWh)**

0

**Consumption of purchased heat, steam, and cooling (MWh)**

7

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

22

---

**Country/area**

Hungary

**Consumption of purchased electricity (MWh)**

43

**Consumption of self-generated electricity (MWh)**

0

**Consumption of purchased heat, steam, and cooling (MWh)**

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

43

---

**Country/area**

Italy

**Consumption of purchased electricity (MWh)**

13

**Consumption of self-generated electricity (MWh)**

0

**Consumption of purchased heat, steam, and cooling (MWh)**

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

13

---

**Country/area**

Netherlands

**Consumption of purchased electricity (MWh)**

264

**Consumption of self-generated electricity (MWh)**

0

**Consumption of purchased heat, steam, and cooling (MWh)**

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

264

---

**Country/area**

Norway

**Consumption of purchased electricity (MWh)**

7

**Consumption of self-generated electricity (MWh)**

0

**Consumption of purchased heat, steam, and cooling (MWh)**

3

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

10

---

**Country/area**

Ireland

**Consumption of purchased electricity (MWh)**

3,724

**Consumption of self-generated electricity (MWh)**

0

**Consumption of purchased heat, steam, and cooling (MWh)**

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

3,724

---

**Country/area**

Sweden

**Consumption of purchased electricity (MWh)**

7

**Consumption of self-generated electricity (MWh)**

0

**Consumption of purchased heat, steam, and cooling (MWh)**

3

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

10

---

**Country/area**

Israel

**Consumption of purchased electricity (MWh)**

37

**Consumption of self-generated electricity (MWh)**

0

**Consumption of purchased heat, steam, and cooling (MWh)**

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

37

---

**Country/area**



Singapore

**Consumption of purchased electricity (MWh)**

33

**Consumption of self-generated electricity (MWh)**

0

**Consumption of purchased heat, steam, and cooling (MWh)**

0

**Consumption of self-generated heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

33

## C-EU8.4

(C-EU8.4) Does your electric utility organization have a transmission and distribution business?

No

## C9. Additional metrics

### C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

### C-EU9.5a

(C-EU9.5a) Break down, by source, your organization's CAPEX in the reporting year and CAPEX planned over the next 5 years.

**Coal – hard**

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

Does not form part of Centrica's current operations or near-term strategy

**Lignite**

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

Does not form part of Centrica's current operations or near-term strategy

**Oil**

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

Does not form part of Centrica's current operations or near-term strategy

**Gas**

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

29,000,000

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

30

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

**Most recent year in which a new power plant using this source was approved for development**

2023

**Explain your CAPEX calculations, including any assumptions**

In Centrica's Climate Transition Plan we announced the ambition to invest up to £100m annually in low carbon and flexible generation. While the actual figure invested each year will vary, we are hoping to increase investment to around this level rapidly and seize any opportunities we identify.

Centrica recognises the need for Gas Peaking Plants in the short/medium term to smooth intermittency from renewable power generation as the industry scales. We also include an estimated cost of conversion for each peaking plant to run on hydrogen.

The three key technologies we are currently focusing our CAPEX planning around are solar, battery and flexible gas peakers (with the potential for hydrogen conversion). The proportion of these technologies our investment will deploy is highly contingent on market conditions and is not certain, it will likely vary over the next five years. Under current market conditions we anticipate that approximately 35% will go towards batteries, with 40% to flexible peakers, 20% to Nuclear and 5% to solar.

**Sustainable biomass**

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

Does not form part of Centrica's current operations or near-term strategy

**Other biomass**

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

Does not form part of Centrica's current operations or near-term strategy

#### Waste (non-biomass)

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

Does not form part of Centrica's current operations or near-term strategy

#### Nuclear

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

54,000,000

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

60

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

**Most recent year in which a new power plant using this source was approved for development**

2009

**Explain your CAPEX calculations, including any assumptions**

Please note that this figure is Centrica's 20% share of EDF's British nuclear fleet. This is considered as indirect capex. Centrica completed the purchase of this stake in 2009.

#### Geothermal

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

Does not form part of Centrica's current operations or near-term strategy.

### Hydropower

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

Does not form part of Centrica's current operations or near-term strategy.

### Wind

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**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

Does not form part of Centrica's current operations or near-term strategy

### Solar

---

**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

10,000,000

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

10

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

**Most recent year in which a new power plant using this source was approved for development**

2021

**Explain your CAPEX calculations, including any assumptions**

In Centrica's Climate Transition Plan we announced the ambition to invest up to £100m annually in low carbon and flexible generation. While the actual figure invested each year will vary, we are hoping to increase investment to around this level rapidly and seize any opportunities we identify.

The three key technologies we are currently focusing our CAPEX planning around are solar, battery and flexible gas peakers (with the potential for hydrogen conversion). The proportion of these technologies our investment will deploy is highly contingent on market conditions and is not certain, it will likely vary over the next five years. Under current market conditions we anticipate that approximately 35% will go towards batteries, with 40% to flexible peakers, 20% to Nuclear and 5% to solar.

## Marine

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**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

Does not form part of Centrica's current operations or near-term strategy.

## Fossil-fuel plants fitted with CCS

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**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

Does not form part of Centrica's current operations or near-term strategy.

**Other renewable (e.g. renewable hydrogen)**

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**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

Centrica's investment in Hydrogen is currently treated as R&D (see appropriate section) due to the nascency of the technology.

**Other non-renewable (e.g. non-renewable hydrogen)**

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**CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)**

0

**CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year**

0

**CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years**

0

**Explain your CAPEX calculations, including any assumptions**

Does not form part of Centrica's current operations or forward-looking strategy

## **C-EU9.5b**

**(C-EU9.5b) Break down your total planned CAPEX in your current CAPEX plan for products and services (e.g. smart grids, digitalization, etc.).**

Products and services	Description of product/service	CAPEX planned for product/service	Percentage of total CAPEX planned products and services	End of year CAPEX plan
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### C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
Row 1	Yes	

### C-CO9.6a/C-EU9.6a/C-OG9.6a

(C-CO9.6a/C-EU9.6a/C-OG9.6a) Provide details of your organization's investments in low-carbon R&D for your sector activities over the last three years.

Technology area	Stage of development in the reporting year	Average % of total R&D investment over the last 3 years	R&D investment figure in the reporting year (unit currency as selected in C0.4) (optional)	Average % of total R&D investment planned over the next 5 years	Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan
Other, please specify Smart Systems & Net Zero Retail technology	Large scale commercial deployment				<p>Hive, within the British Gas business supplies new technologies and energy efficient solutions to residential customers. Hive products, including the smart thermostat, allow customers to better understand and manage their energy usage.</p> <p>Following five years of material losses, management has announced that the segment will no longer be separately reported,</p>



					<p>and investment will be stripped back. Hive made an operating loss of £55m in 2020, however there is no clear 2021 or 2022 figure reported as it is now shown with British Gas Services &amp; Solutions. Over the period 2018-2020, the total operating losses were £224m, with further capital expenditure of c£80m.</p> <p>We have now setup a Net Zero focused business within British Gas Services and Solutions</p>
Other, please specify Distributed energy resources	Large scale commercial deployment				<p>Centrica Business Solutions (CBS) reported a reduced adjusted operating profit of £44m in 2022 (adjusted operating loss of £52m in 2021). CBS supplies new technologies, flexible generation and energy efficient solutions to commercial and industrial customers.</p>
Other, please specify Digital technology	Small scale commercial deployment				<p>In 2017, Centrica created of an innovation fund to identify, incubate and accelerate new technologies and innovations, with £30m to date invested in thirteen projects, including: -</p> <p>7 Companies in the distributed/</p>

					<p>decentralised energy system space. These include;</p> <ul style="list-style-type: none"> <li>a) a blockchain solution that standardises electric grid data and provides software tools so utilities can run local energy markets</li> <li>b) Linear Generator provider that offers businesses affordable flexible and reliable clean power from natural gas</li> </ul> <p>5 companies in the connected world space. These include;</p> <ul style="list-style-type: none"> <li>a) technology specialists in industrial cyber security</li> <li>b) Cutting-edge in-home monitoring and fall detection, empowering people to live independently for longer</li> </ul> <p>Centrica has successfully exited 3 of these companies.</p>
Other, please specify Energy storage & hydrogen production	Large scale commercial deployment				<p>Hydrogen storage – Exploring the repurposing of Centrica’s offshore Rough facility. From acquisition in 2002 Rough operated as a seasonal storage facility to support the UK during Winter. From 2017–2022 this was a gas production asset. In Autumn 2022 Centrica was granted a 10-year storage license,</p>

				<p>operating with 30bcf of potential storage capacity over winter 22/23 immediately becomes the UK's largest gas storage facility and adding ~50% to UK capacity.</p> <p>We are exploring how the Rough facility may transition to store Hydrogen in a similar capacity, acting as a seasonal storage facility supporting the UK in Winter.</p> <p>While there are a range of possible pathways to Net Zero – depending on factors such as future innovations in electricity generation and heating technologies, and changes in consumer behaviour – it is widely accepted that hydrogen is likely to play a significant role. This reflects that hydrogen appears to be the most effective decarbonisation option in many sectors and compliments alternative low carbon solutions in other sectors.</p> <p>Producing hydrogen at scale will require hydrogen storage facilities to manage the inevitable fluctuations in production, particularly for 'green' hydrogen generated by renewable energy sources, and consumption, due to</p>
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				<p>seasonality in demand. The National Grid Energy System Operator's ("NGESO") 2022 Future Energy Scenarios ("FES") suggests demand for hydrogen storage could be between 2 to 10TWh by 2035, and between 11 and 56TWh by 2050 (across the net zero scenarios). This suggests that hydrogen storage will play an important role in delivering Net Zero. A repurposed, hydrogen-ready Rough would significantly contribute to the storage needs of the country. There would also be significant technical and environmental advantages associated with repurposing the existing infrastructure, and geographical advantages associated with Rough's location offshore within a nascent Hydrogen 'Hub' Zone and close to offshore wind capacity off the North East coast. The potential benefits to consumers associated with repurposing Rough are significant – during the construction and natural gas-H2 blended phase Rough could increase the resilience of the UK natural gas market to unexpected</p>
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					shocks, improve liquidity in the market, and facilitate job creation and growth in the Humber and wider region in the 2020s. We have also added a minority stake (5%) in HiiROC whose proprietary technology converts methane into clean hydrogen and carbon black.
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## C10. Verification

### C10.1

**(C10.1) Indicate the verification/assurance status that applies to your reported emissions.**

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

### C10.1a

**(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.**

**Verification or assurance cycle in place**

Annual process


**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

 Assurance statement and basis of reporting 2022.pdf

**Page/ section reference**

Pages 1-2 and 4-7

**Relevant standard**

ISAE3000

**Proportion of reported emissions verified (%)**

100

## C10.1b

**(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.**

---

**Scope 2 approach**

Scope 2 location-based

**Verification or assurance cycle in place**

Annual process


**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

 Assurance statement and basis of reporting 2022.pdf

**Page/ section reference**

Pages 1-2 and 4-7

**Relevant standard**

ISAE3000

**Proportion of reported emissions verified (%)**

100

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**Scope 2 approach**

Scope 2 market-based

**Verification or assurance cycle in place**

Annual process


**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

 Assurance statement and basis of reporting 2022.pdf

**Page/ section reference**

Pages 1-2 and 4-7

**Relevant standard**

ISAE3000

**Proportion of reported emissions verified (%)**

100

## C10.1c

**(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.**

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**Scope 3 category**

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)

Scope 3: Use of sold products

**Verification or assurance cycle in place**

Triennial process


**Status in the current reporting year**

Underway but not complete for reporting year – previous statement of process attached

**Type of verification or assurance**

Limited assurance

**Attach the statement**

 Assurance statement and basis of reporting 2021.pdf

**Page/section reference**

Pages 1-2 and 8-10. Assurance over our GHG intensity of customer energy use (gCO<sub>2</sub>e/kWh) target is assured every three years back to the 2019 base year.

Assurance includes 97% of the emissions associated with Category 3 of Category 3d 'Generation of purchased electricity that is sold to end users' under the scope 3 protocol guidance and 100% of Category 11. This in total is equivalent to 98% of our total scope 3, and 99.9% of the total emissions from the two categories selected.

**Relevant standard**

ISAE3000

**Proportion of reported emissions verified (%)**

99.9

**C10.2**

**(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?**

Yes

**C10.2a**

**(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?**

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C4. Targets and performance	Progress against emissions reduction target	ISAE3000	Progress against target: Reduce carbon intensity of customers' energy use by 28% by 2030 (Percentage progress in the reporting year against 2019 baseline) (Percentage, %) is included in our DNV assurance.

**C11. Carbon pricing**

**C11.1**

**(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?**

Yes

**C11.1a**

**(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.**

- EU ETS
- UK ETS

**C11.1b**

**(C11.1b) Complete the following table for each of the emissions trading schemes you are regulated by.**

**EU ETS**

**% of Scope 1 emissions covered by the ETS**

51



**% of Scope 2 emissions covered by the ETS**

0

**Period start date**

January 1, 2022

**Period end date**

December 31, 2022

**Allowances allocated**

63,100

**Allowances purchased**

947,046

**Verified Scope 1 emissions in metric tons CO<sub>2</sub>e**

1,010,146

**Verified Scope 2 emissions in metric tons CO<sub>2</sub>e**

0

**Details of ownership**

Other, please specify

We own and operate the majority of the facilities covered (see comment), however we share responsibility for operating Spirit assets (joint venture)

**Comment**

These emissions include those from Whitegate power station in Ireland and our operated joint venture, Spirit Energy's, J6A offshore gas platform in Dutch waters

**UK ETS**

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**% of Scope 1 emissions covered by the ETS**

23

**% of Scope 2 emissions covered by the ETS**

0

**Period start date**

January 1, 2022

**Period end date**

December 31, 2022

**Allowances allocated**

252,779

**Allowances purchased**

201,402

**Verified Scope 1 emissions in metric tons CO<sub>2</sub>e**

454,181

**Verified Scope 2 emissions in metric tons CO<sub>2</sub>e**

0

**Details of ownership**

Other, please specify

We own and operate the majority of the facilities covered (see comment), however we share responsibility for operating Spirit assets (joint venture)

**Comment**

These emissions include CSL's Easington terminal and offshore platform; CBS's Brigg gas engine; and Spirit Energy, operated joint venture's, onshore terminal and offshore platforms

**C11.1d****(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?****UK Emissions Trading System (EU ETS)**

The cost of carbon has become an important factor in all investment decisions taken by Centrica in the power and gas markets. We actively use all available methods to manage our exposure to the risk of rising carbon costs through abatement and emissions trading. Centrica has been actively trading in the EU Emissions Trading market for over ten years and has also been active in the international carbon credit market. We aim to meet the cost of our carbon emissions in the most economical manner for our customers and shareholders. Centrica believes that flexibility is important to help installations manage their carbon exposure. We are constantly looking to manage our carbon position using both abatement and carbon credits. Using the trading markets enables us to effectively manage cost exposures arising with regards to carbon pricing through the UK ETS. We also have in place robust procedures to ensure verification of our emissions and subsequent surrender of sufficient emissions allowances is carried out in line with the scheme requirements.

An example of our strategy for complying with UK ETS is our CBS Centrica Energy Assets (CEA) Power business, which factors in a carbon escalator price (based on the UK ETS price) into the investment case for fossil fuelled assets to test the commercial viability of these projects going forward. All Centrica's CEA power business is certified to ISO14001, the international standard for environmental management systems and is regularly audited by external specialists from an independent accredited certification body. The system for managing UK-ETS uses a two-stage process comprising a portfolio level Standard that sets out the minimum requirements to be met across the portfolio for compliance with the UK-ETS regulations and the associated guidelines. This specifies the overarching requirements for compliance at installation level including the contents of the monitoring and reporting plan, the identification of emission sources, categorisation of tiers, uncertainty requirements, sampling plan requirements, data management/ control/ CO<sub>2</sub> calculation requirements, risk assessment processes and training/ competency needs. This is then enacted by site level procedures that set out the details of the individual site processes used to satisfy the company Standard including the roles and responsibilities and the data flow activities. The two-stage process

ensures a uniformity of approach for Centrica and optimum use of resources for ensuring compliance.

The UK-ETS has an annual regulatory compliance cycle with defined dates for submission to the regulator of an annual emission report that quantifies emissions for the calendar year. The emission statement has to be subjected to independent verification by an approved external verifier prior to submission. Following completion of verification and the submission to the regulator the final task associated with compliance for the calendar year is surrender of emission allowances to match the actual installation emissions. Centrica was fully compliant across all relevant power station with the above in 2022.

## C11.2

**(C11.2) Has your organization canceled any project-based carbon credits within the reporting year?**

No

## C11.3

**(C11.3) Does your organization use an internal price on carbon?**

Yes

## C11.3a

**(C11.3a) Provide details of how your organization uses an internal price on carbon.**

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### **Type of internal carbon price**

Shadow price

### **How the price is determined**

Alignment with the price of allowances under an Emissions Trading Scheme

Alignment with the price of a carbon tax

### **Objective(s) for implementing this internal carbon price**

Change internal behavior

Navigate GHG regulations

Stakeholder expectations

Stress test investments

### **Scope(s) covered**

Scope 1

### **Pricing approach used – spatial variance**

Uniform

### **Pricing approach used – temporal variance**

Evolutionary

### **Indicate how you expect the price to change over time**

Following a historically volatile carbon price, we forecast an upward trajectory in carbon prices which will impact the viability of high carbon power investments such as coal versus renewable energy. This gives confidence in our strategic direction of focusing on lower carbon generation and the grid flexibility required for higher levels of renewable generation. In this way we use projected carbon pricing to disincentivise capital projects and investments which would have higher emissions.

Beyond this, by modelling expected growth in carbon pricing across the electricity system we can plan to provide services to meet the increasing demand for flexibility created by a decarbonised power network (batteries, DSR, optimisation etc). This shapes our operations and the propositions we offer our customers.

### **Actual price(s) used – minimum (currency as specified in C0.4 per metric ton CO2e)**

92

### **Actual price(s) used – maximum (currency as specified in C0.4 per metric ton CO2e)**

119

### **Business decision-making processes this internal carbon price is applied to**

Capital expenditure  
Procurement

### **Mandatory enforcement of this internal carbon price within these business decision-making processes**

Yes, for all decision-making processes

### **Explain how this internal carbon price has contributed to the implementation of your organization's climate commitments and/or climate transition plan**

The use of shadow internal carbon prices (ICP) is integrated into the commercial decisions taken in many areas of Centrica's operations to incentivise action in line with our climate transition plan. For example, we use our ICP to predict external carbon prices and ensure commercial robustness in the face of a changing external environment. Our ICPs are time sensitive, with higher value deployed for future decisions. Ultimately, this has helped us create the commercial case for investing in low-carbon energy assets such as Solar and Battery.

Utilising an ICP also enables us to better predict the long-term impacts of regulations on our business and communicate this information to interested stakeholders such as politicians and investment analysts, to better understand our business and inform. As an example, in 2022 internal carbon pricing was utilised to determine the price point we bid in energy market auctions for potential future generation asset developments (we decided to commit to building, or declined proposals based on our projected ICP). Another activity which used our ICP was the valuation, and subsequent purchasing decisions, regarding future Power Purchase Agreements (a forward contract between generator and off-taker for energy supply) for our future customer demand. Without

accurate ICPs, all these projects and products could be commercially unviable.

Centrica's internal carbon price is also utilised by the UK downstream businesses for near term hedging, where under stable historic market conditions it constitutes approximately 12% of the wholesale power price.

We support the use of carbon prices to incentivising decarbonisation, internally and across the economy. We believe that if carbon pricing mechanisms continue over the long term, they will impact attractiveness of investment opportunities providing financial incentives to grow low carbon generation.

## C12. Engagement

### C12.1

#### (C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers

Yes, our customers/clients

Yes, other partners in the value chain

### C12.1a

#### (C12.1a) Provide details of your climate-related supplier engagement strategy.

##### Type of engagement

Engagement & incentivization (changing supplier behavior)

##### Details of engagement

Facilitate adoption of a unified climate transition approach with suppliers

##### % of suppliers by number

1

##### % total procurement spend (direct and indirect)

49

##### % of supplier-related Scope 3 emissions as reported in C6.5

65

##### Rationale for the coverage of your engagement

We want to partner with suppliers who share our ambition for achieving net zero, so we can cut carbon emissions across our supply chain together. Towards this, all suppliers with a spend of over £5m per year with Centrica, are required to submit a Carbon Reduction Plan (CRP) when submitting a bid, this represents 65% of our supplier-related Scope 3 emissions'

The key elements of an accepted CRP include:

- Commitment to achieving net zero by 2050 or earlier (including an interim target)
- GHG emissions (in line with GHG protocol) and carbon intensity (TCO2e/£m revenue) reporting
- Coverage of all geographies and activities
- Carbon reduction measures planned to achieve net zero
- Board-level (or equivalent) sign-off
- Public disclosure of the plan

**Impact of engagement, including measures of success**

Since January 2022, when this policy was launched, we have reviewed and monitored the CRPs as they have been submitted. By setting the threshold of £5m, we are targeting 49% of our procurement spend, and we expect to see a phased introduction of CRPs as contracts expire and are renegotiated. We also track success of the initiative by reviewing our supplier emissions volumes on aggregate and hope to see a reduction as the plans are implemented.

**Comment**

**Type of engagement**

Engagement & incentivization (changing supplier behavior)

**Details of engagement**

Other, please specify

Setting Corporate Standards, inclusive of environmental safeguards that suppliers must adhere to

**% of suppliers by number**

100

**% total procurement spend (direct and indirect)**

100

**% of supplier-related Scope 3 emissions as reported in C6.5**

100

**Rationale for the coverage of your engagement**

We want to use our purchasing power as a force for good which is why we strive to ensure that our supply chain is sustainable. As part of this, it's important to have a strong foundation so we focus on embedding Corporate Responsibility (CR) clauses in supplier contracts and ensuring that suppliers commit to uphold our CR Policy for Suppliers which includes environmental safeguards. This applies to all suppliers wherever they are based in the world or whatever our spend with them is, because it's a core part of our onboarding process and ongoing management activities.

Within both the onboarding of a supplier and the ongoing management we utilise a risk based methodology to establish the inherent risk with both the country and commodity/service that we are procuring. Suppliers that we identify as posing a high risk

or have been shown to demonstrate inadequate performance are required to develop corrective action plans to improve and embed sustainable behaviours. The information secured forms a scorecard and a corrective action plan. We review the corrective actions and encourage the supplier to upload evidence to demonstrate continuous improvement. In 2022, the average sustainability of those assessed in Ecovadis was 60(low risk), which remains above the multi-industry average of 51 (medium risk). This is an improvement when compared with our previous average score (59) in 2021.

### **Impact of engagement, including measures of success**

We use our purchasing power to embed high social, ethical and environmental standards across our global supply chain. A key way we measure success is by ensuring that all of our suppliers a) sign-up to our CR clauses in contracts which encompasses environmental safeguards and b) comply with our Procurement and CR Policy for Suppliers which contains the commitment to protect the environment.

In 2022, all suppliers committed to uphold high environmental standards. They either accepted our CR policy and clauses, or we agreed that their policies equalled our own and further alignment was unnecessary. Through these actions, we set out the clear expectation to tackle climate change and protect the environment from the very outset of our relationship, which provides a sound foundation for doing business responsibly and helps reduce risk as well as GHG emissions across our supply chain.

### **Comment**

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#### **Type of engagement**

Information collection (understanding supplier behavior)

#### **Details of engagement**

Collect GHG emissions data at least annually from suppliers

#### **% of suppliers by number**

0.2

#### **% total procurement spend (direct and indirect)**

21

#### **% of supplier-related Scope 3 emissions as reported in C6.5**

3

#### **Rationale for the coverage of your engagement**

The key motivator of engagement is to improve the quality of our scope 3 data so that we can better monitor emissions from our supply chain, and ultimately work with them to target reductions. To do this, we have initially focused on our most material suppliers by spend given they are likely to have the largest impact on our emissions and will enable us to make the greatest gains in understanding our emissions and implementing emissions reduction initiatives. For example, our top 50 suppliers in 2022 were responsible for 80% of our total Scope 3 category 1 emissions, when using general

emission factors from Greenhouse Gas Protocol and Quantis which act as a guide for us to gauge the emission-intensity of our spend. Our engagement efforts are therefore aimed at those 50 suppliers. This is why over the last two years we have focused our efforts on those top 50 suppliers, 50% of whom we engaged last year, and will work to engage all new members of our top 50 this year.

### **Impact of engagement, including measures of success**

The measure of success is engaging and obtaining supplier specific scope 3 data from our top 50 suppliers who we believe are our biggest emitters. We have made good progress towards this, which has allowed us to replace estimated spend-based emission data with more accurate supplier specific emission factors. We now use a hybrid approach to calculate category 1 emissions, with 21% of our total procurement spend being covered by supplier-specific emission factors gained from engagement with suppliers. Where we now use supplier-specific data, we have seen a 96% reduction in reported emissions which has led to the total coverage of supplier-related scope 3 emissions under this engagement falling to approximately 3%. Whereas spend on suppliers not engaged is covered by Greenhouse Gas Protocol and Quantis emission factors which on average tend to be significantly over-estimated and contributes the rest of the supplier-related scope 3 emissions. This project has allowed us to better understand the magnitude of our supply chain emissions and hence formulate a more accurate emission baseline which we can use to set realistic reduction targets in the future. Furthermore, this has given us the opportunity to collaborate with key suppliers and share best practice on how to drive down emissions in these areas.

### **Comment**

## **C12.1b**

**(C12.1b) Give details of your climate-related engagement strategy with your customers.**

### **Type of engagement & Details of engagement**

Education/information sharing

Run an engagement campaign to educate customers about the climate change impacts of (using) your products, goods, and/or services

### **% of customers by number**

100

### **% of customer - related Scope 3 emissions as reported in C6.5**

100

### **Please explain the rationale for selecting this group of customers and scope of engagement**

With over 90% of our carbon emissions arising from our customers, its vital that we enable all of our customers to manage their energy more sustainably. We engage our



customers through focused campaigns and wider targeted communications mainly in the UK and Ireland, where the majority of our customers are based. In doing so, we can educate and inform customers in reducing their footprint and cutting costs, while driving sales and achieving our purpose to enable the transition to a lower carbon future.

To help our domestic customers manage their bills and reduce their carbon footprint, we launched and promoted products to increase the control customers have over their energy usage. For example, we ran a campaign via radio and targeted emails to promote our new and improved Hive thermostat range, which includes an energy tracking service “Hive Heating Plus”..

In 2022 Centrica Business Solutions (CBS) surveyed over 1,000 businesses and identified their need for additional support transitioning towards net zero. To help with this, CBS released a series of guides and reports to help businesses convert their net zero ambitions into action. We published articles with titles such as “Why volatility can put you on the path to net zero”, and case studies from key customers like the NHS..

During 2022 we supported the Renewable Heat Incentive (RHI), which gives companies a subsidy for each kWh generated by renewable products and Energy Performance Contracts (EPC) that guarantee customers carbon and cost savings. We also raised awareness of the Boiler Upgrade Scheme (BUS) via our website informing customers of the benefits and how they can apply.

In addition to promoting low-carbon products, we also engaged in information campaigns. For example, Centrica, along with key strategic partners, engaged in a ten-month engagement program with residents within the town of Whitby, Ellesmere Port to educate and collect feedback from the local community regarding the proposed Hydrogen Village Trial. This included writing to all 2,000 residents, specific online campaigns, attending 1,100 homes for assessments and hosting 600 visitors in the Hydrogen Experience Centre. The aim of this engagement was to educate residents on the purpose behind replacing natural gas for heating and cooking with hydrogen - a safe and carbon-neutral alternative.

### **Impact of engagement, including measures of success**

We want to help customers manage their energy more sustainably. Success is measured with the delivery against our People and Planet Plan goal to help customers to reach net zero by 2050, with a 28% reduction by 2030. In 2022 we reduced emissions by 6% (vs 2019 baseline).

This progress is a direct result of raising awareness and encouraging customers to use lower carbon services and solutions. For example, in 2022 we installed ~600k smart meters, which led to a saving of ~60,000 tCO<sub>2</sub>e within year. We attribute this success to a targeted campaign we launched to drive demand for smart meters. This campaign involved sending over 20,000 individual communications via email, letter, OB dial and SMS.

We also monitor the delivery of our low-carbon products within our Hive brand. Not only

did our Hive customers save money by using our new product: Hive Heating Plus customers saved up to £26 each month during the winter, but our new Hive customers (~350k within year) who have a thermostat also saved ~ 50,000 tCO<sub>2</sub>e in 2022.

Meanwhile, Centrica Business Solutions campaigns encouraged large-scale energy users to take up offerings that can help them realise their carbon and cost ambitions. For example, CBS helped Magna PT (part of multinational group Magna International), who are specialists within the automotive industry, to optimise their energy use and reduce CO<sub>2</sub>. Magna PT are high users of electricity, up to 60MW per year, due to manufacturing activity. Centrica installed Combined Heat and Power units which meet 53% of their power requirement and is estimated to save ~14,000 tCO<sub>2</sub> per annum. In total, by providing companies like Magna PT with efficient heating solutions and offering a zero-carbon energy tariff, CBS reduced customer emissions by over 1m tCO<sub>2</sub> in 2022.

Additional efforts relating to the RHI and other government efficiency schemes has enabled a steady take-up, further feeding the installation of low carbon services and solutions. This can be illustrated with the continued delivery of ECO in 2022 which reduced in-year emissions by 10,888 tCO<sub>2</sub>e.

## C12.1d

### **(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.**

It's essential that we work in partnership with wider stakeholders across the value chain to develop and deliver new energy services and solutions that help us decarbonise key sectors including power, heat, transport and the gas network. By pooling our expertise and collaborating with partners such as start-ups, established car manufacturers, competitors and local authorities, we can deliver energy solutions that work for our customers and wider society. Our engagement strategy is focused in areas of significant risk or opportunity as we transition to a lower carbon world, and where we feel we have the capabilities and commercial drive to make a significant contribution – from providing new smart home products and developing better homes, to delivering electric vehicle (EV) charging solutions and investing in the development of new energy systems.

Due to our experience and knowledge with domestic EV charger installation, energy usage & optimisation, and our experience of electrifying our own van fleet, we are able to assess, evaluate and deliver a range of services to maximise EV take-up. Towards this we have announced partnerships with car manufacturers Ford, Vauxhall, Toyota and Honda to offer a home charging installation service and are collaborating on energy services customers. We have signed similar partnerships with car leasing companies including Leaseplan and Arval, car breakdown firm RAC, and banking group Barclays. Recently we launched our Hive EV home charger through retail partners such as Toolstation to enable consumers and electrical tradespeople to purchase the charger standalone and arrange their own installation outside of British Gas.

Centrica Business Solutions is set to start injecting hydrogen into its existing gas peaking plant at Brigg, Lincolnshire, as part of a UK first trial with the hydrogen innovator HiiROC aimed at better understanding the role of hydrogen in power production. This will be part-funded by a grant from the Net Zero Technology Centre, which has given 20 projects a total of £8m through its Open Innovation Programme. This will be the first time that hydrogen is used within a UK grid connected gas fired power plant. The plant is currently designed to meet demand during peak times or when generation from renewables is low. Mixing hydrogen in with the natural gas will reduce the carbon-intensity of the asset. In this instance, Centrica owns the power plant, and HiiROC is providing the technology which can convert biomethane, flare gas or natural gas into clean hydrogen and carbon black through a Thermal Plasma Electrolysis process. The carbon by-product is solid and therefore easy to capture and re-used in applications such as tyres, rubbers, building materials etc. This first-of-its-kind project would not be possible without Centrica and HiiROC collaborating.

We have partnered with a range of third parties to create lower carbon homes. For example, through our Centrica Innovations fund, we have partnered with start-ups to develop and deliver new offerings which includes investment in Mixergy. Mixergy has developed a smart hot water system that only heats the amount of water required by adjusting to household routines while storing excess renewable energy from the grid which improves flexibility and reduces energy use from heat losses by up to 40% a year.

Centrica also partners to tackle specific challenges, such as how to decarbonise the housing sector and reduce fuel poverty. British Gas and Midlands Heart (housing association) have joined forces over the past two years to showcase how social housing can be retrofitted with lower carbon energy, combining a fabric-first approach alongside new and innovative technologies (such as DSR, Solar PV, Heat Pump, Storage Heaters etc). PH Jones, a Centrica brand, has supported Midlands Heart by installing various combinations of low-carbon solutions within similar homes to allow for comparison. This study will identify the most cost-efficient way for Midlands Heat to achieve net zero, without leaving any residents behind, and helps Centrica advance our understanding of how low-carbon solutions work in a variety of homes.

We have also worked with local authorities to host developer days and regularly engage major manufacturers (OEMs) on shaping lower carbon homes. Success will be measured against our ambition to help customers reduce net emissions by 100% through direct and indirect action by 2050.

## C12.2

### **(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?**

Yes, climate-related requirements are included in our supplier contracts

## C12.2a

### **(C12.2a) Provide details of the climate-related requirements that suppliers have to meet as part of your organization's purchasing process and the compliance mechanisms in place.**

**Climate-related requirement**

Other, please specify

Suppliers are required to accept the Responsible Sourcing Policy in completeness or to provide verification that they have an equivalent or better Policy in place that they are already working to.

**Description of this climate related requirement**

The Responsible Sourcing Policy and Our Code Documents reference the commitment to “protect the environment and mitigate climate change” and to have a health, safety and environment management system in place that covers amongst other matters “greenhouse gas emissions”. Furthermore it states the expectation the suppliers are expected to adopt behaviours that reflect Our Code.

The mechanisms for monitoring compliance are assigned on a case by case basis with third party only for high risk identified suppliers and first party for where alternatives to our policies are proposed.

**% suppliers by procurement spend that have to comply with this climate-related requirement**

100

**% suppliers by procurement spend in compliance with this climate-related requirement**

100

**Mechanisms for monitoring compliance with this climate-related requirement**

- Supplier self-assessment
- First-party verification
- On-site third-party verification

**Response to supplier non-compliance with this climate-related requirement**

Retain and engage

**C12.3**

**(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?**

**Row 1**

**External engagement activities that could directly or indirectly influence policy, law, or regulation that may impact the climate**

- Yes, we engage directly with policy makers
- Yes, our membership of/engagement with trade associations could influence policy, law, or regulation that may impact the climate

**Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?**

Yes

**Attach commitment or position statement(s)**

 our-approach-to-political-involvement.pdf

**Describe the process(es) your organization has in place to ensure that your external engagement activities are consistent with your climate commitments and/or climate transition plan**

To better manage risks and opportunities related to climate change, Centrica actively contributes to the development of public policy by engaging key stakeholders which include government and regulators in the UK, Republic of Ireland, EU, US, Canada and Norway. We ensure our engagements on policy across the business are consistent with our overall approach to climate change and Group strategy by having dedicated policy groups that develop detailed policy positions which are collated and taken to the CEO / executive via a regular, typically monthly, policy and engagement meeting for review and approval. The CEO therefore has ultimate ownership and sets the company's position on public policy for key issues like climate change which filters out into the business, and ensures we have a consistent and established policy position on climate change across our global geographies. These policy positions are also shared with the board.

Our key climate change policies are agreed internally through our regular policy and engagement meetings in support of our wider business strategy. Policy positions support the delivery of our net zero targets, for both our own operation and our customers emissions, and are designed to be Paris aligned

Last year we conducted our first Trade Associations Review to support our commitment to ensure that each association that represents Centrica, engages in advocacy that's aligned with the goals of the Paris Agreement. In addition to this new annual review, applications to join new trade associations will henceforth be assessed against Paris and our own climate goals, and approved by the Corporate Affairs Director.

Underpinning all of this is 'Our Approach to Political Involvement, which supports Our Code, and sets out the parameters for the companies political involvement.

## **C12.3a**

**(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?**

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

The Great British Insulation Scheme

**Category of policy, law, or regulation that may impact the climate**

Carbon pricing, taxes, and subsidies

**Focus area of policy, law, or regulation that may impact the climate**

Subsidies on products or services

Other, please specify

Energy efficiency requirements

**Policy, law, or regulation geographic coverage**

National

**Country/area/region the policy, law, or regulation applies to**

United Kingdom of Great Britain and Northern Ireland

**Your organization's position on the policy, law, or regulation**

Support with minor exceptions

**Description of engagement with policy makers**

Centrica has actively engaged with Government officials on the Great British Insulation Scheme (formerly known as ECO plus) throughout its formation. This included directly feeding in content to help form the policy, attending meetings and reviewing early proposals. We intend to continue this engagement as the Government assesses the success of ECO4 and as it opens future consultations on how to fill policy gaps to address different social groups.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

We are fully supportive of a scheme that helps to address Britain's poorly insulated housing stock and ensures that no social groups are left behind, as per our Just Transition principles. We see insulation as a no-regrets option in helping to reduce energy consumption within buildings and ultimately accelerate the transition towards net zero.

We also support the targeting of low-income households in addition to those with specific low energy ratings (reflective of poor insulation). The scheme aims to deliver maximum value by addressing fuel poverty and tackling those properties which are of the poorest quality.

However, we believe that any obligation measure should balance ambition with delivery ability. We are cognisant of the delivery risk to this scheme, and we will work with government to ensure that the supply chain – from manufacturers providing the materials to the number of installers retrofitting the properties – are fully resourced and fit for purpose to meet customer demand for the scheme.

Additionally, we look to engage with the Government's upcoming consultation on

improving the energy efficiency of owner-occupied homes in 2023. This group thus far has been out of scope for government schemes, and we believe that improving energy efficiency measures within these properties will result in a reduction of emissions.

**Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

**Please explain whether this policy, law or regulation is central to the achievement of your climate transition plan and, if so, how?**

Energy efficiency will play a key role in helping our customers reduce their energy usage and help us achieve our target of net zero by 2050. We are also guided by our Just Transition Principles: to minimise harm and maximise benefits for people, and to ensure no groups are "left behind" as we transition and improving energy efficiency can lower energy bills alongside carbon. We see energy efficiency measures as no regret option to enabling the UK's transition. However, we also recognise the need for pragmatic and practical government-led programs which can be fulfilled by industry to ensure an orderly transition.

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**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

Boiler Upgrade Scheme (BUS)

**Category of policy, law, or regulation that may impact the climate**

Carbon pricing, taxes, and subsidies

**Focus area of policy, law, or regulation that may impact the climate**

Subsidies on products or services

**Policy, law, or regulation geographic coverage**

National

**Country/area/region the policy, law, or regulation applies to**

United Kingdom of Great Britain and Northern Ireland

**Your organization's position on the policy, law, or regulation**

Support with minor exceptions

**Description of engagement with policy makers**

Centrica has engaged with government on all the recent schemes designed to incentivise consumer uptake of low-carbon technology. A recent example of our engagement on the BUS specifically is Centrica's comprehensive response to Chris Skidmore's Net Zero Review. Within which, we outlined the importance of the BUS and why it's a policy we believe should be prioritised for action, as it has significant impact on the UK's advancement to net zero. We also share our experiences of using the BUS and heat pump installations with government officials.



Beyond the BUS, Centrica is also engaging with the Scottish Government on their Home Energy Scotland grant.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

We are pleased to see the government making efforts to stimulate a nascent market by reducing the upfront cost of a heat pump with the intentions of driving consumer demand. When the Government moved away from a tariff model, as used for the Renewable Heat Incentive, to a grant-based model, we were supportive. It's significantly more attractive to customers and provides certainty for the low-carbon heat market. And what's more, we are encouraged that the BUS will be extended.

It is worth noting that the decision to extend the scheme also highlights the low take-up of the grants in the years it's run so far. Since applications for the grant opened in May 2022, there has been a total of 13,730 BUS voucher issued up to the end of March 2023, not even 50% of the uptake required to fully utilise the £450m fund (with the previous 2025 end date).

To build on the success of the BUS, we believe that the scheme could take into consideration the dependency between home insulation and heat pump effectiveness. Many houses in the UK need significant renovations to improve insulation before a heat pump can warm the home efficiently. In these cases, the £5k grant would not cover the majority of the cost for the customer, and this is likely acting as a barrier to uptake.

**Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

**Please explain whether this policy, law or regulation is central to the achievement of your climate transition plan and, if so, how?**

Electrification of heat is a major lever in progressing towards net zero and is paramount to Centrica reducing its' customers carbon emissions. In recognition of this, we have set the ambition to install 20,000 heat pumps by 2025.

Both industry and the Government have a role to play in stimulating the heat pump market. The BUS is a great example of how subsidies can, to a degree, help remove the upfront cost barrier for customers. And we are also playing our part to stimulate the heat pump market by launching market leading price matching and performance guarantees for consumers and running informative campaigns to educate customers on the benefits of switching heating technology. .

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**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

Recovery of Policy Costs

**Category of policy, law, or regulation that may impact the climate**



Carbon pricing, taxes, and subsidies

**Focus area of policy, law, or regulation that may impact the climate**

Taxes on products or services

**Policy, law, or regulation geographic coverage**

National

**Country/area/region the policy, law, or regulation applies to**

United Kingdom of Great Britain and Northern Ireland

**Your organization's position on the policy, law, or regulation**

Support with major exceptions

**Description of engagement with policy makers**

Centrica has consistently advocated for green energy subsidies to be funded via general taxation rather than electricity bills. Recent examples of our engagement on this topic includes our response to Chris Skidmore's Net Zero Review, attending the Regional Energy Summit and other key meetings with government officials (such as representatives of DESNZ). We will also be responding to the upcoming consultation.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

It is more progressive and therefore fairer to fund these costs via general taxation because higher earners will pay more. Beyond this, and specifically related to the UK's progression towards net zero, removing green energy subsidies from electricity bills will make electric heating (such as heat pumps) more attractive to the average consumer. Currently, electricity bills are elevated by the existing levy structure by c.20%. By removing this element of their energy bill, customers should be further incentivised to make the switch to electric solutions – the only viable low-carbon alternative in the market at present.

**Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

**Please explain whether this policy, law or regulation is central to the achievement of your climate transition plan and, if so, how?**

Centrica needs to help customers switch from natural gas to an alternative low-carbon fuel for heating if we are to reduce our customers carbon emissions to net zero by 2050. Our climate transition plan reflects this by outlining ambitions for volume of heat pump installs in the near-term. Ensuring that electricity running costs are not elevated by various levies by removing them into general taxation is key to the commercial case for a customer making the switch in fuel type to electricity. Removing barriers to uptake, such as high running costs, is integral to market growth and Centrica's ability to execute our climate transition plan.

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

Proposals for hydrogen transport and storage business models

**Category of policy, law, or regulation that may impact the climate**

Low-carbon products and services

**Focus area of policy, law, or regulation that may impact the climate**

Other, please specify

Subsidies on infrastructure, Business models for low carbon solutions (hydrogen)

**Policy, law, or regulation geographic coverage**

National

**Country/area/region the policy, law, or regulation applies to**

United Kingdom of Great Britain and Northern Ireland

**Your organization's position on the policy, law, or regulation**

Support with minor exceptions

**Description of engagement with policy makers**

Centrica responded to the public consultation open in 2022, to confirm our views on the future role of hydrogen in the UK's transition to net zero, and to offer detailed feedback on how the Government can support and accelerate the development of the hydrogen industry.

We engage frequently with government officials and policy makers and have hosted visits to our assets and policy roundtables to discuss the role of hydrogen. Most recently we ran a hydrogen CHP roadshow across the UK where we could 'show and tell' the technology to key policy makers.

We have also been part of the Government's Hydrogen Advisory Council Working Group on Transport and Storage (the HAC T&S WG) and engaged within this forum.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

Centrica is supportive of government action to assist the development of a hydrogen industry within the UK. We urge government to fast-track decisions on hydrogen transport and storage business models, and to select the low-regret network and storage projects ahead of the 2025 timeline set.

This includes bringing forward investment in hydrogen storage to maximise the system-wide benefits it can deliver, establishing short-term mechanisms policy interventions to overcome existing barriers to industry development, taking a bespoke approach to project implementation ahead of the 2025 decision on business models and kick-starting the hydrogen economy by facilitating blending of hydrogen into the existing grid.

And alongside rapid action to promote near-term investment, bring confidence in the long-term future of hydrogen by establishing a process for effective strategic planning, led by a Future System Operator who should be tasked with developing a plan for transitioning to a merchant model when the market matures.

**Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

**Please explain whether this policy, law or regulation is central to the achievement of your climate transition plan and, if so, how?**

For the UK to meet its 2050 net zero commitment and interim carbon budget commitments, hydrogen solutions must be rapidly scaled through the 2020s. This will require significant action and coordination across the value chain. The production of hydrogen cannot be scaled without a market for hydrogen, demand-side technologies will not be developed and deployed without a source of hydrogen, and large-scale projects cannot come forward without both network and storage assets.

We see the potential for hydrogen to play a key role across our value chain in delivering our climate transition plan. Our long-term aim remains to invest £2 billion to turn the Rough field into one of the world's biggest methane and hydrogen storage facility, bolstering the UK's energy security, delivering a net zero electricity system by 2035, creating 5,000 skilled jobs and decarbonising the UK's industrial clusters by 2040.

However, the unpredictable nature of global markets means this type of investment can't be made on market triggers alone – it would require some form of regulated model, similar to that already in place for the UK gas interconnector.

We also recognise the potential for hydrogen in decarbonising the heat in the home, as a low-disruption and low-carbon solution for consumers. And although we still need to understand the consumer use case (which is why we are involved in the hydrogen village trials), we already install hydrogen-blend ready boilers, and support the mandating of hydrogen-ready boilers by 2026. The governments assistance in developing the hydrogen value chain and encouraging blending in the gas grid will play an important role in reducing our customers emissions from heat and help us achieve net zero.

Another key element of our climate transition plan is to invest in low-carbon and flexible generation assets. At the moment, some of these flexible assets are gas peaking plants, which help smooth the intermittent generation from renewable assets (such as solar and wind). These are especially important in the short term as the country transitions away from coal and natural gas at scale. However, in the future, we plan to convert these assets to run on hydrogen, and we are currently trialling this with our strategic partner HiiROC. The commercial feasibility of this conversion is largely dependent on the development of the hydrogen economy.

## **C12.3b**

**(C12.3b) Provide details of the trade associations your organization is a member of, or engages with, which are likely to take a position on any policy, law or regulation that may impact the climate.**

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**Trade association**

Other, please specify

Association for Decentralised Energy (ADE)

**Is your organization's position on climate change policy consistent with theirs?**

Consistent

**Has your organization attempted to influence their position in the reporting year?**

No, we did not attempt to influence their position

**Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position**

ADE is the leading trade association for decentralised energy, focused on bringing energy together to advocate on the priorities for the UK in achieving net zero. They drive the decarbonisation of heat, champion the role of industry in the green transition and push for UK homes, places or work and public services to be energy efficient and smart.

As an industry leader, the ADE brings together interested parties from across the sector to develop a sustainable environment for combined heat and power, district heating and cooling technologies as well as demand-side energy services. They believe that the energy system must be designed around the user's needs.

Being an advocate for the proliferation of decentralised energy generation as a key enabler of a lower carbon energy system, our views are consistent with those of the ADE.

We are a member of ADE and are represented on the board. We work with them to promote decentralised energy services and solutions, sitting on working groups that develop policy positions to support CHP and demand-side response, and aim to create the policy environment to encourage growth in the sector.

**Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)**

**Describe the aim of your organization's funding**

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

**Trade association**

Other, please specify  
Energy UK

**Is your organization's position on climate change policy consistent with theirs?**

Consistent

**Has your organization attempted to influence their position in the reporting year?**

No, we did not attempt to influence their position

**Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position**

Energy UK is the trade association for the energy industry. It represents over 80 members made up of generators, gas and electricity suppliers as well as other businesses operating in the energy industry.

Energy UK and its members are committed to driving the sustainability agenda forward by reducing the sector's environmental impact. This is reflected in Energy UK's vision for the UK to have, 'a more decarbonised energy supply and one that is secure, diverse and affordable with greater local heat and power'.

The association has a range of initiatives underway to make these ambitions a reality, which will ensure the industry makes a positive contribution to society, economy and the environment.

Centrica is represented on Energy UK's Board and chairs the Future Market Design group, the New Energy and Services & heat committee, alongside the Energy Systems working group. We are also active members of committees and working groups that for example, focus on power generation and environmental policy.

While views held within Energy UK on climate change related issues are predominantly consistent with our own, there are occasional divergences between members, such as how best to deliver the smart meter roll-out. As leaders in the UK's mandatory smart meter deployment and a firm believer in the value they can create in giving customers greater control and understanding over their energy consumption and costs, we aim to influence and increase awareness of smart meter benefits with members throughout the association.

**Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)**

**Describe the aim of your organization's funding**

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

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**Trade association**

Other, please specify

Heating and Hot Water Industry Council (HHIC)

**Is your organization's position on climate change policy consistent with theirs?**

Consistent

**Has your organization attempted to influence their position in the reporting year?**

No, we did not attempt to influence their position

**Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position**

HHIC is committed to driving, supporting and promoting the sustained growth of the UK's residential heating and hot water industry. The HHIC informs and advises on these issues to tackle challenges and influence Government on how best to decarbonise heating and hot water in UK homes and businesses to achieve the 2050 carbon targets.

Membership is made up of heating manufacturers together with new renewable entrants to the market.

We are a proactive member of HHIC, participating in working groups covering topics such as the future of hydrogen and how the proposed market mechanism can stimulate growth in the heat pump market. Through participation on these working groups, we help shape not only HHIC's position, but we can also contribute to industry responses, standards and consultations from Government and regulators while developing initiatives that support the introduction of innovative renewable and low carbon heating technologies in the UK.

**Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)**

**Describe the aim of your organization's funding**

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

## C12.4

**(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).**

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### Publication

In mainstream reports

### Status

Complete

### Attach the document

 annual-report-and-accounts-2022.pdf

### Page/Section reference

Pages 2-6, 10-13, 27, 29, 31, 33-34, 39, 42-54, 56, 67-68, 70, 75, 82-83, 84, 85, 89, 92, 95, 113, 117-118, 133-136, 148, 150, 163, 180, 158 and 260

### Content elements

Governance  
Strategy  
Risks & opportunities  
Emissions figures  
Emission targets  
Other metrics

### Comment

Climate change related information is integrated throughout the Annual Report and Accounts 2022 – from a statement of commitment in the Chairman's and Chief Executive introduction at the start of the book, to our carbon performance in the Strategic Report. With the Strategic Report, our climate reporting is focused around our People & Planet Plan and Task Force on Climate-related Financial Disclosures as well as our wider KPI disclosure that closes the filing. Our disclosure against the TCFD achieved full compliance with the recommendations for the second year running whilst including progress against our Climate Transition ambitions which were set out in our Climate Transition Plan in 2021.

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### Publication

In voluntary sustainability report

### Status

Complete

### **Attach the document**

 People & Planet Plan Update 2022.pdf

### **Page/Section reference**

Pages 5 to 6, 9-17, 27-29, 33-37 and 39-40

### **Content elements**

Governance  
Strategy  
Emissions figures  
Emission targets

### **Comment**

The Update sets out our People & Planet Plan - a set of 5 Group-wide goals that are helping create a more inclusive and sustainable future that supports communities, our planet and each other. The Plan builds off progress made under our Responsible Business Ambitions and accelerates action through goals such as being a net zero business by 2045 and helping our customers be net zero by 2050 at the latest. We also report how our Plan supports and contributes to the United Nations Sustainable Development Goals.

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### **Publication**

In voluntary communications

### **Status**

Complete

### **Attach the document**

 data-centre-2022.xlsx

### **Page/Section reference**

'Planet' tab

### **Content elements**

Emissions figures  
Emission targets  
Other metrics

### **Comment**

The Data Centre contains over 150 metrics and forms part of our wider reporting suite. It enables us to transparently report a fuller picture of our non-financial impact and shows trends over time. The metrics span all of our impact areas – from safety and customer satisfaction to carbon and community investment.



**Publication**

In mainstream reports

**Status**

Complete

**Attach the document**

 Climate Transition Plan 2021-23.pdf

**Page/Section reference**

Full Document

**Content elements**

- Governance
- Strategy
- Risks & opportunities
- Emissions figures
- Emission targets
- Other metrics

**Comment**

Our first Climate Transition Plan 2021-23 sets out our plan for achieving our net zero targets, whilst ensuring a fair and affordable transition for all. We've committed to review our Plan in full every three years and publish an update as needed. The Plan was updated in 2022 to take into account retained Spirit Energy assets and was supported by the overwhelming majority of shareholders following the shareholder advisory vote at our 2022 AGM.

## C12.5

**(C12.5) Indicate the collaborative frameworks, initiatives and/or commitments related to environmental issues for which you are a signatory/member.**

	Environmental collaborative framework, initiative and/or commitment	Describe your organization's role within each framework, initiative and/or commitment
Row 1	UN Global Compact Other, please specify United Nations Sustainable Development Goals, EV100, Business Ambition for 1.5, Task Force on Climate-related Financial Disclosures, CA100+	We're long-term signatories to the UN Global Compact and as part of this, we uphold the universally accepted principles on key issues that will help create a better world – from protecting human rights and the environment, to ending discrimination and corruption. As part of our membership, we also communicate our approach and progress on these issues annually.  We fully support the UN SDGs which call on government, businesses and others, to take meaningful action on the biggest issues facing people and planet by 2030 – whether

	<p>that's by building a more inclusive team or fighting climate change. Whilst we contribute to many of the 17 SDGs, we make a meaningful contribution to a targeted number of SDGs via our People &amp; Planet Plan. For planet, this corresponds to us contributing to one lead SDG which is '7 Affordable and Clean Energy', as well as three supporting SDGs of '9 Industry, Innovation and Infrastructure', '11 Sustainable Cities and Communities' and '13 Climate Action'. Specific indicators we support are mapped out at <a href="http://centrica.com/SDGs">centrica.com/SDGs</a>.</p> <p>We are members of the EV100 global initiative, which is committed to accelerating the transition to electric vehicles. All members have pledged to transition their fleets by at least 2030. We are slightly ahead of this pace with our commitment to convert our fleet by 2025. As we have encountered supply issues of electric vehicles in the past few years due to unforeseen events disrupting the supply chain, such as the Covid pandemic and Russia's invasion of Ukraine, it is important that industry sends a strong demand signal to manufacturers to ensure resilient supply in the future. We also hope groups such as EV100 sends a strong message to government to facilitate the transition by accelerating the scale up of public infrastructure across the UK.</p> <p>In 2021 we joined the Business Ambition for 1.5 campaign to unite with other business leaders across the world who are committed to setting targets at the pace and scale required by climate science. We remain committed to validating our targets, and are awaiting further guidance from SBTi on how to achieve this.</p> <p>We became signatories of the Task Force on Climate-related Financial Disclosures (TCFD) in 2020, and we've achieved full compliance in our 2021 and 2022 reporting.</p> <p>As a systemically important GHG emitter, we are assessed by CA100+ against their Net Zero Benchmark. We actively engage with the initiative to focus our efforts and improve our corporate disclosure, and to make progress against their key indicators which are aligned with Paris.</p>
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## C15. Biodiversity

### C15.1

**(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?**

	<b>Board-level oversight and/or executive management-level responsibility for biodiversity-related issues</b>	<b>Description of oversight and objectives relating to biodiversity</b>
Row 1	Yes, both board-level oversight and executive management-level responsibility	As the signatory of Centrica’s Health, Safety and Environment policy our Chief Executive Officer has management level responsibility for biodiversity related issues across the organisation. He is also a member of our Board which has oversight of all our environmental matters including those related to biodiversity as appropriate.

### C15.2

**(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?**

	<b>Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity</b>
Row 1	No, and we do not plan to do so within the next 2 years

### C15.3

**(C15.3) Does your organization assess the impacts and dependencies of its value chain on biodiversity?**

**Impacts on biodiversity**

**Indicate whether your organization undertakes this type of assessment**

Yes

**Value chain stage(s) covered**

Direct operations

**Tools and methods to assess impacts and/or dependencies on biodiversity**

Other, please specify

Centrica Business Solutions consider biodiversity and ecology as part of their aspects and impacts register within the ISO 14001 certification procedure.

**Please explain how the tools and methods are implemented and provide an indication of the associated outcome(s)**

The aspects and impacts register is reviewed every year which involves an evaluation of changes to biodiversity around the relevant sites, for example Glanford Brigg power station. This is undertaken by a qualified ecological clerk and if any unacceptable changes to biodiversity are observed (such as a decline in species diversity) then the business unit being assessed will not be ISO 14001 certified

**Dependencies on biodiversity**

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**Indicate whether your organization undertakes this type of assessment**

No and we don't plan to within the next two years

## C15.4

**(C15.4) Does your organization have activities located in or near to biodiversity-sensitive areas in the reporting year?**

Yes

## C15.4a

**(C15.4a) Provide details of your organization's activities in the reporting year located in or near to biodiversity -sensitive areas.**

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**Classification of biodiversity -sensitive area**

Other biodiversity sensitive area, please specify

UK Government Sites of Special Scientific Interest, UK Government Marine Conservation Areas

**Country/area**

United Kingdom of Great Britain and Northern Ireland

**Name of the biodiversity-sensitive area**

The Humber Estuary SSSI and both the Inshore and Offshore Holderness MCZ's are zones which Centrica Storage Limited (CSL) currently operate within. Whereas The Lagoons SSSI and Spurn National Nature Reserve are located nearby but CSL do not operate within these.

**Proximity**

Overlap

**Briefly describe your organization's activities in the reporting year located in or near to the selected area**

CSL operate an offshore platform (Platform 437b) in the Inshore and Offshore MCZ and Humber SSSI and also operate adjacent to The Lagoons SSSI and Spurn National Nature Reserve.

Under normal operations and in the previous reporting year, operating in all of the

above-mentioned biodiversity zones would not have a negative effect. However, specifically with the Offshore Holderness MCZ CSL reported three PON1 notifications in 2022 relating to oil spills. These were all minor spills reported to the regulator who closed all the actions with no further actions required.

**Indicate whether any of your organization’s activities located in or near to the selected area could negatively affect biodiversity**

Yes, but mitigation measures have been implemented

**Mitigation measures implemented within the selected area**

- Physical controls
- Operational controls

**Explain how your organization’s activities located in or near to the selected area could negatively affect biodiversity, how this was assessed, and describe any mitigation measures implemented**

There is the possibility that operations at CSL could lead to harmful substances associated with the refinery of raw natural gas spilling and therefore being leaked into the surrounding natural environment. However CSL have a number of operational control documents to prevent the release of any harmful substances which could affect biodiversity. There is also a robust reporting process in place with the offshore regulator to minimise the risk of harm to biodiversity. CSL also operates a number of ‘hard’ barriers to physically prevent harm to the environment including; the use of bunds and suitable storage receptacles and Oil in Water processing equipment. With all the controls in place the offshore regulator are comfortable with the risk posed to biodiversity.

Likewise for the onshore terminal, this also has a range of operational procedure and physical controls in place to reduce the risk of damage to biodiversity.

## C15.5

**(C15.5) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?**

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Land/water management Species management

## C15.6

**(C15.6) Does your organization use biodiversity indicators to monitor performance across its activities?**

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
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Row 1	Yes, we use indicators	State and benefit indicators
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## C15.7

**(C15.7) Have you published information about your organization’s response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).**

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
No publications		

## C16. Signoff

### C-FI

**(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.**

### C16.1

**(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.**

	Job title	Corresponding job category
Row 1	CEO	Chief Executive Officer (CEO)

## SC. Supply chain module

### SC0.0

**(SC0.0) If you would like to do so, please provide a separate introduction to this module.**

### SC0.1

**(SC0.1) What is your company’s annual revenue for the stated reporting period?**

	Annual Revenue
Row 1	

## **SC1.1**

**(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.**

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**Requesting member**

**Scope of emissions**

**Scope 2 accounting method**

**Scope 3 category(ies)**

**Allocation level**

**Allocation level detail**

**Emissions in metric tonnes of CO<sub>2</sub>e**

**Uncertainty ( $\pm\%$ )**

**Major sources of emissions**

**Verified**

**Allocation method**

**Market value or quantity of goods/services supplied to the requesting member**

**Unit for market value or quantity of goods/services supplied**

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

## SC1.2

(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).

## SC1.3

(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

Allocation challenges	Please explain what would help you overcome these challenges

## SC1.4

(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

## SC2.1

(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.

## SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?

## SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services?

## Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
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Please select your submission options	Yes	Public
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**Please confirm below**

I have read and accept the applicable Terms