Centrica - CDP Climate Change Questionnaire 2021

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 9m residential and business customers mainly in the UK and Ireland, through strong brands such as British Gas, Bord Gáis Energy and Centrica Business Solutions. Supported by around 24,000 colleagues including 7,500 engineers and technicians, we're focused on delivering our strategic growth areas of energy supply, services and solutions alongside energy trading and optimisation.
Following our 2015 strategic review, we've been re-positioning our business away from power generation and oil and gas production to focus on providing services and solutions for a more sustainable world. The majority of our power generation assets have been divested or decommissioned, gas storage has ceased and we've announced our intention to exit exploration and production as soon as market conditions allow having already placed these assets into a joint venture. Consequently, we'll be scored under the CDP Electric Utilities module.

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. Meanwhile indirect emissions under scope 2 come from electricity purchased and consumed across our offices and assets. Our scope 3 emissions consist of those we don't produce ourselves but are the result of services and solutions we provide such as electricity and gas sold to customers from wholesale markets and other products purchased to run our business.

Why reducing our impact on climate change is important - 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, enables us to play a key role in shaping the energy transition while supporting national and international carbon reduction targets.

Accelerating our **action on net zero** – Building on progress made under our Responsible Business Ambitions and in continued support of the UN Sustainable Development Goals, we introduced our People & Planet Plan which aims to create a more inclusive and sustainable future that supports communities, our planet and each other by advancing action through five global goals that matter deeply to our business and society, and where we're well placed to

make a world of difference – from accelerating our shift to net zero, to building the engaged and inclusive team that'll help us get there. As part of the Plan which was approved in 2020, we will:

- **Help our customers be net zero by 2050 (28% carbon intensity reduction by 2030)** - With around 90% of our total carbon emissions coming from our customers, the biggest thing we can do is to help them use energy more sustainably. That's why we'll help our customers cut their emissions across power, heat and transport. We'll provide energy efficiency and optimisation products like Hive and demand side response, offer fuel switching technologies such as electric vehicle charging solutions, heat pumps and hydrogen, as well as ensure a cleaner energy supply with products that include green tariffs and a cleaner fuel mix. We've made good progress against our net zero goal with the carbon intensity of our customers' energy use reducing by 18% from 2019 – equivalent to the annual emissions of 1.7 million UK homes.
- **Be a net zero business by 2045 (40% reduction by 2034)** - As part of our strategic transformation to become a customer-facing business, we now emit over 80% less carbon than a decade ago. We want to continue to lead by example and drive emissions out of our business. So we'll complete our transformation by exiting interests in exploration and production, converting our fleet to electric and expanding energy efficiency, onsite generation and green tariffs across our sites. Towards our net zero target, our total carbon emissions decreased by 18% from 2019, with savings largely linked to less upstream generation and production. This new net zero target is five years ahead of our previous one and the UK Government's deadline .and provides a stronger commitment to net zero than our outgoing one focused on helping customers reduce emissions by 25% by direct (3%) and indirect action by 2030.

We also understand the wider role we can play in mitigating climate change in supply chains and across our communities. For example, we work collaboratively with partners to raise and maintain high environmental standards in our supply chain and engage communities via dedicated projects and campaigns to help them use energy more sustainably.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years
Reporting year	January 1, 2020	December 31, 2020	No

C0.3

(C0.3) Select the countries/areas for which you will be supplying data.

Belgium
Canada
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.

Equity share

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

Smart grids / demand response
Battery storage
Micro grids
Gas extraction and production

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(s)	Please explain
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. Specifically, the CEO personally oversaw the development of our revised Climate Change goals, actively participating in their development to ensure full alignment with company strategy. Through their membership of the Board and attendance at the relevant Board sub-committees the CEO ensures that issues associated with climate change are represented consistently at the highest level. For the majority of 2020 the Board sub-committee Safety, Health, Environment, Security and Ethics Committee (SHESEC), was accountable for oversight on climate change. Following a company-wide review of governance arrangements, this committee was replaced with the Safety, Environment and Sustainability Committee (SESC) on which the CEO and Chairman sit. In 2020 the SESC reviewed an annual report on climate-related strategy, risks, opportunities, and overall progress against our climate change ambitions, and a full review and upgrade of our climate goals and targets. 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 target and ambitions. Additionally, the CEO chairs the GERACCC (Group Ethics, Risk, Assurance, Control and Compliance Committee) which reports the Group Risk Profile to the joint Board Audit/SHESEC Committees to ensure Board challenge and oversight. At the end of 2020, the GERACCC was replaced by Executive and Committee reviews, with quarterly Risk & Controls meetings held with the Group CFO and BU Managing Directors
Director on board	The Chair of the Board Safety, Health, Environment, Security and Ethics Committee (SHESEC) and its replacement the 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 provide board oversight and challenge on the Group Principal risks, which are reported to the joint Audit Committee/SHESECC after review by the GERACC. Additionally, they receive and review an annual detailed update on climate-related strategy, risks, opportunities and overall progress against our climate change ambitions. In 2020 the SESC Chair oversaw the Boards review and approval of our new and enhanced science based climate change goals as part of our People and Planet

	Plan.

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
Scheduled – all meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding business plans Monitoring implementation and performance of objectives Monitoring and overseeing progress against goals and targets for addressing climate-related issues	Centrica has a governance structure which follows best practice, through which the Board has group-wide oversight of climate related issues. For the majority of 2020 oversight on climate change was provided by the Board Safety, Health, Environment, Security and Ethics Committee (SHESEC), until it was replaced by the Safety, Environment and Sustainability Committee (SESC). The new SESC meets 3 times annually to review the effectiveness of internal controls and risk management including those relating to climate change. Progress in meeting our Climate Change goals is reviewed at least annually, using a dashboard of key performance indicators (KPI) relating to our near and long-term climate change targets and ambitions. In 2020 the SESC reviewed and approved of our new and enhanced science based climate change goals as part of our People and Planet Plan. The SESC Chairman 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, Climate Change is identified as a component 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 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 GERACCC (Group Ethics, Risk, Assurance, Control and Compliance Committee), chaired by the Group Chief Executive before submission to the joint Board Audit/SHESEC Committee to ensure Board challenge and oversight. 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 suitably of, climate goals and targets are also reviewed. The Board & 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 longer term risks relating to market, competition, technology, and policy aspects, all of which are influenced by climate change. In 2020 all businesses assessed net zero and the energy transition as part of their strategic proposals which were presented to the Board in 2021.

C1.2

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

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	Both assessing and managing climate-related risks and opportunities	Quarterly
Other, please specify Health, Safety, Environment Committee (latterly Centrica Leadership Team)	Both assessing and managing climate-related risks and opportunities	Quarterly

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

The Chief Executive Officer (CEO) chaired the Health, Safety, Environment (HSE) Committee that existed for the majority of 2020. The CEO then chaired the Centrica Leadership Team meetings when they superseded the HSE Committee. As Chairman of the HSE Committee (latterly CLT), the CEO is ultimately accountable for ensuring that the committees are effective in discharging their duties. Chairing the committees enables the CEO to assess and monitor climate related issues in detail with relevant technical and business support as required.

During the majority of 2020 the Health, Safety and Environment (HSE) Committee met as a sub-committee of the Centrica Executive Committee (CEC) and was chaired by the Group Chief Executive. The HSE Committee had authority delegated by the CEC to set objectives, targets, and policies for managing issues related to climate change. The HSE Committee met four times a year and at each meeting reviewed and set as appropriate; HSE policies, standards and governance arrangements, promoted HSE performance and monitored and reported on the effectiveness and operation of HSE management systems and controls, including risk and opportunity management.
In the latter part of 2020, a company-wide review of governance was undertaken and the duties of the HSE Committee was brought back into the executive team, renamed the Centrica Leadership Team (CLT), which meets monthly.

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 HSE Committee meeting, including a review of progress against a range of KPI, such as carbon emission KPIs. Additionally, an environmental deep-dive was undertaken with the Committee annually, 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 2020 this committee approved an upgrade to the group's climate change targets, in line with science as part of its people and Planet Plan, a specific example of this was bringing our internal net zero target forward 5 years to 2045.Another issue reviewed and agreed at this committee was the decision to fully electrify our UK engineering fleet by 2025, vastly removing emissions from one of the key sources within Centrica.

The HSE committee membership comprised of the Group Chief Executive, Chief Executive Centrica Consumer, Chief Executive Centrica Business, Director Technology & Engineering, Group General Counsel & Company Secretary, and Group HSE Director. The Managing Director of Centrica Storage Limited, HSE Directors for the business units and relevant Group HSE functional heads 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. The CLT, which effectively replaced this committee wrt. climate considerations, contains all those that sat on the HSE committee whose roles still exist within the organisation.

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	Type of incentive	Activity inventivized	Comment
Environment/Sustainability manager	Monetary reward	Emissions reduction target	Delivery of selected Centrica and Business Unit specific environment plans is incentivised and may include reductions in carbon emissions.
Other, please specify UK Home Industry Development team	Monetary reward	Efficiency project	Incentives are provided to ensure we meet our Energy Company Obligation (ECO) targets for improving domestic energy efficiency, and to ensure we do so in the most cost-effective way possible. The efficient delivery of ECO is built into the objectives for the ECO leadership team. Success in this area, coupled with business performance, help determine the annual performance bonus for relevant employees.
Other, please specify Power Generation operation teams	Monetary reward	Efficiency target	Power generation incentive targets are a combination of business profit and individual performance measures. Individual performance targets are determined by employee role and may include open-cycle gas turbine (OCGT) efficiency and compliance with the EU Emissions Trading System (EU ETS).

Facilities manager	Monetary reward	Emissions reduction target	Facility Managers are incentivised specifically for environmental targets on energy and waste.
Other, please specify Nominated suppliers or employees	Non-monetary reward	Supply chain engagement	Employees in Centrica can nominate colleagues who have supported the responsible procurement agenda. This can be related to supporting ethical site inspections and/or contributed to closing a corrective action plan, addressing non-compliance from labour to environmental sustainability. It can also be due to supporting the supplier in completing a sustainability assessment. Recognition is given through the 'Centrica Recognition' Platform, which is visible to all employees (globally) and celebrates employees who demonstrate the Centrica Values, and/or act in support of the Responsible Business Ambitions, including our climate targets. Additionally, we have created a recognition for suppliers based on their responsible procurement credentials and the continuous improvement to the energy efficiency of the products they produce. For example, gas boiler suppliers are incentivised to continue improving the efficiency of their product to achieve recognition in their industry and maintain key supplier status with Centrica. This level of recognition is sponsored by our Chief Procurement Officer (CPO). A lack of improvement in this area, and particularly if a supplier does not complete the relevant scorecard detailing their actions, results in an escalation with the potential consequence that we cease trading with a supplier.
Other C-Suite Officer	Monetary reward	Energy reduction project	In 2020, Centrica's Consumer CEO (who oversaw energy supply and services for Centrica's c.25 million domestic customer accounts, as well as Whitegate power station in Ireland.) had the delivery of an agreed Responsible Business Ambitions Plan for Centrica's Consumer division included in their objectives. A critical

			component of this plan is the Climate Change ambitions which include emissions reduction targets, with 2022 and 2030 milestones, for both Centrica's internal carbon footprint and our customers' carbon emissions. Their performance against this objective, including delivery of the climate change ambitions, will form part of the evidence submitted to the Remuneration Committee for consideration in determining Annual Incentive Plan awards. It will also form part of the standard performance conversations that they have with their manager (Group CEO).

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. This Operating Plan considers within year performance and 12 to 18-month outlook. 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. Climate R&O over this timescale are integrated into the Group Enterprise Risk Management process.

Long-term	3	20	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. The Board explored climate-related R&O as part of our 2015 strategic review, which included market trend analysis out to 2035, including future changes in oil and gas markets and changing trends in demand and consumer behaviour, influenced by macro-trends such as decarbonisation. In 2019, the Board sub-committee reviewed the resilience of our assets to the effects of climate change out to 2050, given the potential implications of revising asset values. Additionally, following the report from the Task Force on Climate-related Financial Disclosures, we are undertaking forward-looking scenario analyses out to 2050 to enhance our long-term planning and risk assessment on climate change. Ad-hoc reviews, looking at key topics which present risks & opportunities are also undertaken. Many of these relate to climate related topics. Recent examples include the future of mobility, decarbonisation policy in the UK, decarbonisation outlook in the US and decarbonisation of heat in the UK.

C2.1b

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

Risks are prioritised by assessing potential impacts alongside the likelihood of materialisation. In 2020, a 1-6 impact and 1-8 likelihood scale was used, with the overall rating (1-48) the product of impact by likelihood. The impact score being derived using several criteria including health, safety & Environment, Regulatory, Reputation and Financial impact. Further statistical modelling, scenario planning and commercial analyses are carried out where applicable. Risks related to, or influenced by, climate change are assessed alongside other business risks and thus the significance of climate-related risks relative to other business risks are determined via this process. Substantive financial and strategic risks are also determined using this risk scoring process.

Financial impact is scored on a scale of 1-6 from minor to very high and is derived through consideration of lifetime or in-year operating cash flow impact. Likelihood is scored on a scale of 1-8 based, from 1 being highly unlikely (rarely happened in industry or sector), through, very unlikely, unlikely, moderately unlikely, likely, very likely, to highly likely (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 top risks for each BU or function are reported to Group Enterprise Risk and each of these risks is allocated to one of the Group Principal Risks.

The Principal Risks, used in 2020, encompass the Group's Risk Universe and they are listed and described in the Annual Report. Each Principal Risk is then rated using the same 1-48

scoring based on the reported risks. A risk with an impact score of 6 or above for any impact criteria would automatically be categorised as a high according to the heat map and would therefore be classified as a priority, or **substantive**, risk. If the impact score is 4 or 5 then the risk will be classified as high if the likelihood is, respectively, 6 or 5 (likely or moderately likely) or above. Additionally, if the likelihood is highly likely (8), then the risk will automatically be classified as high. The ratings of the Principal Risks are reported to the Group Ethics, Risk, Assurance, Control and Compliance Committee.

One example, to scale the highest boundary for impact (6/6) would be the group wide HSE matrix's highest impact threshold. This is for a >£500m lifetime impact, or >£125m in year impact, and any risk in this bracket would be categorised as substantive. The bracket below (5/6 for impact) has a threshold of £250m--£500m lifetime impact or £60m-£125m in year impact. This would be automatically classified as substantive if the frequency was 'moderately likely' and happened more than once per year across the Group, sector and / or external market.

Note: the risk rating methodology and Group Risk Universe have subsequently been updated, however the risk tools above, were the ones predominantly used in 2020.

C2.2

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

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 component 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 operational) and the external environment. Each identified risk from asset to company

level, , is consistently assessed and reported according to Our Approach to Enterprise Risk. 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 and opportunities over a long-term time horizon (including direct, upstream & downstream operations) are monitored, identified and assessed annually as emerging risks via our Board strategic planning process each year. The Board meets annually at the Board Planning Conference to review the Group's strategy and set the context for the plans for the following year. As our strategy is predicated on enabling the energy transition, our strategic plans are implicitly reviewed in the context of climate change and the long-term impact of climate-related risks and opportunities on the business.

In 2020, to support the annual reviews, we integrated the assessment of emerging risks (including climate change) into the quarterly ERM risk review, with functions and Business Units.

Risks are prioritised by assessing potential impacts alongside likelihood, quarterly, by each business unit, before being reported to the Group Ethics, Risk, Assurance, Control and Compliance Committee (GERACCC). A 1-6 impact and 1-8 likelihood scale is used with the overall rating (1-48) their product. The impact score is derived using several criteria including HSE (Heath, Safety, Environment), Regulatory, Reputation and Financial impact.

Risk ratings are ranked as low, moderate or high according to the overall risk rating. The high risks (risks evaluated to have a potential substantive impact) for each BU or function are reported to Group Enterprise Risk and allocated to one of the Group Principal Risks. The Principal Risks encompass the Group's Risk Universe and are described in the Annual Report. Each Principal Risk is rated using the same 1-48 scoring, where they are determined to be 'substantive' or not at Centrica Enterprise level.

The most material component risks derived through the risk assessment process are reported to the executive level GERACCC. 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 GERACCC is chaired by the Group Chief Executive, with membership comprising of the Centrica Executive Committee (CEC).

Quarterly, after the CEC has considered the GRAC (Group Risk and Audit Committee) report, the principal risks are presented at either the Board Audit Committee or SHESEC (Safety, Health, Environment, Security, Ethics Committee).

A risk with an impact score of 6 or above would automatically be categorised as high and therefore be classified as substantive. If impact score is 4 or 5 then the risk will be classified as high if the likelihood is, respectively, 6 or 5 (likely or moderately likely) or above. Additionally, if the likelihood is highly likely (8), then the risk will automatically be classified as high. The ratings of the Principal Risks are reported to the GERACCC

The CEC's prioritised risks are categorised as either: risks requiring standards (RRS), risk requiring judgement (RRJ) and external risks, which determines whether a risk will be mitigated, transferred, accepted or controlled. A RRS is controlled through Standards and Management Systems (and is either mitigated, transferred or controlled), while a RRJ is a risk that we choose to take to execute our business strategy, for example to capitalise on an identified opportunity. An external risk is a risk that requires a focus on scenario and contingency planning with little ability to reduce likelihood.

For the majority of 2020, the Health, Safety and Environment Committee, a sub-committee of the CEC, set objectives, targets and policies for managing risk in relation to HSE, which included climate change. Risks reported to the HSE committee were monitored and agreed quarterly by SHESEC. The SHESEC was authorised by the Board to review the effectiveness of identifying and managing risks that could materially affect performance and reputation. During the latter part of 2020, following a company-wide review of governance, the HSE Committee was incorporated into the executive committee, which was renamed the Centrica Leadership Team (CLT). Additionally, the SHESEC was replaced by the Safety, Environment and Sustainability Committee (SESC) with effectively the same accountabilities on climate change.

Also, latterly, the GERACCC was replaced by Executive and Committee reviews, with quarterly Risk & Controls meetings held with the Group CFO and BU Managing Directors. As part of this review, a simplified Enterprise Risk Framework was rolled out, to ensure a focus on matters of most significance to the business. The updated Group Risk Universe contains 36 Key Risks, with a revised 5x5 Risk Matrix and clearly articulated Risk Assessment Criteria to improve the clarity of risk judgements.

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 BU and ER 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 4 and an impact score of 4, meaning it was categorised as a medium RRS risk. Mitigating actions implemented, include developing a portfolio of well-established delivery partners and engaging with industry, Government, and the regulator to develop best practice to increase cost effectiveness of delivery.

The physical risk of extreme weather events, such as flooding at Easington terminal for our CSL 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. It therefore does not escalate to the CEC HSE sub-committee/ CLT. This assessment was reviewed by Group HSE.

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

Risks and opportunities over a long-term (3 years or more) time horizon are monitored, identified and assessed annually as emerging risks via our Board strategic planning process each year.

In addition to the annual strategic planning process, and feeding into this process, opportunities related to climate change and the energy transition are assessed regularly at the business level, at varying frequencies, all more often than annual. Our business units operate new product development processes with clearly defined governance arrangements centred around monthly product development boards. At these meetings, proposed products and services developed to meet identified opportunities, across short, medium and long-term time frames, are reviewed. Factors such as market sizing, technology pathways, competitor intelligence, capability requirements are assessed in order to evaluate the opportunity and how best to respond. Propositions are typically developed through a series of stage gates from original idea through to a viable market offering. Recent examples include responding to growing demand for renewable and green energy tariffs. These opportunities can relate to upstream, downstream, and direct operational areas.

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 "Legal, Regulatory and Ethical Standards Compliance" and 'Political and Regulatory Intervention' Principal Risks under which climate change sits. For example, uncertainty over the ramp up of required obligations under the ECO scheme, and the costs associated with Trustmark (a Government endorsed quality standards scheme), was expected to have negative financial implications for our business in the final year of the scheme (2021/22). This has materialised and market prices for late 2021 are 60% higher than at the close of 2019.
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, Health, Safety and Environment and Corporate Affairs Functions and is usually discussed under our "Political and Regulatory Intervention" Principal Risk. For example, Centrica invested £900m in our Centrica Business Solutions business over 2015-2020 and uncertainty over UK regulations, such as flexible generation incentives for distributed generation (which can encourage small scale renewables as well as enabling technology which supports intermittent centralised renewables), could potentially affect our return on that investment therefore it was vital that regulatory changes relevant to climate change and with the potential to impact this investment were identified at an early stage and the required mitigations implemented. For example, our aggregation of demand side response services for our customers benefits from appropriate flexibility incentives, If regulations changed eligibility, or removed existing incentives, for some of these customers, our revenue might decrease.
Technology	Relevant, always included	The need to develop new technologies and innovate is vital to meeting our purpose of satisfying the changing needs of our customers. Decarbonisation is a significant driver of technology development within the energy sector and vice versa, 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 focused on designing new product offerings which are attractive to customers. For example, our current UK energy services business

		revenue in Centrica Consumer relies heavily on the skills and supply chains established to maintain and install gas boilers at scale. As the UK decarbonises this sector in the decades to come, we will need to transition these skills and supply chains towards alternative technology, whether electrified or hydrogen based. We are currently running a hybrid heat pump trial to increase our understanding of consumer behaviours around a technology we believe will play a significant role in the transition.
Legal	Relevant, always included	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 “Legal, Regulatory and Ethical Standards Compliance” Principal Risk. For example, failure to deliver our obligations under ECO 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, we delivered ECO2 two months ahead of the September 2018 deadline to mitigate this risk. With a long scheme such as ECO3 we also ensure we phase delivery over the period.
Market	Relevant, always included	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 usage volumes per customer in some markets. With a significant proportion of our total revenue coming from energy supply, the risk from reduced demand is that our revenue will also reduce. 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 closely monitored through our ERM process, within our “Strategy Delivery” and “External Market Environment” Principal Risks, to ensure we are successfully responding to external drivers and delivering on our strategy.
Reputation	Relevant, always included	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 satisfying the changing needs of our customers and enabling the transition to a lower carbon future and managing reputational impacts

		is therefore vital to the delivery of this, and is regularly assessed and reported by our Corporate Affairs Function and assessed quarterly through our ERM process, within our “Brand, Trust and Reputation” Principal Risk. Reputation is also assessed as one of the impact criteria on our Risk Assessment Matrix and so can form part of the scoring for any risk. For example, due to our joint venture Spirit Energy’s 25% stake in Cuadrilla’s Bowland shale gas license, which we exited in 2020, there was a risk of adverse media attention, or campaign or pressure group focus, due to stakeholder concern over the potential discordance of this activity with UK climate change targets. At the time we actively engaged with climate change bodies and NGOs to offer our perspective and share our approach to being a good corporate citizen.
Acute physical	Relevant, always included	Acute climate risks, such as extreme weather events, 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, flooding, snow and ice events impact our employees’ ability to travel to work safely and may drive an increased demand for domestic heating engineer callouts at the same time, placing pressure and safety risks on our workforce. This is a risk across all our operational engineering geographies, with the UK and NA the most critical due to the proportion of our workforce that need to access ‘site’, be that a customer’s home or business, to perform their work. As a consequence, we regularly 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 Service”, “Health, Safety and Environment” and “Information Systems and Security” Principal Risks and reported quarterly to the GERACCC, SHESEC and Audit Committee.
Chronic physical	Relevant, sometimes included	Long-term changes to weather patterns present both risks and opportunities for our business. Given the long-term nature of these trends and global scale of impact, such risks are considered through our annual strategic planning processes. While the possibility of milder winters could lead to a reduction in energy demand for heating, warmer summers would likely increase demand for cooling during the day and night, which could lead to significant changes in patterns of demand – both of these impacts could affect our supply revenue through, for instance, struggling to meet the pattern of demand, or an overall reduction in supply required and a corresponding fall in supply revenue. In order to help manage this we have diversified the products and services we provide to offset the potential fall in energy consumption, we offer time-of-use tariffs, smart thermostats and other energy management tools. Changes to weather patterns causing global

		uncertainties are considered by our Group Fundamentals and Demand Forecasting teams and are assessed and reported as part of our "External Market Environment" Principal Risk to the GERACCC and Audit Committee.

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

Chronic physical

Changes in precipitation patterns and extreme variability in weather patterns

Primary potential financial impact

Increased indirect (operating) costs

Company-specific description

Physical changes related to climate change could reduce our gas and power forecasting accuracy, subjecting the company to higher imbalance costs and greater exposure to wholesale commodity markets.

National Grid match generation with demand for each second of the day. Being able to forecast energy demand accurately is key to making effective hedging and balancing decisions. Any mismatch between grid demand and the commodity we have purchased is subject to an imbalance cost, based on the cash-out price for that particular period. In uncertain and volatile weather conditions and with sudden customer consumptions changes, a 10% deterioration in forecasting accuracy can materialise, even if only for a limited period. This level of deterioration in short-term demand forecasting accuracy could result in an additional £400,000 of imbalance costs annually for Centrica's UK energy supply businesses.

Extreme weather resulting in volatile customer energy consumption can impact our demand forecasts, making it less predictable and thus increasing the mismatch between

generation, demand and cost. The extreme weather in March 2018 in the UK & Ireland from polar continental air mass ('Beast from the East'), caused significant variance between actual and forecast consumption, leading to significant additional costs for Centrica and ultimately consumers.

This risk applies to our residential and business gas and electricity supply businesses which must manage this risk on an ongoing basis on behalf of our customers to ensure that we procure energy cost effectively to meet the demand. As the largest energy supplier in the UK over £3bn of gas and power commodity procured every year, the ability to use more frequent and accurate weather forecasts and the ability to better and more quickly predict changes in consumption behaviours will be vital to reduce the risk of having to incur imbalance costs. Extreme weather events pose a particular risk to our business due to the large volumes of energy we must supply.

Time horizon

Short-term

Likelihood

About as likely as not

Magnitude of impact

Medium

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)

400,000

Explanation of financial impact figure

Currently British Gas pay approximately £4m pa of gas and power imbalance cost (most of this cost is driven by power, which is c.a. £3.5m pa) therefore a 10% deterioration in the current short-term demand forecasting accuracy could result in £400,000 of additional imbalance costs incurred by British Gas per year. The demand forecasts inaccuracy is mainly driven by weather forecasting and demand forecasting model errors.

In uncertain and volatile weather conditions, and with sudden customer behavioural changes, a 10% deterioration in forecasting accuracy is possible, even if only for a limited period. The financial range provided above highlights the risks of incurring additional costs in case of a continuous deterioration of gas and power demand forecasts in short-term timeframes.

The £3.5m power costs referenced here come with a Demand Forecasting accuracy, calculated using mean absolute percentage error (MAPE), of 2% for power. A 0.2% increase (equivalent to the 10% deterioration outlined) in power MAPE equates to approximately £350,000 increase in imbalance cost; adding gas deterioration we could reach £400,000 p.a. of additional imbalance costs which are paid to the system operator.

Cost of response to risk

150,000

Description of response and explanation of cost calculation

National Grid match generation with demand for each second of the day. Being able to forecast energy demand accurately is key to making effective hedging and balancing decisions. Any mismatch between grid demand and the commodity we have purchased is subject to an imbalance cost, based on the cash-out price for that particular period. In uncertain and volatile weather conditions and with sudden customer consumptions changes, a 10% deterioration in forecasting accuracy can materialise, even if only for a limited period. This level of deterioration in short-term demand forecasting accuracy could result in an additional £400,000 of imbalance costs annually for Centrica's UK energy supply businesses.

Our principal response to the risk of additional imbalance costs from more variable weather, is to minimise the difference between our forecasted demand and actual demand. This is achieved through the continued improvement of our demand forecasting. By improving our forecasting models, they better predict the changing customer behaviours which in turn reduce the imbalance costs we have to pay.

A core aspect of demand forecasting performance is establishing best-in-class processes and models. The team of forecasting experts continuously monitoring and improving model performance and forecasting processes. An example of the expansion of our activities is our deployment of machine learning and other advanced tools to supplement National Grid's demand allocation algorithms. We continue to engage with the industry in forecasting expertise and shaping their processes to optimise for a potentially more volatile future. The cost of improving our forecasting models with machine learning and advanced supplementary tools is £150,000.

The result is to have more frequently trained models in both gas and power forecasting processes that can capture sudden changes in demand and result in quick and better forecasting decisions.

Comment

Some of the initiatives mentioned above are outside the daily running of Demand Forecasting operational activities. There are also daily processes in place that have been designed to manage and mitigate the daily forecasting risks.

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Market

Changing customer behavior

Primary potential financial impact

Decreased revenues due to reduced demand for products and services

Company-specific description

Falling energy consumption

UK energy consumption has been falling since 2005, driven by improved energy efficiency and changing customer behaviour as a result of greater environmental awareness, alongside reaction to price changes and economic downturn. By using less of what we sell, this could impact our profitability. A study we undertook found that our Dual Fuel credit customers with smart meters reduced their consumption by around 3.7% on average (approx. £34pa). During their smart installation, our customers also receive energy efficiency advice from our British Gas Smart Energy Experts (SEE's). This, along with our customers using their smart energy monitors and energy insights available online or via our app all help customers to make changes to become more energy efficient around the home, taking steps to support a low carbon future. Additional smart technology and energy switching will further drive a reduction in the demand for energy. For a longer term expectation, National Grid ESO's 2020 Future Energy Scenarios predict that the average home will decrease total home energy use by 18% to 55% by 2050 across the three Net-Zero scenarios, depending on the dominant domestic heating technology.

The 2016 National Energy Efficiency Data-Framework (NEED) report, which studies underlying nation-wide customer consumption patterns and was commissioned by BEIS, shows that installing a new efficient condensing boiler leads to an annual median reduction in gas consumption of 8.3%, while cavity wall insulation leads to a saving of 8.4%. Since 2009, British Gas customers have reduced their underlying energy consumption by approximately 7% for gas and 9% for electricity.

Time horizon

Long-term

Likelihood

Unlikely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

567,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The continuing reduction in energy consumption would impact Centrica's revenue and profits if we failed to adjust and reposition our business.

National Grid's 2020 Future Energy Scenarios predict that the average home, in a 'Leading the Way' scenario, will decrease total home energy use by 9% by 2050. If we extrapolate that using our current residential energy business in the UK, which had a revenue of £6.4bn in 2020, this would represent a £576million loss in revenue from the sale of energy at today's prices.

Cost of response to risk

1,200,000,000

Description of response and explanation of cost calculation

Our shift in focus towards energy services is helping to reduce our reliance on revenue from energy supply. We are focused on putting our customers in control of their energy and see this as a growth area for our business and a chance to lead the sector in giving customers what they want.

We are leading the national roll-out of smart meters in GB, having installed over 7.9m in homes and businesses by the end of 2020. To further develop our leadership capabilities in cutting-edge products, we established the Hive business in 2015. Building on this, we also established a global Centrica Business Solutions business in 2015, to put business customers in control over their energy and reduce their use. In 2017 we acquired REstore, Europe's leading demand response aggregator to expand our capabilities and in 2018, we acquired Vista Solar, a United States based solar engineering, procurement and construction (EPC) company.

These investments help Centrica pivot away from the areas that are exposed to the risk of consumption reduction, namely our supply business for both business and consumers. Instead these businesses enable us to capitalise on delivering the energy efficiency and consumption reducing technology and services that drive this trend.

We invested over £1.2bn in our Hive and CBS businesses, between 2015-2020, in order to shift our focus towards energy services and diversify our business. This included over £300m in M&A (purchasing businesses including Ener-G Cogen, Neas, REstore and Smart Watt), over £400m in capex and the balance in operating losses.

Comment

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Current regulation

Mandates on and regulation of existing products and services

Primary potential financial impact

Increased direct costs

Company-specific description

In the UK, there is a risk that we fail to meet our legal obligations under ECO, which require energy suppliers to reduce heating costs for vulnerable and low-income households by funding insulation and heating measures. Targets are set in 'Lifetime Bill Savings' (LBS) and energy suppliers must install or fund sufficient measures to meet their target. As the largest supplier, we have the biggest obligation (2.1bn LBS for period Oct-18- Mar-22). Measures typically are loft, cavity wall, solid wall and underfloor insulation; first-time central heating; and replacement of broken gas boilers. Failure to comply with ECO could risk enforcement action which can lead to fines designed to compensate for consumer detriment. For example in 2014, British Gas agreed to pay £11.1m to help vulnerable customers following failure to deliver the Carbon Emissions Reductions Target and Community Energy Saving Programme by the 2012 deadline. In addition to the risk of enforcement action, which would include an initial investigation into breach and if guilty then penalty taking into account factors such as consumer detriment, costs avoided by the company and mitigating or aggravating action. There is also the reputational damage of not meeting our target as well as the risk that forecasted costs for delivery are exceeded.

The latest phase of ECO is ECO3, which runs until March 2022. The scheme started in

December 2018. The scheme marks another step-change in ECO, being solely targeted at low income and fuel poor households with restrictions on heating measures. The supply chain took time to adapt to the new rules and industry delivery during H1 2019 was very slow. The regulations changed again in late 2019 and the new requirements (including Trustmark) increased costs in 2020. Many businesses slowed during Covid lockdowns and ECO was no exception.

Prices have risen in 2021 as more regulatory change is introduced. The greatest uncertainty for delivery is PAS2030:2019 and PAS2035:2019, being mandatory from July 2021. Difficulty delivering ECO could increase bills for our customers. Investment in projects that may be cancelled or changed may also have negative financial implications for our business and make achieving our ECO targets more difficult, with potentially increased costs and a higher likelihood of failure to meet our obligations which would result in a fine. As the largest obligated supplier, British Gas faces greater detriment when there is a supply shortage.

Time horizon

Short-term

Likelihood

About as likely as not

Magnitude of impact

Medium

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)

18,000,000

Potential financial impact figure – maximum (currency)

28,000,000

Explanation of financial impact figure

Failure to comply with ECO requirements could risk enforcement action which can lead to fines designed to compensate for consumer detriment. For example, in 2014, British Gas agreed to pay £11.1m to help vulnerable customers following failure to deliver the Carbon Emissions Reductions Target (CERT) and Community Energy Saving Programme (CESP), by the 2012 deadline. We completed the shortfall in 2013.

BEIS is intending to amend the ECO3 regulations to allow up to 10% carry-under. This means enforcement action would only be taken if we failed to reach 90%. Carry-under would impose a 10% penalty. Therefore, we would assume a higher figure for failure, 20% for example.

Thus, the financial cost of failing to meet our targets by 15% would be 2.1bn 'Lifetime Bill Savings' * 15% * 20% * 30p (BEIS Impact Assessment price) = £18m
This is net of cost of delivery i.e. the shortfall itself will need to be paid.

We may also have a fine added on top. The figure shown is a £10m added fine.

Cost of response to risk

3,000,000

Description of response and explanation of cost calculation

ECO delivery

To mitigate the risk of not meeting our legal obligations under ECO3 and to avoid the associated fine, as occurred in 2014 under the CERT scheme, we need to plan and implement processes that ensure we meet the ECO3 deadline in March 2022. The delayed start of the scheme; the slow delivery in H1 2019 due to the supply chain being slow to adapt to the new rules; the regulations changing again in late 2019; and then the adverse impact of Covid, all meant that we needed to plan for success. As a result. the following mitigation actions have been taken:

• expanded our portfolio of ECO partners again. These include a wide range of bilateral partners, both large managing agents and direct smaller installers, with national coverage to effectively manage cost and delivery risk
• secured factoring services for our partners at minimal cost to compete with other energy suppliers' short payment terms
• secured sufficient volume in 2021 that even allowing for excessive delivery issues, will exceed 90% by year end

Together, these actions should enable us to meet the ECO3 deadline, avoid legal non-compliance and avoid the associated fine and reputational damage. However, there are significant costs associated with meeting the ECO3 obligations. Our directly controllable management costs relating to ECO are approximately £3m annually, with roughly half associated with commercial contract management. The remaining costs are associated with; supporting ECO innovation, technical monitoring, staff working on policy design, and processing measures, reporting and compliance checking.

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.

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 the UK's biggest challenge on the journey to net-zero by 2050. Heat accounts for approximately 40% of energy consumption and is mainly generated in our homes and businesses.

The Government has outlined, through its Ten Point Plan, its ambitions on how it intends to transition those off the gas grid onto low-carbon technologies. Heat pumps have been chosen as the main technology for these properties however, there has yet to be a clear outline on how the Government intends on transitioning those on the gas grid to low-carbon heating solutions. This will be an enormous task as the majority of consumers are connected to the gas grid (85%) with a significant amount of non-domestic buildings using natural gas (65%) for heating.

British Gas services currently derives most of its revenue through the installation and servicing of on-grid gas boilers, we are the largest gas boiler service provider in the UK. As new technologies are mandated and/or incentivised, we are well placed to transition our capabilities and play a key role in their roll out. As a business we are technology agnostic and can adapt our supply chain and the skillset of our workforce to any of the currently available and viable technologies; heat pumps, hydrogen boilers, direct electric heating, and hybrid systems combining these.

Time horizon

Medium-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)

1,300,000,000

Potential financial impact figure – maximum (currency)

3,000,000,000

Explanation of financial impact figure

British Gas Services and solutions had a revenue of ~£1.3bn in 2020. The approximate current costs of most alternative heating technologies are greater than or equal to current gas boilers. This, coupled with the ambition to increase market share in our services business, means that revenue should increase whatever realistic proportion of heat pump, hybrid heat pump, hydrogen, or direct electric solutions come to be.

Cost to realize opportunity

10,500,000

Strategy to realize opportunity and explanation of cost calculation

Centrica are technology agnostic wrt. low-carbon heating technology. We believe that a wide variety of solutions will be deployed, with regional considerations influencing the eventual technology deployed, and stand ready to play a critical role whatever pathway is undertaken.

In line with the CCC's balanced pathway projection that heat pumps are the most likely technology for the majority of UK households, we have modelled the costs to re-skill our engineering workforce. The approximate 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 very provisionally, around £3000. This will be required for around a quarter of the engineers in a heat pump workforce, with the remaining three quarters requiring lighter training with a cost to the business of ~£1k. This does not cover increased on-going costs for refresher training, some training required for more complex systems (such as split systems), or the training needed for centralised and support staff. Additionally, it does not incorporate any costs borne by the business training engineers to the point where they can re-skill for heat pumps. With ~7k engineers in service at present, the reskilling of British gas' work force would cost ~£10.5m

An example of us executing our strategy to realise this opportunity is our hybrid heat pump trial, which we began in 2020. This is a project in the west midlands where we are exploring the role that hybrid heat pumps can play facilitating the decarbonisation of standard gas boilers. We are subsidising the products for up to 75 suitable customers

and upskilling engineers to deliver the installation. This will provide valuable insights into the viability of this product in a net zero future, as well as the operational challenges that our workforce and operational model might face.

Comment

Identifier

Opp2

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Shift in consumer preferences

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

Changing consumer behaviour is an increasing factor in the market for low carbon products and services. Concern about climate change and rising energy costs in the UK has focused attention on reducing energy consumption while weather events across the US have raised awareness for consumers and businesses around their energy use and environmental impacts.

Our Centrica Hive and CBS businesses are striving to give customers what they want – more control, choice and the ability to lower their energy bills and carbon emissions. Additionally, for businesses energy resilience is of growing concern as they face increased uncertainty due to extreme weather events.

In the UK, smart meters and smart-enabled propositions are influencing consumer behaviour. A recent sample of customers with smart meters found customers reduced their dual fuel consumption by around 3.7% on average. We expect this figure to rise to ~5% with information available through apps & online, which provide smart meter customers useful insights into their energy consumption. Our leadership position in the mandated smart meter roll-out is helping enhance customer experience and retention, with 7/10 customers with smart meters were similarly or more satisfied than with their previous standard meters.

Increasing the customer benefits from smart-enabled propositions will lead to increased revenue for our Consumer and Business divisions through increased product sales both in the UK and globally. We also continue to expand the range of smart-enabled

products, such as tariffs specifically for Electric Vehicle owners, which utilise smart metering technology to provide a cheaper rate at night, allowing customers with Electric Vehicles to save money. Tariffs such as this also improve customer retention while reducing demand on the grid during peak periods. In 2020 we expanded the Hive family of products to include Hive Heating Plus, a subscription service that utilises smart meter data to provide personalised hints and tips for better management of energy at home..

Through our CBS business, we are giving large-scale energy users the opportunity to operate, monitor and optimise their energy. CBS has over 6400 contracted sites in 34 countries across insight, optimisation and solutions. The use of distributed generation and storage technologies is set to grow substantially, with forecasts suggesting that distributed generation could grow from a 2% global market share to 12% during 2014-30.

Time horizon

Short-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)

360,000,000

Potential financial impact figure – maximum (currency)

1,000,000,000

Explanation of financial impact figure

In 2019 our combined revenue for CBS and CHS (now Hive) was £360m (this figure is not available for 2020 as the CHS component has become integrated with the British gas business). We are looking to increase market share and have £1bn as a reasonable ceiling for the increase in revenue of these activities.

Cost to realize opportunity

1,300,000,000

Strategy to realize opportunity and explanation of cost calculation

In 2015, Centrica reshaped its business to build new capabilities and deliver on these opportunities by establishing our Hive and CBS business. As part of our CBS business

in 2016, we expanded our capabilities by acquiring ENER-G, an established supplier and operator of CHP solutions and Neas Energy, a provider of enhanced energy optimisation for decentralised assets. In 2017 we also acquired REstore for £59m, Europe's leading demand response aggregator and in 2018 we acquired Vista Solar, a United States based solar engineering, procurement and construction (EPC) company.

We have invested a cumulative £1.3bn during 2015-20 in our Hive and CBS businesses to develop our product and service offerings for customers. These acquisitions, and the wider investment in these two businesses, help increase our capability in delivering the cutting-edge products and services that satisfy the changing needs of our customers, and capitalise on this opportunity.

Around 1.4m customers now use our Hive connected home solutions which provide greater control over their energy with just a tap on the app – from smart thermostats, plugs lights and cameras, to contact and motion sensors. By the end of 2020, we had installed over 7.9m smart meters in GB through our metering business, this is helping to drive demand in products providing more control to the customer.

In 2020, we completed solar installations totalling over 13 MWp mainly for large scale businesses.

These examples stand among many other activities which all act to help us achieve our 'People and Planet Plan. Launched in 2021, but developed in 2020, the planet component has the goal to 'Supporting every customer to live more sustainably'.

Comment

The annual component of this £1.3bn figure varied across the 2015-2020 period.

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

Despite the Covid pandemic, the uptake of electric vehicles by individuals and businesses greatly expanded in 2020. While transport still accounts for 29.8% of the UKs CO2 emissions 2020 was a significant year for EVs with sales topping 175,000 and market share reaching 11%. National Grid forecasts the UK stock of EV's to range from 2.7 to 10.6 million by 2030 and up to 36 million by 2040.

The rise in EV ownership highlights the need for faster infrastructure development as adoption grows. Sustained government policy announcements and both public and private investment saw charge points jump by 24% in 2020 as the UK network has increased to more than 20,000 charging devices.

Centrica is already one of the largest charger installers in the UK, with 17,000 home and business installations, including 3,500 rapid chargers since 2017. Centrica has committed to make its own fleet of 12,000 vehicles fully electric by the end of 2025. We have ordered 3,000 e-Vivaro vans from Vauxhall, to be deployed by the end of 2022.

Centrica is focussed on five segments across the EV market, having identified the importance of cross consumer-and-business opportunities to deliver the electric revolution. This enables Centrica to have a direct role to plan across the full lifecycle of electric vehicles from manufacturing, to early adopters, through to mainstream adoption and the secondary market.

• Fleets – Using the expertise and co-created solutions developed with our own fleet to accelerate our customers' switch to EV with infrastructure, software and services to support businesses and drivers in all charging scenarios
• Home – Supporting both private drivers and at-home charging fleet drivers with installation services, a dedicated charging and home energy management app, ongoing maintenance and time of use energy tariffs
• Destinations – Building out a partnership network to enable more flexible charging opportunities for fleet drivers and provide destination business sites with charging facilities to attract and generate revenue from customers
• Workplaces – Assisting organisations with hardware installation, management software and energy solutions for charging of employees, visitors or customers
• OEMs – Partnering and supporting manufacturers and dealerships with on-site charging solutions and packaged products for resale to end-customer EV drivers

Time horizon

Short-term

Likelihood

More likely than not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

75,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Centrica is well positioned to capture a material share of the EV products and services market given its scale and ability to integrate energy supply, energy services and technology, however the precise proportion is uncertain.

Although the segment remains small today, we expect consumer electric vehicle adoption to grow materially in the next 5 years. While we forecast the value pool for residential charge point installations to be modest, our vision is to capture value from the broader value chain, including optimised tariffs. Increasing customer adoption of residential smart energy technologies will also create a growing value pool. Establishing a credible presence in charge point installations will be critical to unlocking this value in the short term.

Further value pools we are, or will, operate in are new segments (e.g. charge point installation in new builds), EV fleet management, public charge point installation, and workplace charging.

Our internal market sizing and forecasting, which uses data from external sources such as the department for transport, predict that EV sales are set to increase by 250% between 2024 and 2030, and the UK EV market gross margin is estimated to be between £500m to £1bn in gross margin annually in 2030. We believe we can capture over 15% of the value pools we will access and that this will equate to over approximately £75m gross margin annually in 2030.

Cost to realize opportunity

15,000,000

Strategy to realize opportunity and explanation of cost calculation

British Gas and Hive have developed several propositions to help realise the markets they are targeting. Examples include an all-in-one solution for consumers that includes installation of a home EV Charger, Alfen hardware, control in the Hive smart app, and a newly launched EV tariff that allows customers to take advantage of cheaper charging costs at times when there is less demand on the power grid. By August 2021, British Gas will have 175 specialised EV charger engineers, with national installation coverage. Alongside this, we have invested in integrating our Fleet Management system in the Hive app to give customers smart control.

Centrica is continuously assessing and evaluating a wide range of opportunities across

the EV value chain and working with our customer-facing teams on bringing this value to organisations and consumers. This includes designing propositions and charging solutions for new segments, specifically New Builds, Landlords and customers without a driveway. We believe these to be growing segments and are developing strategic partnerships to realise these opportunities in 2022 and beyond.

Our roadmap to further develop Hive's EV charging solutions has been informed by research from our technology teams and features we have tested with customers. It will develop digital products and services to support growth in new segments. This will include front end user software and backend platform requirements, including integration with external partners; specifically charge point operators and hardware manufacturers, as well as with Centrica's cross-business energy management systems (to deliver half-hourly settled green energy tariffs that are optimised). Staff wages for those working on this project are the principle component of future investment, which include mobile designers, software developers, platform engineers, and product and programme managers.

Since 2013 Centrica has invested over £15m in operating costs to build capability across the EV value chain. The key components of this have been developing capabilities (retraining SMART meter engineers to install EV charge points, and upskilling and hiring more helpdesk employees to facilitate customer enquiries) and marketing for our propositions,

The total investment by Centrica is anticipated to increase significantly over the following years.

Comment

C3. Business Strategy

C3.1

(C3.1) Have climate-related risks and opportunities influenced your organization's strategy and/or financial planning?

Yes

C3.1b

(C3.1b) Does your organization intend to publish a low-carbon transition plan in the next two years?

	Intention to publish a low-carbon transition plan	Intention to include the transition plan as a scheduled resolution item at Annual General Meetings (AGMs)	Comment

Row 1	Yes, in the next two years	Yes, we intend to include it as a scheduled AGM resolution item	We intend to publish our first Climate Transition Plan in Q4 2021.

C3.2

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

Yes, qualitative and quantitative

C3.2a

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

Climate-related scenarios and models applied	Details
Other, please specify National Grid Future Energy Scenarios, Centrica central case drawing from IEA	At the global level we use long-term macro-trends across scenarios in our strategic planning. Numerous variables are influenced by climate change, such as commodity demand or the cost of carbon. Our last major strategic review in 2015 covering all our businesses involved market trend analysis out to 2035, including future changes in global oil and gas markets and changing trends in demand and customer behaviour. We created our own central case to best reflect our diverse portfolio and markets but relevant sources such as the IEA were used for inputs such as primary energy demand, power market evolution, the demand for energy services and the impact of connected devices and the 'internet of things'. We ran 20-year scenarios (out to 2035) for all parts of the business as this provides the optimal balance between the desire to assess long term risks and opportunities and the precision of forecasts. The results were communicated to our shareholders and the markets in July 2015. High level conclusions included continued growth in primary energy demand, with the fastest growing contribution coming from renewables, nuclear and gas. Whilst we recognise that fossil fuels have a role in the near-term, we concluded that climate policies and advances in technology will be effective in decoupling energy growth from carbon emissions. The exact timing of this trend will vary by region but is underway today in some markets and will materialise globally over the next 20 years. We also anticipated a growth in the demand for low-carbon energy solutions including distributed energy, energy services and connected devices which will disrupt many energy markets.. The results greatly influenced our current strategy and led to our Board overseeing a fundamental transformation of Centrica and all its businesses. We subsequently divested or de-commissioned all but one of our centralised power generating assets and placed our oil and gas E&P

	assets into a joint venture. We are now recycling over £1bn investment from these asset businesses into establishing market-leading customer facing businesses, such as Centrica Business Solutions and British Gas with brands such as Hive. These will play a significant role in decarbonising the energy sector in an increasingly decentralised, democratised and digitised energy system. In early 2021 we updated our Purpose as an organisation, committing to 'help you live sustainably, simply and affordably'. This shift in purpose and strategy reflects our belief that the energy system is in transition, increasingly due to societies response to climate change.
Other, please specify National Grid Future Energy Scenarios, ENA, Navigant, Committee on Climate Change	Aligned with the TCFD recommendations, we have completed forward-looking scenario analyses out to 2050 to enhance our long-term planning on climate change. In 2019 we completed a detailed analysis of our UK business against four different scenarios including 2 degrees, using National Grid's Future Energy Scenarios these being the most relevant to our sector and primary market. In 2020 we updated this analysis using 4 scenarios including 1.5 degrees. This on-going analysis enables us to stress test the resilience of our annual strategic planning and business objectives under varying scenarios and provides valuable insights into the range of risks and impacts associated with the energy transition on Centrica's UK businesses whilst highlighting the significant opportunities and potential growth areas in which Centrica is strategically engaged. For British Gas, whilst legacy business lines associated with gas use are exposed to varying levels of erosion, this can be outweighed by growth in new markets with higher decarbonisation predicted to bring higher potential for new revenue streams. Key areas for growth include residential low-carbon heating install and service, insulation, EV charger install and optimisation, Our Centrica Business Solutions business also proves to be well aligned with net zero, with potential growth greater in higher de-carbonised scenarios across multiple areas such as EV charger install and optimisation, solar, low carbon heating install and service and battery storage. Additionally, we see EVs and Heat Pumps driving significant growth in electricity supply. These insights continue to inform more detailed strategic analysis in critical areas such as de-carbonising heat in the UK, the results of which are being used in the development of our business plans and strategic response. We continue to refine our in-house low carbon transition model exploring

	four viable pathways to achieving net zero in the UK. The model and our inputs and assumptions have been peer reviewed by third parties including the Climate Change Committee. Key conclusions include the rapid build out of wind during the next decade and then solar out to 2050 in the power sector, electric vehicles dominating mobility by the 2040's and heat decarbonised through predominately electrification to 2035 then increasingly hydrogen out to 2050. In combination, this analysis informs our strategic and financial planning during the next 5 years on how we can enable our customers towards net zero, what investments we should make and role we should take, in the value chains of power, heat and transport. For example, our scenario analysis has demonstrated that there are a number of key technologies required to de-carbonise domestic heat such as air source heat pumps or hydrogen boilers. What is less clear is what technology is best for what property type. For example, certain homes are not suitable for pure electrification, but they might benefit from a hybrid heat pump. In order to test whether hybrid heat pumps are suitable across a number of housing types we launched a trial in the West Midlands, targeting 75 on-grid residential properties, with the premise that the technology can deliver up to 80 per cent of total heat demand from the heat pump, with 20 per cent coming from efficient gas boilers. Our ultimate aim is to demonstrate the viability of hybrid heating systems in properties that are not suitable for pure electrification to gain government support administered in a way that is in harmony with existing efforts on the Government's rollout of heat pumps, as outlined in the Ten Point Plan.. We are extending this analysis to our other, smaller markets, such as Europe and North America, assessing how climate change and societies response is influencing attributes such as customers' needs, competitor offerings and emerging business models.

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 explicitly addressed climate risks and opportunities and the energy transition out to 2025 and 2030 directionally. 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 'energy technology pathways' service for customers mapping out a pathway to net zero for their energy needs. Additionally, our Board approved other net zero aligned propositions such as investment in grid scale solar generation. For British Gas domestic customers, we are developing a suite of smart home energy management tools allowing them to take greater control of their energy use like 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. We also committed to providing zero carbon power to all our UK customers as a key step towards meeting our scope 3 climate goals. The most recent 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 (Driivz, an Israeli start-up that offers end-to-end software solutions for electric vehicle charging) and re-training in-house engineers which has led to us 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. We have announced new partnerships with Ford, Honda and Vauxhall to offer a dedicated home charging installation service and EV tariffs. We also recently launched a commercial proposition for Air Source Heat Pumps reflecting our assessment of the need to de-carbonise heating. Finally, the Board recently approved the development of a low-carbon certification and offsetting business within our energy trading arm, to help customers with their net zero goals.

Supply chain and/or value chain	Yes	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, we recently upgraded our climate targets as part of our People and Planet Plan and have set science-based targets for over 95% of our value chain for our own emissions (scope 1&2) and our customers emissions (scope 3). Our most substantive strategic focus area across our value chain is helping our customers reduce their emissions. 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, cleaner energy and fuel switching solutions. 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.' 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. On clean energy, we have committed to providing zero carbon power to all our UK customers through our standard or renewable tariffs. On fuel switching, we are working with car manufacturers to support their customers and dealership networks on EV readiness, providing a one stop shop for charging solutions including charger infrastructure, energy management, financing, and optimisation. Since 2019 we have announced new 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. Finally, we are enabling the decarbonisation of the wider

		electricity system and increasingly the gas system, by providing distributed, flexible and low-carbon solutions such as CHP, Batteries, Solar, DSR and bio-gas.
Investment in R&D	Yes	Our 2015 strategic review identified a significant need for innovation & technology advancement to drive de-carbonisation across the energy sector out to 2035. In response, we established a £100m fund to identify, incubate & accelerate technologies that can help deliver products & services that meet our customers' needs that are changing due to climate change and that enable the low carbon transition. Key investments included: • Driivz, a start-up that offers end-to-end software solutions for electric vehicle charging • Greencom, developer of a platform which integrates distributed energy resources to create clean virtual power plants,. • Mixergy, developer of a smart water tank that efficiently heats and stores hot water providing energy savings. • Omnidian, a solar performance guarantee business in the US, which aims to boost solar energy performance One of our most substantive examples of low-carbon R&D was our work with over 200 homes and businesses in our £17m local energy market trial in Cornwall, which concluded 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. We demonstrated how 310MWh of power could be traded successfully, with greenhouse gas savings of nearly 10,000 tonnes a year as a result. We are also working on all-electric, net zero carbon emission technology packages for new home designs with the start-up SNRG. The packages include heat pumps, hot water tanks, mechanical ventilation with heat recovery, solar panels, batteries and EV chargers. In 2020 we commenced a significant R&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.

		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.
Operations	Yes	Risks and opportunities influenced by climate change have 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 our customers. For our remaining power generation and exploration 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, the impacts of such events can be significant. For example, in 2008 our Brigg power station was closed for a short duration due to flooding leading to reduced output impacting profitability. 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. 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 generating assets and placed our oil and gas E&P assets into a joint venture driving down risk and the costs associated with implementing mitigation measures. 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 in order to deliver technology that we believe will play a key role in the energy transition. This initially involved training engineers to install smart meters and more recently electric vehicle charge points. We are now exploring the need to re-train engineers to install and service low carbon heating technologies such as heat pumps and have recently called on the UK government to introduce a Retrofit Fund to

		transition consumers from gas boilers to hybrid heating systems, initially targeting 5,000 installations by 2024. Finally, we have announced a new target to be a net zero organisation by 2045. This will ensure our operational emissions decline in line with Paris.

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	Revenues Direct costs Capital expenditures Capital allocation Acquisitions and divestments Assets	In responding to the macro-trends driving the energy transition, including risks & opportunities (R&O) relating to climate change, we are fundamentally repositioning 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 asset businesses, Central Power Generation and Exploration and Production (E&P), to our customer-facing businesses, including British Gas and Centrica Business Solutions. From 2015-2022, we plan to re-direct over £1 billion of operating and capital resources to our growth areas and reduce our resource allocation to our asset portfolio by about the same amount 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. Moreover, we have divested all our centralised gas fired power assets in NA and UK. Our portfolio now comprises almost entirely of small, peaking plants. Additionally, we divested 31% of our E&P business and placed our remaining 69% into the joint venture Spirit Energy and announced our intention to divest the remaining 69%. During our recent strategic and financial planning process, the Board approved management's proposed capital allocation out to 2025. Our assessment of climate R&O has significantly influenced our plans with major new areas of funding including significant investment into grid-

		scale renewable energy assets. Our plans will see our capital allocation increasingly align with our net zero goals. Climate-related R&O have the potential to impact our revenues in the near and long term. Decreased revenues may occur due to reduced 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. 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.

C3.4a

(C3.4a) Provide any additional information on how climate-related risks and opportunities have influenced your strategy and financial planning (optional).

The implications of climate change are far-reaching, and the energy sector is at the forefront of the need to respond. In 2015, we announced a new strategy which is based on a world moving towards a low carbon future and positions us to play a key role in enabling the energy transition. We recently reviewed and updated our company Purpose to 'helping you live sustainably, simply and affordably' which reflects our goal to help our customers play their own role in the transition towards a low carbon future.

From our analysis of long-term trends and scenarios, we believe decarbonisation of the energy system will be driven by three major trends; decentralisation, digitisation and increased customer control in how energy is generated, managed and used.

To enhance our resilience and competitiveness in this low carbon transition, we are investing around £1bn to 2022, in establishing market-leading customer focussed businesses developing and delivering the energy solutions of tomorrow. Beyond 2022 we intend to grow these businesses and launch new customer-focussed technologies that keep us at the forefront of technology advancements powering the energy transition. We are pivoting our allocation of capital away from carbon intensive fossil-based activities towards low carbon and renewable technology.

Building on this we have recently introduced our People & Planet Plan to create a more inclusive and sustainable future that supports our communities, our planet and each other. Building on progress we've already made under our previous Responsible business Ambitions, we'll accelerate action through five global goals that are focused in areas where we're able to make a significant difference. For our planet, we've introduced bolder goals to fight climate change because we want to help every customer live more sustainably and be net zero by 2050, while working to become a net zero business ourselves by 2045.

We have committed to helping our customers reduce their emissions in line with science by 28% by 2030 (from 2019). We do not act in isolation and we cannot drive the required reductions alone, however we do act in three key ways providing energy efficiency and optimisation solutions, access to cleaner energy and through enabling fuel switching. We are developing these capabilities across power, heat and transport.

Having reduced our global scope 1 and 2 carbon emissions by over 80% in the past decade, and exceeded our efficiency target to reduce our 'Internal Carbon Footprint' by 35% by 2025, we have refreshed our Centrica carbon targets and pulled forward our net zero goal by 5 years to 2045 with a 40% reduction target by 2034. This, along with our on-going shift in investment focus, will ensure our global scope 1 and 2 emissions decline in line with science.

Additionally, if renewables are going to thrive then the ability to store and balance energy is vital. We are enabling the de-carbonisation of the wider electricity system and increasingly the gas system, by providing distributed, flexible and low-carbon solutions such as CHP, Batteries, Solar, Demand side Response.

Finally, as subsidies for renewables are phased out, Centrica provides the necessary financial structuring and route to market services for renewable asset owners and mid to long-term renewable Power Purchase Agreements for electro-intensive sectors. We currently have 11GW of renewable energy assets under management.
These Climate goals form part of our performance objectives for our climate transition plan, designed to ensure we are not only resilient to, but can thrive in a decarbonised world.

C4. Targets and performance

C4.1

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

Both absolute and intensity targets

C4.1a

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

Target reference number

Abs 1

Year target was set

2020

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

Scope 1+2 (location-based)

Base year

2019

Covered emissions in base year (metric tons CO2e)

1,177,848

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)

100

Target year

2034

Targeted reduction from base year (%)

40

Covered emissions in target year (metric tons CO2e) [auto-calculated]

706,708.8

Covered emissions in reporting year (metric tons CO2e)

964,578

% of target achieved [auto-calculated]

45.2668765409

Target status in reporting year

New

Is this a science-based target?

Yes, we consider this a science-based target, but it has not been approved by the Science-Based Targets initiative

Target ambition

Other, please specify

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

Please explain (including target coverage)

To continually improve our impact, we fully reviewed our scope 1 & 2 targets and received Board approval for them in 2020 as part of our People & Planet Plan. We are now focused on an interim target to reduce our emissions 40% by 2034 towards our ambition to be net zero by 2045 (see NZ1). The target encompasses 100% of our global scope 1 and 2 emissions (normalised for divestment and acquisitions, based on operational control), and replaces our outgoing targets (Abs2, Abs3) which remained in place during 2020 whilst we reviewed our strategy. We will be moving to an operational control approach for all our wider reporting from 2021.

The target tracks our progress as we transition to a lower carbon company and

empowers us to innovate and trial new technologies that aid our ability to provide market-leading services and solutions for customers, while engaging colleagues on understanding and mitigating environmental impact. Reductions in emissions will be delivered via a variety of measures including our continued shift away from carbon-intensive assets towards providing customer-facing services and solutions. We will also continue to drive efficiencies across our operations, with savings arising from energy efficiency and low carbon measures such as solar, distributed generation, battery storage and LED installations alongside wider business efficiencies. Lastly, we will focus on driving down emissions from employee and fleet travel. To demonstrate leadership in this area, we signed up to EV100 to support the EV transition in 2019, ordered 3,000 electric vans with Vauxhall which is the largest commercial EV order of its kind in the UK during 20-21 and bought forward our ambition for our entire UK fleet to be electric by 2025. We have, however, been open and transparent that we do not yet have firm and grounded plans to deliver all of the emission reductions to achieve net zero but we have committed to develop and publish a Climate Transition Plan in 2021.

While we consider our target to be science-based, we have continued our dialogue with the SBTi with a view to having it validated. Unfortunately, the delayed publication of the SBTi's oil & gas guidance that they believe will apply to Centrica has slowed the process, but we are exploring options to progress the commitment this year so that we can better meet stakeholder expectations.

Target reference number

Abs 2

Year target was set

2016

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

Other, please specify

Other: Scope 1+2 (location-based) + 3 (business travel)

Base year

2015

Covered emissions in base year (metric tons CO2e)

90,541

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)

2

Target year

2025

Targeted reduction from base year (%)

35

Covered emissions in target year (metric tons CO2e) [auto-calculated]

58,851.65

Covered emissions in reporting year (metric tons CO2e)

38,368

% of target achieved [auto-calculated]

164.6389086554

Target status in reporting year

Achieved

Is this a science-based target?

No, but we are reporting another target that is science-based

Target ambition

Please explain (including target coverage)

This target encompasses the internal carbon footprint of Centrica's core property, fleet and travel, spanning all brands and subsidiaries globally. It's a sub-target of our global net zero target but given we exceeded it five years earlier than planned, we took the decision to retire the target at the end of the reporting period in 2020 and subsequently replaced it with an upgraded set of science-based targets as part of our People & Plant Plan which was approved in late 2020 (see Abs1 and NZ1).

Although the percentage of emissions from our internal carbon footprint is immaterial compared to our total footprint and is therefore not consistent with science-based targets, the management of these impacts are important. The target therefore focuses on areas where colleagues have the greatest ability to influence a decline in emissions which enabled us to drive engagement and benchmark operational performance against businesses with similar impacts, as well as empower us to innovate and trial new technologies that aid our ability to provide market-leading services and solutions. The majority of carbon savings came from reducing our property scope 1 and 2 emissions through energy efficiency measures, solar, distributed generation, battery storage and LED installations alongside business efficiencies. We also targeted a reduction in scope 1 emissions from across our fleet and company cars via take-up of more efficient or hybrid/electric vehicles (EVs).

Target reference number

Abs 3

Year target was set

2019

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

Scope 1+2 (location-based)

Base year

2015

Covered emissions in base year (metric tons CO2e)

2,083,227

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)

100

Target year

2030

Targeted reduction from base year (%)

28

Covered emissions in target year (metric tons CO2e) [auto-calculated]

1,499,923.44

Covered emissions in reporting year (metric tons CO2e)

1,753,079

% of target achieved [auto-calculated]

56.5996888481

Target status in reporting year

Underway

Is this a science-based target?

Yes, we consider this a science-based target, but it has not been approved by the Science-Based Targets initiative

Target ambition

2°C aligned

Please explain (including target coverage)

As part of our Responsible Business Ambitions which we upgraded at the end of 2020, we had originally committed to reduce our global carbon emissions in line with Paris and achieve net zero by 2050. This target therefore represented our medium term 2030 milestone which is 15 years on from the 2015 base year. It also encompasses 100% of our global scope 1 and 2 emissions (normalised for divestment and acquisitions) and we consider the target to be science-based, given it meets the CDP 2.1% year-on-year reduction criteria.

As part of our continued commitment to follow best practice, we fully reviewed our scope

1 and 2 targets in 2020 and announced an enhanced version as part of our People & Planet Plan. This involved increasing our interim science-based target to 40% reduction by 2034 (see Abs 1) and accelerating our net zero target by five years to 2045 (see NZ1). The target is driving enhanced ambition across our business, including our decision to bring forward our target to electrify our entire UK road fleet to 2025 from 2030.

C4.1b

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

Target reference number

Int 1

Year target was set

2020

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

Other, please specify

Scope 3: Fuel and energy related activities (not included in Scopes 1&2, plus Scope 3: Use of sold product

Intensity metric

Other, please specify

Grams CO2e per kWh of energy sold

Base year

2019

Intensity figure in base year (metric tons CO2e per unit of activity)

182

% of total base year emissions in selected Scope(s) (or Scope 3 category) covered by this intensity figure

98

Target year

2030

Targeted reduction from base year (%)

28

Intensity figure in target year (metric tons CO2e per unit of activity) [auto-calculated]

131.04

% change anticipated in absolute Scope 1+2 emissions

0

% change anticipated in absolute Scope 3 emissions

22.2

Intensity figure in reporting year (metric tons CO2e per unit of activity)

149

% of target achieved [auto-calculated]

64.7566718995

Target status in reporting year

New

Is this a science-based target?

Yes, we consider this a science-based target, but it has not been approved by the Science Based Targets initiative

Target ambition

Well-below 2°C aligned

Please explain (including target coverage)

As part of our continued commitment to follow best practice, we fully reviewed our scope 3 customer target (see Oth2) in 2020, and the Board approved an enhanced version as part of our People & Planet Plan which we published and reported against as part of our 2020 annual reporting. 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 (see NZ2), with an interim target to reduce the carbon intensity of their energy use by 28% by 2030.

To help our customers be net zero, we'll encourage their take-up of new and existing low carbon services and solutions that transform the way they live, work and move. We'll provide energy efficiency and optimisation products like Hive smart thermostats and valves, offer fuel switching technologies such as electric vehicle charging solutions, heat pumps and hydrogen heating systems, as well as ensure a low carbon energy supply with products that include green tariffs, demand side response and a cleaner fuel mix.

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 will be moving to an operational control approach for all our wider reporting from 2021. While we consider our target to be science-based, we have continued our dialogue with the Science Based Targets initiative (SBTi) with a view to having it validated. Unfortunately,

the delayed publication of the SBTi's oil & gas guidance that they believe will apply to Centrica has slowed the process, but we are exploring options to progress the commitment this year

C4.2

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

Net-zero target(s)
Other climate-related target(s)

C4.2b

(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.

Target reference number

Oth 1

Year target was set

2019

Target coverage

Company-wide

Target type: absolute or intensity

Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Other, please specify
Other, please specify
Deliver flexible, distributed and low carbon technology

Target denominator (intensity targets only)

Base year

2015

Figure or percentage in base year

0

Target year

2030

Figure or percentage in target year

7

Figure or percentage in reporting year

2.6

% of target achieved [auto-calculated]

37.1428571429

Target status in reporting year

Underway

Is this target part of an emissions target?

No, this target does not relate to emissions targets reported in C4.1a or C4.1b

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain (including target coverage)

Our ability to store and balance energy supports the decarbonisation of the energy system by maximising renewable and low carbon energy. To support the energy system transition, our outgoing Responsible Business Ambitions included a target of 7GW of flexible, distributed and low carbon technology by 2030 which is the equivalent to over 10% of current UK peak demand, and was to be achieved by providing technologies and services that include solar, battery storage, demand side response and Combined Heat and Power (CHP) units.

As part of our continued commitment to follow best practice, we fully reviewed our Responsible Business Ambitions at the end of 2020 and streamlined our focus in favour of enhancing our net zero commitment for our company and customers via our new People & Planet Plan. As a result, we will retire the target but continue to track flexible and low carbon capacity as a KPI within our wider reporting suite.

Target reference number

Oth 2

Year target was set

2019

Target coverage

Company-wide

Target type: absolute or intensity

Intensity

Target type: category & Metric (target numerator if reporting an intensity target)

Other, please specify

Other, please specify

% reduction in average customers energy carbon footprint

Target denominator (intensity targets only)

Other, please specify

% reduction in average customers energy carbon footprint

Base year

2015

Figure or percentage in base year

0

Target year

2030

Figure or percentage in target year

3

Figure or percentage in reporting year

4.9

% of target achieved [auto-calculated]

163.3333333333

Target status in reporting year

Underway

Is this target part of an emissions target?

No, this target does not relate to emissions targets reported in C4.1a or C4.1b

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain (including target coverage)

Centrica was one of the first companies to report its global scope 3 emissions and in 2019, we introduced Responsible Business Ambitions to help customers reduce their emissions by 25% by 2030 which included directly targeting a 3% reduction by providing services and solutions that enable them to use energy more sustainably. Savings were to be delivered via offerings such as energy insights from smart meters, optimisation services via technology like demand-side response alongside low carbon solutions including solar, battery storage, heat pumps, and electric vehicle charging. At the end of 2020, we had helped customers reduce their emissions by 4.9%.

Following a commitment to step up our efforts to tackle climate change, we reviewed our targets during 2020 and introduced an upgraded set via our People & Planet Plan which included helping customers reduce the carbon intensity of their energy by 28% by 2030 (see Int1) and be net zero by 2050 (see NZ2), which has subsequently replaced this target.

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, but we have not committed to seek validation of this target by the Science Based Targets initiative in the next 2 years

Please explain (including target coverage)

In 2020, the Board approved the acceleration of our ambition to be a net zero business by 2045, with an interim target of 40% carbon reduction by 2034 (see Abs1). Our new net zero target forms part of our People & Planet Plan and 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 (normalised for divestments and acquisitions and based on operational control). While we consider the target to be science-based, the delayed publication of the SBTi's oil & gas guidance that they believe will apply to Centrica has impacted our validation process, but we are exploring options to progress the commitment this year in order to better meet stakeholder expectations.

We do not yet have firm and grounded plans to deliver all of the emission reductions to achieve net zero but within our plan, will be the continued move away from oil and gas exploration and production, converting our road fleet to electric by 2025 and seeking opportunities to expand energy efficiency, onsite generation and green tariffs across our sites. We have committed to develop and publish a Climate Transition Plan in 2021.

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, but we have not committed to seek validation of this target by the Science Based Targets initiative in the next 2 years

Please explain (including target coverage)

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. 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). This target covers 96% 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.

To help our customers be net zero, we'll encourage their take-up of new and existing low carbon services and solutions that transform the way they live, work and move. We'll provide energy efficiency and optimisation products like Hive smart thermostats and valves, offer fuel switching technologies such as electric vehicle charging solutions, heat pumps and hydrogen, as well as ensuring a low carbon energy supply with products that include green tariffs, demand side response and a cleaner fuel mix. It is our intention to neutralise all residual emissions through carbon removals although we are still in the process of developing our strategy in this area.

While we consider the target to be science-based, the delayed publication of the SBTi's oil & gas guidance that they believe will apply to Centrica has impacted our validation process, but we are exploring options to progress the commitment this year.

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	5	800,197
To be implemented*	8	685,027
Implementation commenced*	11	7,050
Implemented*	15	133,272
Not to be implemented	1	48

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)

Scope 3

Voluntary/Mandatory

Mandatory

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

5,000,000

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

125,000,000

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 measures employed and typically a much longer period for solid wall insulation.

In 2020, we invested £125m* and installed around 50,000 measures which we estimate will deliver total lifetime savings of around 0.5mtCO2e**, equating to an annual saving of around 15,000tCO2e.

*Costs include administration fees.

**The Heating Cost Reduction Obligation (HHCRO) is reported to Ofgem in lifetime heating bill savings which is not reflective of the actual bill saving for the customer on a number of measures. The resultant saving is based on modelled figure, removing policy incentive adjustments with carbon as an estimate.

Initiative category & Initiative type

Energy efficiency in buildings

Other, please specify

Smart home solutions

Estimated annual CO2e savings (metric tonnes CO2e)

92,935

Scope(s)

Scope 3

Voluntary/Mandatory

Voluntary

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

35,496,902

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

344,000,000

Payback period

1-3 years

Estimated lifetime of the initiative

Ongoing

Comment

Home solutions like smart meters* and Hive Active Heating, can generate carbon savings by giving customers greater understanding and control over their energy

In 2020, we installed around 716k smart meters in homes and businesses as part of the mandated smart meter roll-out. These installs are estimated to save ~ 63,525tCO2e by giving customers greater insight into their energy consumption and costs, enabling them to take action to reduce their energy use. By the end of 2020, we had installed nearly 8m smart meters since 2009, more than any other energy supplier in the UK

Customers using our Hive connected home solutions enjoy greater control over their energy with just a tap on the app – from smart thermostats, valves and plugs, to lights, cameras, and contact and motion sensors. The benefits of which can be demonstrated by customers never having to heat an empty home or room with our Hive Active Heating smart thermostats and Hive Radiator Valves, which are helping customers live sustainably, simply and affordably. Customers using Hive Active Heating are projected to collectively save around 29,410tCO2e and £120 each a year. During 2020, the number of active Hive customers increased by 13% to 1.4m

*While 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 Connected Home products

Initiative category & Initiative type

Low-carbon energy generation
Solar PV

Estimated annual CO2e savings (metric tonnes CO2e)

9,299

Scope(s)

Scope 3

Voluntary/Mandatory

Voluntary

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

1,361,339

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

35,800,000

Payback period

4-10 years

Estimated lifetime of the initiative

16-20 years

Comment

Solar products

As part of our Centrica Business Solutions offering, we completed solar installations that totalled 13MWp in 2020. We estimate that by providing solar to customers, we can help them save around 9,299tCO2e and £1.4m 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 which enables them to turn energy into an opportunity by making them more resilient, competitive and sustainable.

Initiative category & Initiative type

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

Estimated annual CO2e savings (metric tonnes CO2e)

9,086

Scope(s)

Scope 3

Voluntary/Mandatory

Voluntary

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

7,087,886

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

149,000,000

Payback period

4-10 years

Estimated lifetime of the initiative

11-15 years

Comment

Combined Heat and Power (CHP) generators

We installed over 90 CHP generators in 2020. CHPs can cut carbon emissions by up to 25% and we calculate that during 2020, our installations reduced customer emissions by around 9,086tCO2e. We estimate the CHPs will also save nearly £7.1m on energy bills for our commercial customers.

Initiative category & Initiative type

Transportation
Other, please specify
Company fleet efficiency, replacement and travel policy

Estimated annual CO2e savings (metric tonnes CO2e)

5,985

Scope(s)

Scope 1

Voluntary/Mandatory

Voluntary

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

2,900,178

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

4,500,000

Payback period

1-3 years

Estimated lifetime of the initiative

6-10 years

Comment

Fleet and company cars

We continued to implement our global low carbon fleet roadmap in 2020, resulting in a 17% reduction in emissions that saved 5,985tCO2e. This was primarily driven by a 17% reduction in UK commercial fleet emissions, with savings achieved by continuing to replace vehicles with more efficient models, improving our first-time fix rates when servicing customers and reducing the number of vehicles required to serve customers by 7%. Use of electric and hybrid vehicles has also helped lower emissions as we progress towards our ambition for a 100% zero carbon British Gas fleet by 2025, which is five years earlier than our previous goal. We have nearly 300 EV vans on the road and have already driven over 2m electric miles. During 2020-21, we took further steps towards our goal by ordering 3,000 new electric-powered vans with Vauxhall which is the largest commercial EV order of its kind in the UK and we'll order more as soon as they become available. Efforts like these have saved around £ 2.9m during 2020, based on the ratio of petrol and diesel used alongside the litres of fuel saved, and applied the average price per litre for the fuel type.

We also encourage colleagues to take up low emission company cars and have over 460 colleagues driving electric and hybrid options. This, together with the impact of reduced activity from COVID-19, has led to our company car emissions reducing by 72%.

Initiative category & Initiative type

Energy efficiency in buildings
Other, please specify

HVAC and uninterruptable power supply (UPS)

Estimated annual CO2e savings (metric tonnes CO2e)

109

Scope(s)

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

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

5,450

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

474,920

Payback period

11-15 years

Estimated lifetime of the initiative

16-20 years

Comment

Centrica property – Building Services projects

In pursuit of being a net zero company, we installed energy efficiency improvements during 2020 at our offices which included air conditioning and UPS upgrades at Leeds, Windsor and Stockport in the UK. These improvements have resulted in an annual reduction of more than100tCO2e and £5,450.

Initiative category & Initiative type

Company policy or behavioral change
Site consolidation/closure

Estimated annual CO2e savings (metric tonnes CO2e)

217

Scope(s)

Scope 1
Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

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

109,700

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

0

Payback period

<1 year

Estimated lifetime of the initiative

Ongoing

Comment

Property efficiencies

Part of managing our property portfolio effectively is ensuring that we have the right amount of space for our business needs to avoid using unnecessary resources to run them. We therefore conduct an ongoing property review process to carefully consider the changing requirements of our business as we transform into a simpler and leaner organisation while managing the increased desire from colleagues to have a more flexible approach to working which includes working from home more often. An outcome of this was that in 2020, we closed or consolidated four of our sites in the UK and Ireland which cumulatively saved around 117tCO2e and £109,700 a year.

Initiative category & Initiative type

Energy efficiency in buildings
Heating, Ventilation and Air Conditioning (HVAC)

Estimated annual CO2e savings (metric tonnes CO2e)

426

Scope(s)

Scope 1

Voluntary/Mandatory

Voluntary

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

5,000

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

100,000

Payback period

1-3 years

Estimated lifetime of the initiative

Ongoing

Comment

Energy efficient heating

At our Easington gas terminal, we recognised that the condensate flash heater was not the most efficient system of heating. So in 2020, we received approval for a permit variation to replace it with a more efficient modular array of modern boilers. This change will not only reduce our emissions by 426tCO2e but also save £5,000 annually.

Initiative category & Initiative type

Energy efficiency in buildings

Other, please specify

Cooling technology and Compressed air

Estimated annual CO2e savings (metric tonnes CO2e)

215

Scope(s)

Scope 1

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

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

127,046

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

16,000

Payback period

<1 year

Estimated lifetime of the initiative

3-5 years

Comment

Peterborough Power Station energy efficiency upgrades

In 2020, Peterborough Power Station which consists of a 245MW open cycle gas turbine and 49MW reciprocating gas engine, received upgrades to significantly improve its cost efficiency, as well as its carbon footprint. Work delivered consisted of upgrading air compressors alongside optimisation of water cooling pumps which will save nearly £130,000 and more than 200tCO2e a year. In June 2021, we announced the sale of the site which is expected to complete before September 2021 and forms part of our strategy to become a simpler, leaner company focused on delivering for our customers as well as our target to be net zero by 2045.

C4.3c

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

Method	Comment
Other Corporate Strategy	Corporate strategy At the heart of Centrica is our purpose to help our customers live sustainably, simply and affordably. Our business strategy is focused on doing just that – from providing energy services and solutions to energy supply, trading and optimisation. All of which is delivered to homes, businesses and other large-scale energy users through strong customer-facing brands such as British Gas, Hive, Bord Gais Energy and Centrica Business Solutions. Our commitment to achieve our purpose and give our customers what they want and need, is backed by an investment of more than £1bn to grow our customer-focused businesses during 2015-22.
Dedicated budget for low-carbon product R&D	Dedicated budgets for technology and innovation R&D We have budgets to support low carbon development because we know that to get to net zero, we need a mix of new and existing technologies. Some R&D budgets directly support the innovation of low carbon services and solutions for our customers. In 2015, we commenced the investment of over £1bn to create and develop new customer-facing businesses which included R&D budget to expand Hive's family of products which has grown since its creation in 2013 to include smart thermostats, radiator valves, plugs lights and cameras, as well as window, door and motion sensors. We also set up a £100m Centrica Innovations fund in 2017 to identify new technologies for a more sustainable world and in 2020, incorporated it into our core business functions to better shape the low carbon technologies of the future in a way that integrates the needs of our customers. The fund has invested in several innovative products that have developed into viable offerings such as a smart hot water system and electric vehicle software solution. We also use R&D budgets to trial and roll-out new or untested solutions that could enable the energy transition. One way we do this is through our not-for-profit social impact entity, Energy for Tomorrow (EfT), which uses funds from feed-in-tariffs installed on nearly 300 schools to back sustainable ideas. This includes investment in the £17m Cornwall local energy market trial which concluded in 2020 and

	now provides a blueprint for a smarter, more flexible energy system that can enable more renewables to come online. The trial was the largest of its kind in the UK, and saw over 200 homes and business generating, storing and trading 310MWh of renewable electricity which saved nearly 10,000tCO2e. We've recently launched a £1m trial to test the role Hybrid Heat Pumps could play in decarbonising heat in over 70 homes and have dedicated funding to realise the potential of hydrogen and carbon capture and storage (CCS) by partnering to develop the world's first industrial cluster using these technologies in the Humber. Furthermore, R&D budgets exist to support communities at a local level transition to net zero in an affordable way. We do this via our EfT campaign which launched in 2020 and awards grants of up to £100,000 to back sustainable initiatives from communities and start-ups.
Compliance with regulatory requirements/standards	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 have 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 energy efficiency within our own operations. Within these areas we have dedicated budget to support delivery. For example, our Energy Portfolio team is responsible for fulfilling energy efficiency improvements under ECO as well as upgrading our customers to smart meters and our budget enables us to deliver these obligations 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.
Dedicated budget for energy efficiency	Internal carbon emission reduction targets Setting and publishing carbon reduction targets that have executive and Board support, has stimulated our investment and focus on delivering low carbon technologies that reduce our internal carbon footprint 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 have specifically invested in placing an order for 3,000 electric vehicles (EVs) with Vauxhall which is the largest commercial EV order of its kind in the UK and we'll order more vehicles as soon as they become

	available.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.

Level of aggregation

Group of products

Description of product/Group of products

Energy efficiency measures

As part of our mandated delivery of the Energy Company Obligation (ECO), we delivered a variety of energy efficiency measures to reduce energy costs and lower emissions (scope 3). Core measures delivered include wall insulation, loft/room/roof insulation, underfloor insulation and energy efficient boilers.

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify

Conversion from Lifetime bill savings deemed scores (based on Reduced data Standard Assessment Procedure (RdSAP) methodology) as set in ECO, with in-use factor overlay and reductions to account for ECO uplift incentives

% revenue from low carbon product(s) in the reporting year

0

Comment

The ECO scheme commenced in April 2013 and has been extended in recent years, with the current scheme period running from December 2018 to March 2022. Under the new scheme, heating measures are now restricted but still make up a significant proportion of the scheme while the measures in scope are more expensive and has led to fewer installs overall. We closed our delivery business in favour of using a third party model to fulfil our ongoing obligation and in 2020, around 50,000 measures were

installed which we estimate will deliver annual savings of around 15,000tCO2e.

While ECO enables valuable cost and carbon savings for the community, we do not currently generate revenue from the activity.

Level of aggregation

Group of products

Description of product/Group of products

Connected and smart products

British Gas provides 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, plugs and cameras, to smart window, door and motion sensors, our Hive ecosystem of services and solutions can be controlled conveniently with just a few taps on the app, meaning customers never have to heat an empty home or light an empty room.

Smart meters also 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. This empowers customers to take control of their energy and identify ways to reduce consumption (customers' scope 1 and 2).

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify

Refer to comment box

% revenue from low carbon product(s) in the reporting year

0.59

Comment

Around 1.4 million active customers are experiencing the benefits of our Hive solutions. For example, customers with our Hive Active Heating smart thermostat can control their heating and hot water from anywhere at any time via the app which means they never have to heat an empty home and as a result, can save up to £120 a year as well as 20% of their carbon emissions. We calculate that this is equivalent to collectively saving 29,410tCO2e per annum. We see customers wanting increased control over their

energy which is reflected in Hive increasing its customers by 13% last year.

Our leadership of the UK's smart meter roll-out was maintained in 2020, with cumulative installs totalling nearly 8m across homes and businesses, improving energy management and bill accuracy. Over 716,000 smart meters were installed in 2020 and we estimate the devices will save around 63,525tCO2e annually. Our analysis of smart meter consumption is based on a sample of British Gas customers with smart meters and compares consumption before and after installation with comparable British Gas customers who have standard meters. In a sample of our residential customers with smart meters, we found credit customers had reduced their dual fuel consumption by around 3.7%, saving £34 on average per annum across gas and electricity.

Methodology - Avoided emissions for Connected Home products are calculated based on the volume of energy saved and its associated emissions, using recognised global standards. Smart meters savings are based on British Gas methodology approved by the Department for Business, Energy and Industrial Strategy (BEIS).

Level of aggregation

Group of products

Description of product/Group of products

Zero carbon electricity and green tariffs

We want to offer customers different types of tariffs and agreements that meet their different needs, as well as provide peace of mind that they're making a positive contribution towards tackling climate change. That's why we've taken the decision that all of the electricity we sell in the UK will be 100% zero carbon (customers' scope 2) and have done so for the last two years during 2019-20. We've also introduced a range of green tariffs and bespoke energy deals for residential and business customers (customers' scope 2). In 2018 for example, British Gas became the largest supplier to gain independent certification for its 100% renewable electricity tariff from the Carbon Trust, allowing customers to confidently report zero carbon emissions per kWh of electricity used. And in 2020, British Gas introduced its new fully-certified Green Future renewable energy residential tariff which was developed with sustainability experts, Climate Care. The tariff is one of the greenest tariffs on the market offering customers green gas as well as renewable electricity and in 2021, it was one of only two tariffs to be classified as gold standard by Uswitch in its independently verified accreditation scheme for renewable tariffs. Through the tariff, customers can also support carbon cutting projects at home and abroad including helping UK woodlands and supporting projects that reduce carbon emissions in the Amazon. And to make electric vehicles (EVs) even greener, we've introduced a green tariff especially for EVs that encourages customers to charge at night for less when the grid isn't under pressure, and we'll then match 100% of the electricity used by buying the same amount from renewable sources

through Guarantees of Origin.

Are these low-carbon product(s) or do they enable avoided emissions?

Low-carbon product

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify

Refer to comment box

% revenue from low carbon product(s) in the reporting year

21.47

Comment

As a leading supplier of energy and services, we have a huge opportunity to provide our customers with cleaner, greener energy tariffs. And in 2020, all of our UK customers received zero carbon electricity as standard which saved a significant 6.3mtCO2e. On top of this, customers on our green tariffs for gas saved an additional 1,600tCO2e. In total we had around 1.8m customers on our dedicated green tariffs for electricity and gas in 2020 which marked a more than three-fold increase from the previous year and reflects growing customer interest in sustainable energy. However, given consumer misconceptions surrounding green energy, we want to continue to help customers better understand energy so that they can make more sustainable choices in the future.

On top of providing green tariffs, Centrica also signed a number of green deals with business customers including one of the UK's largest combined green energy contracts with the Catholic Church to supply over 4,500 Catholic schools and churches.

Methodology - Green tariffs provide customers with electricity that is backed by Renewable Energy Guarantees of Origin (REGO), Guarantees of Origin (GoO), or Renewable Energy Certificates (REC) that guarantee that an equivalent amount of electricity originated from a renewable source. The carbon savings associated with the renewable electricity are calculated based on the emissions associated with the equivalent electricity consumption if it was grid average power. The green gas tariff is a combination of Renewable Gas Guarantee of Origin (RGGO) backed biogas and offsets through Certified Emission Reduction (CER) or Voluntary Emission Reduction (VER) projects. Biogas is zero emissions. The emissions associated with the non-renewable gas are offset through CERs or VERs that support natural carbon sinks in the form of forests and woodlands.

Level of aggregation

Product

Description of product/Group of products

Solar

We help customers reduce reliance on fossil fuels by investing in alternative renewable energy sources, such as solar energy (customers' scope 1 and 2).

In the UK and North America, we offered solar panels to commercial, industrial and public sector customers via Centrica Business Solutions, helping large-scale energy users generate and manage their energy more intelligently.

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify

refer to comment box

% revenue from low carbon product(s) in the reporting year

0.12

Comment

Installing solar is one of the ways we're creating a cleaner energy system that enhances grid flexibility, supports renewables and reduces reliance on fossil fuels. In 2020, we delivered solar to customers that totalled 13MWp, with the majority taking place in North America. We estimate that this will save around 9,299tCO2e annually. These savings include partnerships with large scale energy users to realise their carbon and cost savings such as the one we have with the British Army's Defence School of Transportation (DST). Here we'll complete a 2.3MW solar farm that's expected to supply around a third of the DST's electricity needs while saving 2,000tCO2e and £1m annually, which can be reinvested back into helping them achieve their net zero ambition by 2045.

Methodology - UK: Internal calculation method using average irradiance of 920kWh/kWp and using BRE Standard Assessment Procedure (SAP 2012) CO2 emissions factor for grid electricity of 0.23314 kg/kWh. North America: Carbon savings calculated using average annual productivity 1,577kWh/kWp and Environment Protection Agency (EPA) emission factors. Italy: Carbon savings calculated using average annual productivity 1,489kWh/kWp and International Energy Agency (IEA) emission factors.

Level of aggregation

Product

Description of product/Group of products

Panoramic Power

Our global Panoramic Power offering brings together wireless sensor technology and cloud-based analytics, to give businesses actionable insights into energy use. This intelligence helps optimise performance, deal with potential equipment failures before they happen and reduce energy inefficiencies which reduces costs and carbon emissions.

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify

Avoided emissions are calculated on the volume of energy saved and its associated emissions, using recognised global standards.

% revenue from low carbon product(s) in the reporting year

0.02

Comment

Around 20,000 Panoramic Power sensors were deployed in 2020. This brings our total to nearly 90,000 sensors, monitoring approximately 9,600 sites across 65 countries worldwide. Together, the sensors collect around 50m data points per day that can empower insight to deliver efficiencies. And on average, we see Panoramic Power customers save around 10-20% on energy bills by reducing usage which can also lower emissions (customers' scope 1 and 2) as well as energy costs.

Level of aggregation

Product

Description of product/Group of products

Combined Heat and Power (CHP) generators

CHP enables 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. This process can be

significantly more efficient than most grids, and therefore comes with an associated carbon saving. CHP's also remove transition and distribution loses and can enable flexible grid services, supporting the transition to a low carbon energy mix.

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify

Avoided emissions are calculated by the difference between the direct emissions from the CHP units and the emissions associated with the use of electricity and gas required to produce an equivalent amount of energy using the replaced technologies.

% revenue from low carbon product(s) in the reporting year

0.16

Comment

In 2020, we installed over 90 CHP units worldwide. The majority of these were in the UK, with additional activity in Ireland, Belgium, Netherlands, Italy, Hungary and North America. This brings our cumulative total to over 3,000 units delivered with around 700MW in operation. The generators are capable of cutting carbon emissions by up to 25% when compared to grid and boiler heat generation which can make a meaningful difference to customers realising their climate goals. For example, we calculate that the CHPs we installed in 2020 delivered in-year savings of around 9,086tCO2e. To bring these benefits to life, we're undertaking a programme of energy efficiency with Northern Lincolnshire and Goole NHS Foundation Trust and at the heart of it, is the £2.7m project at Goole Hospital to cut emissions by nearly 60% with the installation of a super-efficient CHP unit that will replace its existing one as well as the coal-fired boiler plant. The project will not only deliver annual savings exceeding £250,000, but it'll create a warmer environment for patient and cleaner air for residents.

Level of aggregation

Group of products

Description of product/Group of products

Energy Performance Contracts (EPC) / Optimisation Services

We provide bespoke advice, product installations and operational assistance that enhances the energy efficiency and control of large scale energy users, which reduces costs and carbon emissions (customers' scope 1 and 2). Improvements typically involve replacing industrial sized boilers with more efficient versions and upgrading to LED

lighting.

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify

Refer to comment box

% revenue from low carbon product(s) in the reporting year

0.07

Comment

We guarantee customers with a certain level of financial and/or carbon savings over the length of the contracts which generally span up to 15 years. In the UK during 2020, our EPCs created annual savings of 2,528tCO2e.

Methodology - Energy saving calculations vary depending on the technology and are calculated in kWh in the first instance. Financial savings are calculated using rates agreed in each contract and may include a price escalator/degradation. Carbon savings are calculated using agreed carbon rates, usually employing values published by Defra at the time of writing the Investment Grade Audit.

Level of aggregation

Product

Description of product/Group of products

Demand side response

We control a large amount of flexible power via demand side response contracts. Under these contracts, we manage the energy use of energy intensive customers by curtailing unnecessary usage at peak times and/or exporting electricity to the grid when its needed. This acts as a low-to-zero carbon frequency response mechanism and avoids having to start up or ramp up a marginal unit generator (typically gas fired turbine), which would be far more carbon intensive.

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify

Refer to comment box

% revenue from low carbon product(s) in the reporting year

0.12

Comment

The 1,910MW of flexible power under management is spread across customers located mainly in the UK, France, Germany and Belgium. The flexible power we had under management has nearly doubled over the last year and demonstrates our growing focus in enabling grid flexibility. We are undertaking work to quantify the carbon savings associated with flexible capacity under management.

Methodology - GHG Project protocol. Involves comparing the intensity of the DSR flexible response offered by calculating the build and operating margins against equivalent services. This provides the carbon benefit to the wider 'system/grid' and not for each individual customer.

Level of aggregation

Product

Description of product/Group of products

Electric Vehicle (EV) charging points

To build the infrastructure needed to support the mass adoption of lower carbon transport, we have chosen to become a lead installer and service solution provider for EV charge points in the UK (customers' scope 1).

Installations are concentrated in locations where vehicles can maximise use of the charge points, such as at destinations, car parks, travel hubs, commercial properties, motorway service stations and car manufacturers alongside installs at people's homes.

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify

Avoided emissions are calculated by comparing the carbon associated with the electricity used to charge a vehicle for a given distance, with the emissions associated with a similar class of petrol or diesel vehicle for the same distance.

% revenue from low carbon product(s) in the reporting year

0.01

Comment

We've installed nearly 17,700 EV charge points across the UK since 2013 and have committed to install 23,000 EV charge points during 2021. To support EV take-up, Centrica Business Solutions and British Gas have also introduced tariffs for EVs that give customers a cheaper and greener way to charge their vehicle during off peak hours and by 2022, the tariff is projected to save 21,668tCO2e. We have also created partnerships with leading manufacturers such as Volkswagen, Ford and Lotus, to deliver charge points and EV tariffs at scale.

With the UK's zero carbon transport strategy focused on a ban on the sale of petrol and diesel vehicles by 2030, EV-enablement is a growing focus for the UK and our business. To further maximise the adoption of EVs, we run pilots of new services and solutions that can support EVs becoming more mainstream such as charging in areas where there's no private parking for residents and vehicle-to-grid charging.

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 2020, Centrica had three power stations all of which had bespoke management systems in place with procedures for operation and maintenance, and incorporated hydrocarbon leak prevention, detection and mitigation. All power stations operate under an ISO 14001:2015 certified management system and have an accurate understanding of their aspects, impacts and the necessary requirements to monitor and prevent methane emissions. In addition to this, any locations where a leak is considered higher risk, 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. Leaks can typically occur in the gas Above Ground Installation and gas turbines but in 2020, no leaks were detected at our power stations. And during maintenance activities, the methane emissions from the gas engines were re-tested on the Distributed Gas Engines to ensure that they met the permitted requirements.

Exploration & Production and Storage: We have hydrocarbon reduction measures at all installations which we manage through a process safety framework. These measures include monitoring the integrity of subsea wells as well as active inspection and management of process equipment at offshore installations as well as onshore terminals. We focus efforts on improving Asset Integrity and incorporating management of small bore tubing, flexible hoses and bolted joints which are higher risk areas for leaks. Measuring methane release volumes is particularly difficult for fugitive emissions given their size and consequently, it is difficult to quantify improvements although we believe we are making continued progress in controlling emissions due the robust processes we have in operation. Although there are no regulations in place on this issue, our non-operated joint venture Spirit Energy participated in an industry-wide initiative in the Netherlands during 2019 to identify practical and economic ways of reducing methane emissions from the Dutch oil and gas producers and off the back of that, our Dutch assets have reviewed quantification methodologies of methane released, identified potential methane sources and used information and learning from the initiative to develop a best-in-class methane reduction plan co-ordinated by an internal working group with a focus on monitoring and measurement which was successfully completed in 2020. We already have methane action plans in place given these are a permit requirement in the Netherlands.

At our Centrica Storage Easington site, optical leak surveys using infra-red cameras, have been conducted. This enables us to visualise and pinpoint potential sources of fugitive emissions and guard against leaks. During 2019, a gas management improvement plan was submitted to the Environment Agency as an Improvement Condition of the current permit and as part of the Humber Gathering System Project permit variation. The plan identifies and implements opportunities to further reduce the amount of gas flared and vented, as well as further recovery of primary gas product which we implemented in 2020. During 2020, we also conducted regulatory required fugitive emissions monitoring. This used an infra-red camera to inspect all active plant to identify any fugitive emissions. Leaks identified were added to the Leak Management Plan to allow for the management of the leaks, including immediate rectification. From these studies, it was calculated that during 2020, 3 tonnes of fugitive emissions were released from the Easington site. It had previously been estimated using a method of a number of flanges, pumps, joints amongst others, that 1010 tonnes of natural gas was emitted as fugitive emissions per annum.

C5. Emissions methodology

C5.1

(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).

Scope 1

Base year start

January 1, 2015

Base year end

December 31, 2015

Base year emissions (metric tons CO2e)

1,955,400.017

Comment

This has not changed from last year's CDP submission

Scope 2 (location-based)

Base year start

January 1, 2015

Base year end

December 31, 2015

Base year emissions (metric tons CO2e)

56,108

Comment

This has not changed from last year's CDP submission

Scope 2 (market-based)

Base year start

January 1, 2015

Base year end

December 31, 2015

Base year emissions (metric tons CO2e)

56,108

Comment

Market Based Scope 2 not calculated so Location based used as a proxy

C5.2

(C5.2) 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
ISO 14064-1
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

1,886,420.163

Comment

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

Our current default reporting is location-based; however, we also calculate the market-based figure. In 2021 reporting we will move to Market-Based as our dominant methodology

C6.3

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

Reporting year

Scope 2, location-based

40,298.56

Scope 2, market-based (if applicable)

16,464

Comment

We have been improving our Market Based reporting, including building green tariffs into the calculation; and confirming the sites that have supplier specific power. This action has improved the accuracy of the Market Based reporting. Most sites in the UK

are on a Green tariff, Ireland sites are supplier specific; while N American sites use EGRID

C6.4

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

Yes

C6.4a

(C6.4a) Provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure.

Source

Fugitive and venting emissions from our non-operated offshore platforms (we do collect them for our operated offshore platforms). These emissions will include small quantities of natural gas that mainly consists of methane.

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

No emissions from this source

Relevance of market-based Scope 2 emissions from this source (if applicable)

No emissions from this source

Explain why this source is excluded

We do not collect fugitive and venting emissions from our offshore assets (gas platforms) where we have an equity share, but are not the operator.
This approach reflects the difficulty in obtaining this data and the immateriality of the data. We have previously estimated that excluded emissions are 0.1% of Centrica's scope 1 emissions and hence considered 'Not Relevant'

Source

We do not capture the office and fleet emissions from our joint venture partners, UK Nuclear and Spirit Energy.

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

Emissions are not relevant

Relevance of market-based Scope 2 emissions from this source (if applicable)

Emissions are not relevant

Explain why this source is excluded

The emissions associated with the office and fleet vehicles of these non-operated joint ventures, are immaterial (and therefore not relevant) relative to their generation and production emissions. The challenge in obtaining the data is outweighted by the materiality of the data. By excluding the requirement for the JVs to report these emissions, we have reduced the reporting burden, whilst not changing the emissions materially. Based on 2019 total emissions the exclusion equates to an estimated 0.07% of Centrica's footprint

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

Metric tonnes CO2e

2,378,272.282

Emissions calculation methodology

The Purchased Goods and Services emissions have been calculated to be approx. 1.72% of our scope 3 emissions, using the online Quantis Scope 3 Evaluator tool. The tool calculates the emissions associated with scope 3 categories using spend data and category types, these equate to 2,378,272 tCO2e.

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

0

Please explain

We do not currently collect emissions data from suppliers.

Capital goods

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

109,986.52

Emissions calculation methodology

The Capital Goods emissions have been calculated to be approx. 0.08% of our scope 3 emissions, using the online Quantis Scope 3 Evaluator tool. The tool calculates the emissions associated with scope 3 categories using spend data and category types,

these equate to 109,986.52tCO2e. 0.08% is not considered material and therefore not relevant for this reporting year

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

0

Please explain

We do not currently obtain emission data from Capital Good suppliers but estimate it based on spend

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

Evaluation status

Relevant, calculated

Metric tonnes CO2e

47,121,620

Emissions calculation methodology

This relates to power purchased for resale to customers {Location based methodology] (43,640,080), but excludes traded power. It also includes the T&D losses associated with the power purchased (2,205,973); as well as incorporating the upstream emissions associated with the energy we consume (1,275,566), using the Quantis Suite tool. In total these equate to 34.13% of our Scope 3 emissions

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

0

Please explain

We do not obtain data obtained from our suppliers or value chain

Upstream transportation and distribution

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

4,436

Emissions calculation methodology

These emissions are from our offshore support providers, including supply and safety ships. The emissions are calculated by multiplying the fuel use activity data by DEFRA emission factors. They equate to 0.003% of our Scope 3

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

100

Please explain

These emissions equate to 0.003% of our scope 3 emissions and therefore are not relevant in terms of magnitude. Our influence over the emissions is limited and they are not deemed an area that exposes us to risk. The provider of the service provides the fuel data

Waste generated in operations

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

23,961

Emissions calculation methodology

Emissions from waste have been calculated from our spend on waste services using the online Quantis Scope 3 Evaluator too. This equates to 23,961 tonne (0.02%)

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

0

Please explain

Carbon emissions associated with waste in our operations are not considered relevant from a materiality perspective (equating to 0.02%), relative to other scope 3 emissions. However, they have been calculated using the Quantis Scope 3 Evaluator tool based on spend.

Business travel

Evaluation status

Relevant, calculated

Metric tonnes CO2e

1,282

Emissions calculation methodology

Business travel emissions include those arising from business flight and rail use, employees using their own vehicles for business purposes and helicopter flights for personnel to offshore assets. The flights (756.64 tCO2e), rail (26.23tCO2e) and employees business travel using their own vehicles (384.3tCO2e) are calculated based on travel expense data, multiplied by DEFRA emission factors. Helicopter flights (115tCO2e) are based on fuel consumption multiplied by DEFRA emission factors.

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

9

Please explain

While this is only a small component of our scope 3 emissions (0.001%), it is an area that we can influence and is relevant to our internal stakeholders.

Employee commuting

Evaluation status

Relevant, calculated

Metric tonnes CO2e

9,543

Emissions calculation methodology

As a result of changes to work patterns because of Covid, we have worked to understand the relationship between commuting emissions and working from home emissions. As such, both are included here. WFH emissions (5,664) are based on the average homeworking energy requirements multiplied by the number of employees calculated to be working from home. The commuting emissions are based on the number of people attending the offices multiplied by the country average commuting distance and mode of transport.

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

0

Please explain

There is increasing interest from stakeholders of the impact of new ways of working, hence while the emissions are immaterial at 0.01%, they are now considered relevant

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

Our reporting approach includes upstream leased assets in our scope 1 and 2 emissions. Therefore, this field is not relevant.

Downstream transportation and distribution

Evaluation status

Not relevant, explanation provided

Please explain

The majority of our emissions associated with the transportation and distribution of our products are included within the following source of scope 3 emissions: Fuel-and-energy-related activities (not included in scope 1 or 2). This is because these emissions relate to T&D losses from power and gas distribution.

We have immaterial other downstream transportation and distribution emissions

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

Metric tonnes CO2e

88,419,647

Emissions calculation methodology

Emissions are calculated based on the quantity of gas sold to residential and business customers (energy units), multiplied by the emission factor for natural gas. This totals 67,478,647 tC02e.

Crude oil production emission calculations are based on the CDP scope 3 Oil and Gas Guidance generic conversion and emission factors. This results in 20,941,000 tC02e. In total this equates to 88,419,647 tCO2e of emissions.

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

0

Please explain

This is a relevant component of our scope 3 emissions in respect to its size (64.04% 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

Not relevant, explanation provided

Please explain

Centrica is not a financial organisation.

Other (upstream)

Evaluation status

Not evaluated

Please explain

N/A

Other (downstream)

Evaluation status

Not evaluated

Please explain

N/A

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.

	CO2 emissions from biogenic carbon (metric tons CO2)	Comment
Row 1	12,564	This includes the emissions associated with the biofuel component of forecourt fuel, biomass and biofuel in our offices, as well as landfill gas use in plant

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
0.0000925

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
1,926,719

Metric denominator
unit total revenue

Metric denominator: Unit total
20,820,000,000

Scope 2 figure used
Location-based

% change from previous year
17

Direction of change
Decreased

Reason for change
The 17% decrease in the carbon intensity of revenue is because there has been a greater reduction in our emissions (-23%) compared to the reduction in revenue (-8%). 2020 emissions were lower due to Covid and due to outages at some of our higher emitting sites

Intensity figure
0.0751

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
846,501

Metric denominator
megawatt hour transmitted (MWh)

Metric denominator: Unit total
11,270,435

Scope 2 figure used

Location-based

% change from previous year

12

Direction of change

Decreased

Reason for change

Our Nuclear assets and our Whitegate gas fuelled power station are our main generating assets. Generation was down on both of these assets in 2020 (11% and 17% respectively). With the high emitting asset (Whitegate) having the greatest generating reduction, the result is a decrease in the overall 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
CO2	1,836,707	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	47,203	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	2,488	IPCC Fourth Assessment Report (AR4 - 100 year)
HFCs	0	IPCC Fourth Assessment Report (AR4 - 100 year)
PFCs	0	IPCC Fourth Assessment Report (AR4 - 100 year)
SF6	22	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	7.9	0	198.3	These emissions relate to fugitive emissions from the gas turbines (unburnt hydrocarbons in turbine exhaust)
Combustion (Electric utilities)	840,917	45.9	0	842,063	The methane and carbon dioxide from the combustion of gas and diesel at our power stations
Combustion (Gas utilities)	0	0	0	0	
Combustion (Other)	0	0	0	0	
Emissions not elsewhere classified	0	0	0	1,366.1	The other emissions cannot be categorised as CH4, SF6 or C02 as relate to N2O.

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO2e)
United Kingdom of Great Britain and Northern Ireland	795,270
North America	11,050
Ireland	768,525
Norway	246,741
Other, please specify Rest of World (other European countries)	64,834

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	27,243
Bord Gais Energy	768,512
Centrica Business Solutions	201,343
CSL	96,158
Direct Energy	10,514
Energy Marketing & Trading	208
Functions	343
Nuclear	8,756
Spirit Energy	773,343
UK Business	
NA Business	
Nuclear	

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	843,627	

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted for in Scope 2 market-based approach (MWh)

United Kingdom of Great Britain and Northern Ireland	35,279	11,469	151,312	
North America	3,280	3,090	8,030	
Ireland	1,503	1,402	4,536	
Other, please specify Rest of World	237	504	1,202	

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By business division

C7.6a

(C7.6a) Break down your total gross global Scope 2 emissions by business division.

Business division	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Bord Gais Energy	1,502	1,400.62
British Gas	2,530	392.53
Centrica Business Solutions	4,174	1,873.61
CSL	1,576	0
Direct Energy	2,853	2,662.58
Energy Marketing & Trading	575	792.36
Functions	291	9.64
Nuclear	20,190	6,062
Spirit Energy	6,607	3,271

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?

Decreased

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	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	1,131	Decreased	0.045	A decrease in self generated renewable power has increased our emissions by 1,555 tonnes, however an increase in purchased green tariff power has reduced our emissions by 2,686 tonnes, equating to an overall 1,131 tonne decrease in emissions (0.045%)
Other emissions reduction activities	6,791	Decreased	0.272	We have made carbon savings through air compressor and cooling water pump optimisation at Peterborough Power station (215 tonne); savings in the emissions from our car and commercial fleet through electrification, reduced mileage and increased vehicle efficiency (5,985 tonne); property lighting upgrades (125 tonne); office consolidation (40 tonne); and CSL increased boiler efficiencies (426 tonne). Overall this equates to a 6,791 tonne (0.272%) decrease in emissions
Divestment	136,712	Decreased	5.477	In Q1 2020 we sold King's Lynn Power station resulting in 136,712 (5.477%) tonnes emission reduction compared to 2019
Acquisitions	0	No change	0	No material acquisitions occurred in 2020
Mergers	0	No change	0	No mergers occurred in 2020
Change in output	444,282	Decreased	17.798	2020 had outages/ reduced production at a number of our higher emitting businesses, these include Whitegate power station, CSL, CBS CHPs; and Spirit Energy. These resulted in a 462,590 tonne (24%) reduction in emissions. Additionally, our nuclear assets had increased power consumption as a result of outages, increasing emissions by 12,8228; and Brigg generating site had increased generation resulting in an extra 5480 tonnes. In total this equates to a

				444,282 tonne (17.798%) decrease in emissions from changes in output
Change in methodology	0	No change	0	No changes in our reporting methodology
Change in boundary	0	No change	0	No changes in our reporting boundaries
Change in physical operating conditions	0	No change	0	No change in physical operating conditions
Unidentified	9,577	Increased	0.384	Unidentified emission increase of 9,577 tonnes (0.384%)
Other	13,972	Decreased	0.56	As a result of Covid, there has been reductions in property emissions with staff working from home; reductions in company car emissions with people not travelling; and reductions in commercial fleet emissions with engineers being furloughed

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	No
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)	55,097.45	8,129,373.41	8,184,471
Consumption of purchased or acquired electricity		29,018	136,062	165,080
Consumption of self-generated non-fuel renewable energy		2,076.1		2,076.1
Total energy consumption		86,191	8,265,435	8,351,626

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	Yes

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Fuels (excluding feedstocks)

Natural Gas

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

7,826,956.4

MWh fuel consumed for self-generation of electricity

4,325,900

MWh fuel consumed for self-generation of heat

2,575,710

MWh fuel consumed for self-generation of cooling

2,707

MWh fuel consumed for self-cogeneration or self-trigeneration

1,012,639

Emission factor

0.18387

Unit

kg CO2e per KWh

Emissions factor source

UK Government GHG Conversion Factors for Company Reporting 2020

Comment

The gas used in CHP's are for co-generation. The CSL and SE gas consumped is categorised as heat because it is mainly used in compressors as opposed to for elec generation

We use site specific EFs for our upstream plant gas consumption based on analysis of calorific value.

However the downstream gas consumption EF is based on the HHV

Fuels (excluding feedstocks)

Landfill Gas

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

54,756

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

MWh fuel consumed for self-cogeneration or self-trigeneration

54,756

Emission factor

0.0002

Unit

kg CO2 per KWh

Emissions factor source

UK Government GHG Conversion Factors for Company Reporting 2020

Comment

Landfill gas used to power CHPs on client sites

Fuels (excluding feedstocks)

Burning Oil

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

19,516

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

19,516

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

2.54039

Unit

kg CO2e per liter

Emissions factor source

UK Government GHG Conversion Factors for Company Reporting 2020

Comment

Used as fuel for the support and supply ships for CSL platform

Fuels (excluding feedstocks)

Wood Pellets

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

296

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

296

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

72.29731

Unit

kg CO2e per metric ton

Emissions factor source

UK Government GHG Conversion Factors for Company Reporting 202

Comment

We have biomass boilers at some of our offices used for heating

Fuels (excluding feedstocks)
Petrol

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
40,108

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
40,108

MWh fuel consumed for self-generation of cooling
0

MWh fuel consumed for self-cogeneration or self-trigeneration
0

Emission factor
2.16802

Unit
kg CO2e per liter

Emissions factor source
UK Government GHG Conversion Factors for Company Reporting 2020

Comment
Fleet vehicle fuel, excluding bio-ethanol

Fuels (excluding feedstocks)
Biodiesel

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
12,025

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
12,025

MWh fuel consumed for self-generation of cooling
0

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

0.1658

Unit

kg CO2e per liter

Emissions factor source

UK Government GHG Conversion Factors for Company Reporting 2020

Comment

Includes biodiesel component of forecourt diesel

Fuels (excluding feedstocks)

Diesel

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

227,611

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

227,611

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

2.68787

Unit

kg CO2e per liter

Emissions factor source

UK Government GHG Conversion Factors for Company Reporting 2020

Comment

Excludes biodiesel component of forecourt fuel

Fuels (excluding feedstocks)

Gas Oil

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

1,091

MWh fuel consumed for self-generation of electricity

451

MWh fuel consumed for self-generation of heat

640

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

2.75776

Unit

kg CO2e per liter

Emissions factor source

Used as back up fuel at some sites

Comment

Fuels (excluding feedstocks)

Bioethanol

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

2,111

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

2,111

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

0.00837

Unit

kg CO2e per liter

Emissions factor source

UK Government GHG Conversion Factors for Company Reporting 2020

Comment

bio-ethanol component of forecourt petrol consumption

C8.2d

(C8.2d) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity				
Heat				
Steam				
Cooling				

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 CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

We do not generate power from coal

Lignite

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 do not generate power from lignite

Oil

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 do not generate power from oil

Gas

Nameplate capacity (MW)

1,262

Gross electricity generation (GWh)

2,222

Net electricity generation (GWh)

2,170

Absolute scope 1 emissions (metric tons CO2e)

843,593

Scope 1 emissions intensity (metric tons CO2e per GWh)

389

Comment

The carbon intensity of our power generation has stayed flat at 389

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

we do not generate power from biomass

Waste (non-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

we do not generate power from waste

Nuclear

Nameplate capacity (MW)

1,784

Gross electricity generation (GWh)

9,100

Net electricity generation (GWh)

9,100

Absolute scope 1 emissions (metric tons CO2e)

8,756

Scope 1 emissions intensity (metric tons CO2e per GWh)

0.96

Comment

As a non-operated asset we do not receive gross generation data so have used net for gross as well. Figures are provided on the basis of our 20% equity stake.

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 CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

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

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

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

Solar

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

Marine

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

Other renewable

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

Other non-renewable

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

Total

Nameplate capacity (MW)

3,046

Gross electricity generation (GWh)

11,322

Net electricity generation (GWh)

11,270

Absolute scope 1 emissions (metric tons CO2e)

852,349

Scope 1 emissions intensity (metric tons CO2e per GWh)

76

Comment

In 2020 our largest gas power station had outages as did our nuclear plants, reducing overall generation. The CI of our power generation has decreased from 86 to 76. (All values based on equity)

C8.2e

(C8.2e) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero emission factor in the market-based Scope 2 figure reported in C6.3.

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 total planned CAPEX in your current CAPEX plan for power generation.

Primary power generation source	CAPEX planned for power generation from this source	Percentage of total CAPEX planned for power generation	End year of CAPEX plan	Comment
Gas	30,000,000	100	2021	There are currently no plans for Centrica to invest in order to grow merchant power generation. Within our Centrica Business Solutions arm, we offer financing solutions to our customers to allow them flexibility when purchasing solutions from us. This includes power generation from CHPs and Solar. Therefore, we may fund the project up front, or part of it, and collect the payment over time. Although this may be accounted for as capex, this is commercially a means to grow revenue, not grow a power generation portfolio within Centrica. There will be some capex required in 2021 in order to repair the Whitegate Power station in Ireland. This has been on an unplanned outage since December 2020. The £30m figure stated here is a maximum. The total CAPEX on gas

				generation will be under 5% of the Group total CAPEX (which is £30m of the total £600m, which is not just for power gen).

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
Other, please specify Remaining CAPEX	We have announced that we will spend around £600m capex in 2021, of which Oil and Gas will be no more than £400m. The remaining Capex will be split across all other business areas.	200,000,000	33	2021

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 (optional)	Comment
Other, please specify Smart Systems	Large scale commercial deployment	≤20%		Centrica Home Solutions (CHS) (renamed to Hive, and integrated into British gas in late 2020) 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. CHS.made an operating loss of £55m in 2020. This means that in the three years in question, the total operating losses were £224m, with further capital expenditure of c£80m. Following five years of material losses, management has announced that the segment will no longer be separately reported and investment will be stripped back.
Distributed energy resources	Large scale commercial deployment	≤20%		The Solutions arm of our Centrica Business Solutions (CBS) business made an operating loss of £85m in 2020. CBS supplies new technologies, flexible generation and energy efficient solutions to commercial and industrial customers.
Digital technology	Small scale commercial deployment	≤20%		In 2017, Centrica announced the creation of a new venture 'Centrica Innovations' (CI) to identify, incubate and accelerate new technologies and innovations, with £100m dedicated to the fund over five years. To date, Centrica has invested in thirteen projects, including: - o 7 Companies in the distributed/ decentralised energy system space. These include; a) a blockchain solution that standardises electric grid data and provides software tools so utilities can run local energy markets b) Linear Generator provider that offers businesses affordable flexible and reliable clean power from natural gas

				o 5 companies in the connected world space. These include; a) technology specialists in industrial cyber security b) Cutting-edge in-home monitoring and fall detection, empowering people to live independently for longer o 1 company in the electric vehicle space, which is an end-to-end software solutions provider for electric vehicle charging
Renewable energy	Pilot demonstration	≤20%		Centrica has launched a hybrid heat pump trial in the West Midlands, targeting 75 on-grid residential properties, to test the premise that it can deliver up to 80 per cent of total heat demand from the heat pump, with 20 per cent coming from efficient gas boilers. These installations are subsidised to ensure take up. This test will help determine to what degree hybrid heating systems deliver carbon savings, and what role they can play in the UK's carbon reduction in the near term and out to net zero. They are being installed in properties that are not suitable for pure electrification right now, with the potential for full electrification, or hydrogen to help remove the residual emissions from the gas component in the future.
Energy storage	Large scale commercial deployment	≤20%		Hydrogen storage – Exploring the repurposing of Centrica's offshore Rough facility. Previously used for seasonal storage of gas to support the UK during winter, we are exploring how this may transition to store Hydrogen in a similar capacity. 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. 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 seasonality in demand. Our analysis of the National Grid Energy System Operator's ("NGESO") 2020 Future Energy Scenarios ("FES") suggests demand for hydrogen storage could be in the region of 3.5 TWh by 2035, and as much as 18 TWh by 2050. Indeed, NGESO forecasts strong demand for hydrogen storage across all the FES despite variation in the forecast volume of hydrogen use, suggesting hydrogen storage will play an important role in delivering Net Zero. A repurposed, hydrogen-ready Rough would have the capacity to meet predicted demand beyond 2040 and would be able to support around half of the total expected demand by 2050. 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. In addition to those outlined above, during the construction and natural gas-H2 blended phase Rough could increase the resilience of the UK natural gas market to unexpected shocks, improve liquidity in the market, and facilitate job creation and growth in the Humber and wider region in the 2020s.

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

Centrica-assurance-statement-2020.pdf

Page/ section reference

1

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

Centrica-assurance-statement-2020.pdf

Page/ section reference

1

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.

Scope 3 category

Scope 3: Business travel

Verification or assurance cycle in place

Triennial process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

Centrica-assurance-statement-2019.pdf

Page/section reference

1. Note this is a component of our ‘internal carbon footprint’, in which we assure business travel

Relevant standard

ISAE 3410

Proportion of reported emissions verified (%)

95

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?

No, but we are actively considering verifying within the next two years

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

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

81

% of Scope 2 emissions covered by the ETS

0

Period start date

January 1, 2020

Period end date

December 31, 2020

Allowances allocated

416,570

Allowances purchased

765,703

Verified Scope 1 emissions in metric tons CO2e

1,182,273

Verified Scope 2 emissions in metric tons CO2e

0

Details of ownership

Facilities we own and operate

Comment

The verified emissions are the sum of Centrica's EU ETS data from all relevant countries including; UK, Ireland, Norway and Netherlands. Equity has been applied where relevant.
Note 1, King's Lynn power station has been excluded as its sale was agreed in 2019.
Note 2, the ETS value used in the '% of scope 1 emissions covered by the ETS' is higher as it includes non-operated assets that operate under other companies' ETS; whilst the allocated, purchased, and verified emissions relate only to the assets that we own and operate.

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

EU 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 EU 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 EU ETS is our CBS Power business, which factors in a carbon escalator price (based on the EU ETS price) into the investment case for fossil fuelled assets to test the viability in gaining future market contracts. All Centrica's power stations are certified to ISO14001, the international standard for environmental management systems and are regularly audited by external specialists from an independent accredited certification body. The system for managing EU-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 EU-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/ CO2 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 EU-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. This is completed via the EU registry. Centrica was fully compliant across all relevant power station with the above in 2020.

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

Yes

C11.2a

(C11.2a) Provide details of the project-based carbon credits originated or purchased by your organization in the reporting period.

Credit origination or credit purchase

Credit purchase

Project type

Other, please specify

Agriculture Forestry and Other Land Use

All these purchases were to offsets our customers emissions relating to our green future tariff gas consumption.

Please note the timeline to retire against last year's actual activity is the end of August 2021. As this is after the reporting deadline for CDP some residual reconciliation may take place, in which case it will be updated in next years submission.

Project identification

VCS 1094

Verified to which standard

VCS (Verified Carbon Standard)

Number of credits (metric tonnes CO2e)

10,433

Number of credits (metric tonnes CO2e): Risk adjusted volume

10,433

Credits cancelled

Yes

Purpose, e.g. compliance

Voluntary Offsetting

Credit origination or credit purchase

Credit purchase

Project type

Other, please specify

Agriculture Forestry and Other Land Use

Project identification

VCS 1094

Verified to which standard

VCS (Verified Carbon Standard)

Number of credits (metric tonnes CO2e)

72,381

Number of credits (metric tonnes CO2e): Risk adjusted volume

72,381

Credits cancelled
No

Purpose, e.g. compliance
Voluntary Offsetting

Credit origination or credit purchase
Credit purchase

Project type
Other, please specify
Agriculture Forestry and Other Land Use

Project identification
VCS 612

Verified to which standard
VCS (Verified Carbon Standard)

Number of credits (metric tonnes CO2e)
13,520

Number of credits (metric tonnes CO2e): Risk adjusted volume
13,520

Credits cancelled
No

Purpose, e.g. compliance
Voluntary Offsetting

Credit origination or credit purchase
Credit purchase

Project type
Other, please specify
Agriculture Forestry and Other Land Use

Project identification
VCS 1686

Verified to which standard
VCS (Verified Carbon Standard)

Number of credits (metric tonnes CO2e)
40,480

Number of credits (metric tonnes CO2e): Risk adjusted volume

40,480

Credits cancelled

No

Purpose, e.g. compliance

Voluntary Offsetting

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.

Objective for implementing an internal carbon price

Navigate GHG regulations
Stakeholder expectations
Change internal behavior
Stress test investments

GHG Scope

Scope 1

Application

We produce a carbon pricing forecast for the EU ETS and UK carbon price floor to 2040.

Our forecast is informed by the ETS price, policy and third-party forecasts. These projections are primarily used within our power generation and oil & gas asset businesses for near-term forecasts of business performance and longer-term forecasts which are factored into new capital investment decisions.

The carbon price is also utilised by the UK downstream businesses for near term hedging, where it constitutes approximately 12% of the wholesale power price.

Internal forecasts of carbon prices are integrated in to our short to long term projections of power prices and ancillary market returns. These projections in turn are used to develop our view of the future financial performance of the company and what strategic decisions we need to take, for example where to invest and when.

Actual price(s) used (Currency /metric ton)

40

Variance of price(s) used

N/A

Type of internal carbon price

Shadow price

Impact & implication

The use of shadow internal carbon prices (ICP) are integrated in the commercial decisions taken in many areas of Centrica's operations. We use them to predict external carbon prices and ensure commercial robustness in the face of a changing external environment.

The current value mirrors the EU ETS carbon price and/or the UK carbon price floor, which are set at an EU and UK level respectively. Our ICPs are time sensitive, with higher value deployed for future decisions

Utilising an internal carbon price 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 2020 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, made wrt. future Power Purchase Agreements for our future customer demand... Without accurate ICPs, all these projects and products could lose money

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. For example, following a previously volatile EU ETS 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.

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers
Yes, our customers
Yes, other partners in the value chain

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement

Compliance & onboarding

Details of engagement

Included climate change in supplier selection / management mechanism
Code of conduct featuring climate change KPIs
Climate change is integrated into supplier evaluation processes

% 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 all of 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. Additionally, in 2020 we incorporated climate related criteria into our tender process to evaluate suppliers based on their level of engagement with science-based targets, publication of environmental targets and progress, and the assessment of the impact of their products with life-cycle analysis

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 2020, 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

In addition to onboarding and compliance, we also target deeper engagement with higher risk suppliers as set out below.

Type of engagement

Engagement & incentivization (changing supplier behavior)

Details of engagement

Other, please specify

Corrective action plan collaboration

% of suppliers by number

7.5

% total procurement spend (direct and indirect)

37.5

% of supplier-related Scope 3 emissions as reported in C6.5

7.5

Rationale for the coverage of your engagement

Beyond compliance and onboarding, we focus further engagement efforts on higher risk suppliers so that we can target action to where we can make the greatest difference. To identify higher risk suppliers, we risk-rate them using a third-party engagement tool that determines risk around the following key areas: country, sector, spend and product or service. Suppliers identified as high risk, are subject to an enhanced assessment and remedial action where necessary.

Impact of engagement, including measures of success

We want our supply chain to be increasingly sustainable. We can play an important role in making this happen through embedding proactive monitoring, managing and engagement. One of the ways we measure our success is by maintaining continuous improvement in our supply chain sustainability risk score within the ‘low risk’ category when benchmarked against industry averages. Having a low risk score demonstrates that we have effective engagements in place to maintain or raise standards that reduce the impact of climate change and cuts risk across our supply chain.

In 2020, we assessed a further 60 strategic and higher risk suppliers via a third-party risk assessment tool. This resulted in a sustainability risk score of 54 which maintains our 'low risk' rating and is better than the multi-industry average of 45 (medium risk), which shows that our suppliers are committed to upholding and improving their climate change and wider sustainability resilience.

If a supplier receives a medium or high risk rating, we work with them to create corrective action plans that build their capability. We do this by drawing on our expertise and knowledge acquired via collaboration with the Responsible Sourcing Council (RSC) and through on-the-ground site inspections, which gives us greater insight into issues and helps us tailor support so that we can raise standards collaboratively. In 2020, we undertook five site inspections in the Bangladesh, Cambodia, Pakistan and China, all sites had at least one non-conformance to provide corrective actions for, which enables them to demonstrate continuous improvement.

Comment

While we work hard to raise standards across our supply chain, we also look to help other companies raise standards in theirs. Through our ongoing membership of the RSC, we attended all of their events in 2020 and shared our responsible procurement achievements to help others learn from our experience, and collaborated to find solutions to some of our challenges.

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement

Education/information sharing

Details of engagement

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. Core to achieving this is to engage our customers through focused campaigns and wider targeted

communications mainly in the UK, North America 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.

A good example of engagement is through our support of the sector-led campaign by Smart Energy GB. The campaign uses marketing, events, partnerships and media to encourage customers to adopt smart meters, enabling more people to benefit from greater insight that can be used to reduce energy use. Direct communication with customers through letters and engineer visits, also help drive awareness and installation.

We additionally seek out certifications and partnerships that boost credibility and take-up of energy saving products that can enhance communications across media and sales channels. We were the first UK energy supplier to achieve accreditation from the Carbon Trust for our renewable energy tariff for business customers and we launched a Green Future renewable energy tariff which was developed with Climate care, both of which secured strong press coverage and amplified the offering for customers.

Centrica Business Solutions published many reports helping to encourage and guide decarbonisation within their customer base. In 2020 these included ‘Five Opportunities to Manage Energy Costs’, ‘How to turn ambitious sustainability targets into effective action’, ‘Reducing Energy Costs & Driving Growth’, and ‘Practical ways to measure & mitigate your carbon emissions’. These are shared via targeted media, events and advertising as well as in proactive customer engagements.

We also ran and supported campaigns focused on raising awareness about national schemes that reward companies for undertaking carbon reduction activities. These include 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.

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 2020 we were on track with this goal delivering an 18% reduction.

This is a direct result of raising awareness and encouraging customers to use lower carbon services and solutions. Specific examples contributing to this include our smart meter campaign, which raised awareness of the savings smart meters create and enabled the installation of over 700k additional devices in 2020, saving over 63,000tCO2e annually. External advertising campaigns demonstrating greater control and comfort with Hive led to additional sales of our Hive smart thermostat which will provide saving around 30,000tCO2e annually.

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 instance, our Powering Britain report showed that if just 50% of the UK's Industry, Healthcare and Hospitality & Leisure sectors took up distributed energy solutions, they could save ~11% on their carbon footprint. Off the back of this, we engaged new and existing customers on the findings, including the NHS, so that money saved from energy can be redirected towards being more competitive or extending essential public services. We now provide energy solutions to over 3500NHS properties while 10% of their estate switched to renewable energy. Moreover, following our Distributed Energy Future Trends report which tracks the rising appetite of businesses to amplify social and environmental impact, we enhanced services to kick-start their sustainability journey to turn energy into an opportunity rather than just being a business cost. And by the end of 2020, this contributed to Centrica Business Solutions' order book increasing by 5%.

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 EPC's in 2020 which reduced in-year emissions by 2,500tCO2e.

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 EV charger installation, energy usage & optimisation, and fleet management we are able to assess, evaluate and deliver a wide range of initiatives across the EV value chain to maximise EV take-up. We are working with car manufacturers to support their customers and dealership networks on EV readiness, providing a one-stop-shop for charging solutions including the charging infrastructure, energy management, financing, and optimisation. Towards this in 2019, we announced new partnerships with Ford and Volkswagen to offer a dedicated home charging installation service and EV tariffs, while in 2020, we partnered with 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 have additionally formed a partnership with

the NCP with the purpose of making inner city charging in public places more convenient, as well as Dundee City Council to deliver a flagship charging hub with partners, that introduces rapid EV charging with on-site storage and renewable generation. The success of all of these initiatives is initially focused on rates of take-up and customer experience, with feedback to be used to help refine offerings.

We are partnering with energy experts to decarbonise the energy system by pioneering new ways to generate, manage and consume energy. We have formed a consortium with some of the largest businesses in the UK's Humber region so that we can be part of the world's first zero-carbon industrial cluster, by developing a carbon capture and storage (CCS) and hydrogen production facility. We believe that CCS and hydrogen must play a significant role in decarbonisation so it's vital for the broad range of skills and experience to come together from partners including Phillips 66, Uniper, VPI Immingham, Drax, Equinor, National Grid, SSE Thermal and others, and deliver this project which has the potential to capture and store 10% of the UK's carbon emissions each year. Success will be measured with carbon emissions saved when fully operational while in the short term, success can be judged with the effectiveness of each key milestone in the build up to the industrial hub being ready by 2040, with proposals to build a demonstration hydrogen production facility by 2025 and install carbon capture equipment on one of the biomass units at Drax's power station by 2027. Funded by the European Regional Development Fund, the University of Exeter and ourselves, we are also testing how flexible demand, generation and storage can support the grid during peak times and help stimulate the growth of renewables through the Cornwall Local Energy Market trial.

Technologies like solar and battery storage together with a virtual marketplace enabled by blockchain technology has been rolled out to over 200 homes and businesses and we will analyse the findings of the trial to measure its success, which will focus on proving the value of flexibility for SME business and homeowners.

We have partnered with a range of third parties to create lower carbon homes. For example, though our Centrica Innovations fund, we have partnered with start-ups to develop and deliver new offerings which includes investment in Mixergy. Mixergy is 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. 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 emissions by 100% through direct and indirect action by 2050 and towards this in 2020, we were on track having enabled our customers to reduce emissions by 18% in 2020.

C12.3

(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?

Direct engagement with policy makers
Trade associations
Funding research organizations
Other

C12.3a

(C12.3a) On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Other, please specify Renewable Heat Incentive (RHI)	Support with minor exceptions	Renewable Heat Incentive (RHI) - In response to the sector specific decarbonisation requirements under the UK's fifth carbon budget, we believe the design and function of the RHI needs to be revisited for domestic households to support a step change in heat decarbonisation. We have worked with a leading economic consultancy (Vivid Economics) and leveraged our own internal research to identify shortcomings associated with the RHI, notably long pay-back periods for customers and a limited range of qualifying technologies. Our work has focused on the role a re-purposed RHI could play in tackling the early stages of heat decarbonisation. We have begun engaging Government bodies and other stakeholders on changes that could be made to the scheme, such as responding to various calls for evidence on heat decarbonisation.	In 2020, it was announced that the RHI would be extended by a year to end in 2022 and that it would be succeeded with a 'Low Carbon Heat Support Scheme', which we will work with Government to shape through consultation. We have advocated for improvements to the RHI over the years and compared to the RHI, we believe the new scheme should benefit from: a) a re-design of assignment of rights to allow third parties to provide domestic customers with up-front subsidy for technologies and active consideration of transitioning from a Feed-in-Tariff (FiT) model to a capital grant model, which will both improve scheme cost effectiveness and demand, b) some form of ring-fencing of funding to ensure the domestic sector secures a higher overall proportion of funding given the progress that needs to be made in particular in decarbonising, and c) expanding the scope of low carbon technologies to products such as Gas Absorption Heat Pumps (GAHP) as well as hybrids and Combined Heat and Power (CHP), as is the case in other countries such as Germany. For example, the Committee on Climate Change (CCC) has recommended that 10m hybrid gas heat pumps should be installed by 2030. Customers will need to be incentivised to

			purchase the heating systems, given the higher cost compared to conventional gas boilers. To support decarbonising of heat, we have established our own fund to trial hybrid heat pumps in homes and we will share our findings with government which will inform future policy positions.
Energy efficiency	Support	Energy efficiency in homes and businesses Energy Company Obligation (ECO) - ECO is a government energy efficiency scheme aimed at domestic premises administered by Ofgem and delivered by large energy suppliers. ECO was introduced in 2013, with the latest phase running from December 2018 to March 2022. Energy efficiency in homes remains a key way to reduce energy bills, cut carbon emissions and tackle fuel poverty. We are playing our part in this important scheme and continue to work with third parties to deliver the obligation. In the Clean Growth Strategy, Government committed to “extend support for home energy efficiency improvements until 2028 at at least the current level of ECO funding”. We have worked with BEIS throughout 2020, providing feedback and ideas for ‘ECO4’, the next 4 year iteration (2022-2026)	We have continued to encourage Government that all suppliers should have to play their part, not just the larger ones, and provided evidence that the current small firm exemption and allowance system has led to distortions in the market. We expect this to be partly addressed in 2022 before a buy-out option is introduced in 2024-25. At that point, all energy suppliers will be required to pay their share. A lot of money has been spent on lead generation in ECO3. We have encouraged BEIS to consider consumer drivers and leverage desirable smart tech to engage households. We have warned against an untested ‘whole house’ obligation, consumer acceptance of which is unknown. A large eligible pool is also required, and including social and private rental will support deliverability through Decent Homes and MEES incentive respectively. Businesses - To drive energy efficiency uptake with businesses, we recommend that a range of

			approaches must be considered which reflects the different energy demands, fuel types and uses - from public sector and manufacturing to offices and community centres. The UK Government consulted on the potential for an energy efficiency scheme for SMEs, as a way to achieve the carbon reduction targets for SMEs set out in the Clean Growth Strategy. No decision has been reached. We continue to engage with Government on this issue and whilst we agree with the goal, we are keen to ensure that this consultation does not result in an overly complex scheme that ultimately increases energy bills for SMEs. we would like legislation bought in to deliver an auction model for SME energy efficiency and for businesses investing in energy efficiency to benefit from reduced business rates. Performance standards for large commercial & industrial buildings – The Government proposes to introduce annual monitoring of actual energy use, alongside Energy Performance Certificates, to benchmark the energy efficiency with other similar buildings. We support the scheme, but believe that the Government should provide incentives to drive energy efficiency improvements.
Energy efficiency	Support with minor exceptions	Future Homes Standard - The UK Government proposed a Future Homes Standard in the Autumn 2018 Budget, for introduction in 2025. It will set minimum	We believe the Future Homes Standard could be brought forward from 2025 to 2021, given the industry had already prepared for the introduction of a zero carbon

		environmental standards for all new housing, including a commitment to removing traditional fossil fuel heating systems. We support making new build homes zero carbon and believe it is one of the most economic segments to decarbonise.	homes standard in 2016 which was subsequently abandoned. The time is right to drive momentum into the low carbon heating market to deliver cost savings and provide job opportunities to build back better from Covid-19. With around 200,000 new homes built each year in the UK and around 85% of UK homes having a gas boiler, there is a big opportunity to accelerate the deployment of low carbon home solutions.
Other, please specify Smart Meters	Support	UK - Centrica has always been a strong advocate of the smart meter roll-out because we understand the positive impact they can have on helping people better understand, control and reduce their energy usage. We have been working towards meeting the Government's mandated deadline to offer all customers smart meters by the end of 2020, which was extended to 2024 in 2019 and in 2020, was further extended by six months to June 2025. In June 2021, it was further announced that the existing All Reasonable Steps obligation will be extended by 6 months (now to end on 31 December 2021). Annual installation targets will now commence from 1 January 2022 for a four year period. By the end of 2020, we had installed over 7.9m smart meters in homes and businesses since 2009 and have installed more smart meters than any other supplier. To support this, we've invested in training over 2,000 British Gas Smart Energy Experts which has	UK - We are supportive of smart meters and continue to work with both the Government and industry, to ensure that as many of our customers as possible, are able to benefit from their installation. This includes collaboration with Smart Energy GB, an independent organisation enlisted by Government to champion and communicate the switch to smart meters with the public. Given the programme was designed over a decade ago and is currently impacted by the introduction of price caps, we believe there are opportunities to amplify smart meter benefits, reduce programme costs and measure installs more effectively. In particular, we would encourage government to actively consider a range of incentives to encourage households and SMEs to get a smart meter installed. North America - We believe it is critical that smart meter data be timely, accurate and consistent. This will enable retail energy providers to offer innovative

		enabled us to install smart meters in homes at a rate of one every 21 seconds. To ensure effective take-up, we have shared learning about our roll-out at industry working groups, consultations and regular meetings with Government alongside other stakeholders. Topics discussed include customer engagement, handling of consumer data and maximising benefits from different consumer types including vulnerable customers.	products using 15-minute interval usage data that will empower the introduction of energy saving products and applications for customers. In addition, we encourage utilities to increase service levels as smart meter deployment completes to ensure optimal availability and quality of associated data. Towards this, we funded a project in Texas to streamline and simplify the process for customers, enabling them to share their data with energy service providers. We are additionally supportive of legislation that balances the protection of privacy interests with provision of innovative new energy products and applications.
Other, please specify Net Zero Emissions legislation	Support	Net zero emissions legislation - Based on the analysis published by the CCC, we support the introduction of a 2050 net zero emission target which would end the UK's contribution to global warming within 30 years. As a supporter of the Paris Agreement and having set our own ambition to become net zero by 2050, we welcome the UK's commitment and believe it is achievable. We had lent our support to a number of bodies, including the CBI, who had written to Government requesting that the implementation of legislation be brought forward.	UK - We are supportive of smart meters and continue to work with both the Government and industry, to ensure that as many of our customers as possible, are able to benefit from their installation. This includes collaboration with Smart Energy GB, an independent organisation enlisted by Government to champion and communicate the switch to smart meters with the public. Given the programme was designed over a decade ago and is currently impacted by the introduction of price caps, we believe there are opportunities to amplify smart meter benefits, reduce programme costs and measure installs more effectively. In particular, we would encourage government to actively consider a range of incentives to encourage

			households and SMEs to get a smart meter installed. In parallel to engagement with BEIS, we also engage extensively with Ofgem, to ensure that the smart allowance in the default tariff cap is sufficient to meet our rollout ambitions.
Carbon tax	Support	Upon the UK's departure from the EU Emissions Trading Scheme (EU ETS) on 01 January 2021, we supported the UK setting up its own trading scheme – the UK Emissions Trading Scheme (UK ETS). Centrica advocated for as early implementation as possible prior to 01/01/21 and for linking with the EU ETS, to ensure liquidity and investor confidence. We continue to support the UK's Carbon Price Floor Support Mechanism (CPF) which is in addition to the UK ETS and drives decarbonisation of the UK power system. As the UK ETS becomes established and with an increasing UK ETS price, it may be more efficient to merge the two schemes	We welcomed confirmation in the March 2019 budget that the Government will continue to hold the CPS rate at £18/tonne CO2 for 2020/21, The Government also stated that after the Brexit transition, the UK will continue to apply an ambitious carbon price to support progress towards reaching net zero – either through a UK Emissions Trading System that could be linked to the EU ETS, or a carbon emissions tax as an alternative carbon pricing policy. We are supportive of a robust carbon price and welcome greater clarity around longer-term rates as well as the structure of the CPF going forwards. We have participated in the Government consultation on this during Spring 2020.
Carbon tax	Support	EU Emissions Trading Scheme (EU ETS) - In light of the benefits of international carbon markets for cost-efficient emission reductions, we support the continued participation of the UK in the EU ETS following Brexit. We believe the European approach reduces costs, thereby making decarbonisation both	In mid-December 2020, the UK Government decided to implement a standalone UK ETS from 01 January 2021. We were disappointed by the late decision on this and with no auctions running until May 2021, this has led to considerable uncertainty in power markets, likely impeding decarbonisation efforts. We advocated for a decision to be

		cheaper and faster. A robust EU ETS that delivers a level-playing field, could reduce the need for a separate CPF in the UK over the longer term. We have actively supported within the EU and with other stakeholders, proposals that will lead to the strengthening of the EU ETS including a) doubling the annual rate of allowances (to 24%) taken out of the market and placed in the Market Stability Reserve (MSR) and b) introducing a process whereby future imbalances caused by policy decisions can be corrected – for example, if energy efficiency targets reduced demand.	made in the months There is no firm commitment to linking with the EU ETS at this time, Centrica believes that this should be considered to ensure a collaborative approach to reducing global emissions. We support the UK Government's upcoming consultation to consider whether the allowances cap should be reduced to align with net zero, as well as considering widening the UK ETS eligibility to ensure there is an appropriate carbon signal for other sectors to decarbonise. It is at this point, the UK government should consider whether the CPF should be merged with the UK ETS – balancing simplicity with appropriate decarbonisation signals.
Other, please specify flexible energy systems	Support	Details of engagement Centrica engages regularly with the teams in Ofgem and BEIS to outline then importance of a smart, flexible energy system. Flexibility enables a net zero system, by supporting the system during periods of renewable generation and reducing network reinforcement costs. potentially saving GB consumers £40bn/years. Flexibility procurement must be market driven and supported by open data. We welcome that the Energy White Paper reflects this and the importance of a flexibility is embedded in Ofgem and BEIS'	Proposed legislative solution We support the joint update from BEIS and Ofgem on the Smart Systems and Flexibility Plan. We do not believe any firm legislative changes are needed at this time. Instead the focus should be on ensuring that all flexibility need is commercially procured, increasingly granular data is available and energy market design ensures that flexible assets are appropriately remunerated.

		thinking.	
Other, please specify Net Zero Emissions legislation	Support	Net zero emissions legislation - Based on the analysis published by the CCC, we support the introduction of a 2050 net zero emission target which would end the UK's contribution to global warming within 30 years. As a supporter of the Paris Agreement and having set our own ambition to become net zero by 2045, we welcome the UK's commitment and believe it is achievable. We had lent our support to a number of bodies, including the CBI, who had written to Government requesting that the implementation of legislation be brought forward.	We advocated for the legislation to be implemented as soon as possible and at the end of June 2019, the UK Government made the committed to become the first major economy to pass net zero emissions into law. As we come out of Covid-19, we have a unique opportunity to re-boot our economy in line with our net zero emissions commitment to both stimulate the economy and save customers money. We believe a range of policy decisions should be bought forward across power, heat, transport and the gas network, including legislating to phase out the combustion engine by 2030 in 2020.
Other, please specify Future support for low-carbon heat	Support	We have engaged with policy designers of the scheme in two phases. Firstly, we responded to the Government's 'Future Support for Low Carbon Heat' consultation. We welcomed the Government's move away from a tariff-based model to a grant-based model to incentivise the transition to low-carbon heating solutions via the Clean Heat Grant. Additionally, the steps taken in the introduction of the Green Gas Levy. Both of these policy mechanisms are steps in the right direction however, the Government should be more ambitious in terms of the scope of heating technologies that these schemes will support. With regards to the Green Gas Levy, we addressed the need to be more ambitious on support for green gas, recommending that the	In April 2020, the Government proposed a Green Gas Support scheme to support biomethane injection into the gas grid and a Clean Heat Grant Scheme. The latter is expected to replace the RHI when it comes to an end next year. The scheme is expected to provide support through an upfront grant scheme for heat pumps with successful applicants claiming a flat rate payment of £4,000.

		enduring phase of the green gas levy be accelerated to come in from 2022, including all green gases (biomethane, bio-SNG, bio LPG, hydrogen). On the Clean Heat Grant, we suggested that the support offered should be increased as the current level would not be sufficient in transitioning customers to the technologies eligible for the scheme. We also suggested widening the technology eligibility criteria as it current excludes Hybrid Heating Systems, which have the ability of delivering better customer outcomes and reducing carbon emissions in the near term.	

C12.3b

(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?

Yes

C12.3c

(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.

Trade association

Energy UK

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's 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.

How have you influenced, or are you attempting to influence their position?

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 over 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.

Trade association

Heating and Hot Water Industry Council (HHIC)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's 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 meet the 2020 and 2050 carbon targets.

Membership is made up of heating manufacturers together with new renewable entrants to the market

How have you influenced, or are you attempting to influence their position?

We are a proactive member of HHIC, participating in the Low Carbon Technology, Micro CHP, Hybrid and Boiler technical and policy working groups that help inform and shape

Council positions.

Through participation on these working groups, 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.

Trade association

Energy Manager Association (EMA)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

EMA was established to bring cohesion to the energy management profession in order to help the UK meet its energy obligations, which include those relating to carbon reduction.

To accomplish this, the EMA aims to establish a best practice approach to energy management that will improve the standing of the profession and drive it into the heart of British businesses.

The EMA works closely with energy managers across the UK to influence future policy development so that it functions at optimal levels for practitioners. Engagement largely focuses on Government departments such as BEIS and the Department for Environment, Food and Rural Affairs (DEFRA).

How have you influenced, or are you attempting to influence their position?

Centrica is represented on various advisory boards within the EMA and provides input on carbon reporting, training standards, behaviour change and industry standards.

We have used our involvement in the Association to influence and increase awareness of best practice Energy Performance Contract policy development.

Trade association

Association for Decentralised Energy (ADE)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

ADE is an advocate of an integrated approach to delivering energy locally, designed around the needs of the user.

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.

Being an advocate for the proliferation of decentralised energy generation, our views are consistent with those of the ADE.

How have you influenced, or are you attempting to influence their position?

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.

Trade association

Confederation of British Industry (CBI)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

CBI represents large sections of British business. The CBI recognises that climate change is a real threat and is committed to identifying cost effective policies to tackle the risks. They also help identify and support the prospects for growth and wealth creation through the development of the low carbon economy.

How have you influenced, or are you attempting to influence their position?

We are a full member of the CBI and sit on their Energy and Climate Change working groups as well as the board. We share industry insight and data where appropriate to help inform CBI policy positioning on key issues such as carbon pricing and UK carbon budgets. We played an instrumental role in helping develop the CBI's 2030 Vision and focused on the policy choices relating to UK decarbonisation while during 2019-20, we collaborated to produce a report focused on progressing the decarbonisation of heat.

Trade association

Renewable UK

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

Renewable UK are a membership organisation aiming to build the UK's future energy system, powered by clean electricity, and to deliver this future faster. They support over 400 member companies to ensure increasing amounts of renewable electricity are deployed across the UK and access markets to export all over the world

How have you influenced, or are you attempting to influence their position?

Centrica is a member of the Market Design, Flexibility and hydrogen working groups. We are promoting the need for renewables to be deployed on a merchant basis (i.e. without Government support), with flexibility and hydrogen

C12.3d

(C12.3d) Do you publicly disclose a list of all research organizations that you fund?

No

C12.3e

(C12.3e) Provide details of the other engagement activities that you undertake.

Having a regular and meaningful engagement strategy enables us to better understand and manage issues that are important to our stakeholders and our business. By involving stakeholders in how we do business, we can demonstrate our accountability and increase understanding of the impact we have in society which helps us identify opportunities and manage risks. Interactions are conducted through a variety of methods - from one-to-one meetings to formal committees and workshops - and span a spectrum of topics including shaping a lower carbon future.

Government - We engage Government via direct meetings and consultations relating to evolving energy policy, in order to enable a more cost-effective lower carbon future. Discussions with the UK Government included issues such as carbon pricing, heat decarbonisation, the transition to electric vehicles, the capacity market, as well as the decentralisation of energy systems and increasing grid flexibility.

Customers - We actively seek feedback from a variety of consumers and consumer organisations to better understand their needs and support the expansion of innovative services and solutions. All significant initiatives, such as new proposition launches, are underpinned by robust research and analysis, to ensure we deliver for the changing needs of our customers while enabling them to manage energy more sustainably. Towards this, we have explored and funded several initiatives to accelerate new technologies and ideas that transform the way we live, work and move, and become more sustainable. Our Smart and Hive teams also run engagement surveys to learn how we can increase take-up and enhance offerings. We additionally carry out consumer campaigns that enable customers as well as the general public, to understand the benefits of the connected home and wider energy efficient products first-hand.

Investors – In 2020, we continued our dialogue by holding sessions with institutional investors about our approach to climate change. Amongst a wide range of topics, we discussed our climate carbon transition plan including relevant targets and performance, our strategic resilience to climate change, our governance arrangements and plans to align with the TCFD recommendations. We also hosted a roundtable with a large coalition of institutional investors focused specifically on climate change, in which our CEO led an open and detailed discussion on our role and vision for the energy transition, our thoughts on decarbonisation pathways particularly for heat in the UK, as well as our approach to a Just Transition. We followed this with a climate focused investor meeting with our Chairman and key Board members in early 2021, covering the Board's vision for Centrica in the energy transition, Board capability and proposed investor 'Say on Climate'.

NGOs & think tanks - In 2020, we maintained relationships with many key environmental NGOs and think tanks in the UK. This helps improve understanding of their concerns and ideas on issues such as climate change while exploring common goals so that we can collaborate to drive progress. These interactions form a part of our engagement programme and informs our thinking on addressing the challenge of climate change as we develop a path to net zero.

Communities – By engaging our communities, we can create stronger communities together and deliver positive impact over the long term. In CBS, project managers and issue specialists engage key stakeholders to ensure each project fully assesses, understands and has plans in place to manage potential impacts - from the start of the approval process to the end of a project's lifecycle. These engagements include collaboration with environmental NGOs and local interest groups on issues like decommissioning power plants, the growth of distributed energy and the potential positive impact this could have in keeping carbon emissions and energy costs as low as possible. We also collaborate with communities to explore the potential of local energy markets. In 2020 for example, we continued working with over 200 homes and businesses as part of our £16.7m local energy market trial in Cornwall, which tests how flexible demand, generation and storage can reduce pressure on the electricity grid, enable the growth of renewables and avoid expensive network upgrades. At the same time, we engaged the public sector to take-up low carbon distributed energy products that enable cost savings to be redirected towards providing vital community services. This led to our partnering with 3,500 NHS properties to overhaul their energy systems and switch 10% of their estate to 100% renewable electricity.

C12.3f

(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

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 fed into the Centrica Executive Committee (CEC), latterly

the Centrica Leadership Team (CLT) for review and approval. The CLT therefore has ultimate ownership and sets the company's position on public policy for key issues like climate change which is filtered out into the business, and ensures we have a consistent and established policy position on climate change across our global geographies.

Crucial to this process is our dedicated policy coordination sessions which include weekly policy coordination calls with; Policy & Regulatory, Public Affairs, and Media teams and monthly policy sessions with each of the businesses Managing Directors to ensure consistent policy positioning and advocacy priorities. Issues considered and addressed through these sessions in 2020 include support for the repurposing of Rough to store hydrogen, brexit preparation, preparation for the Govt Energy White paper: EV positioning, and flexibility positioning.

Underpinning all of this is our Political Involvement Policy, which supports Our Code, and sets out the expectation that the business acts as one in observing and upholding our position on political involvement.

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).

Publication

In mainstream reports

Status

Complete

Attach the document

Annual Report & Accounts 2020.pdf

Page/Section reference

Pages 3, 6, 9, 23, 25, 28-33, 35-36, 39, 64-65, 123-124, 222 and 224

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 2020 – 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 which includes our People & Planet Plan and Task Force on Climate-related Financial Disclosures as well as our wider KPI disclosure that closes the filing.

Publication
In voluntary sustainability report

Status
Complete

Attach the document
People & Planet Plan Update 2020.pdf

Page/Section reference
Pages 1-2, 7-10, 13-14 and 17

Content elements
Strategy
Emissions figures
Emission targets

Comment
The Update sets out our new People & Planet Plan - a set of 5 global goals that aims to 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. We also report how our Plan supports and contributes to the United Nations Sustainable Development Goals.

Publication
In voluntary communications

Status
Complete

Attach the document
data-centre-2020 (3).xlsx

Page/Section reference
Planet' tab

Content elements
Emissions figures
Emission targets
Other metrics

Comment

The Data Centre contains over 100 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 voluntary communications

Status

Complete

Attach the document

Our Code.pdf

Page/Section reference

- Page 30

Content elements

Governance

Comment

Our Code sets out the minimum expectations for how we go about our business and guides us to make good choices. It includes a commitment to safeguard the environment and applies to everyone who works for us, with us or alongside us. Our Code forms the foundation of being a responsible business and represents a high-level summary of the key areas of Centrica's Policies and Standards.

Publication

In voluntary communications

Status

Complete

Attach the document

UNGC Communication on Progress-2020-21.pdf

Page/Section reference

Pages 5-7

Content elements

Strategy
Emissions figures

Comment

As a signatory to the United Nations Global Compact, our annual Communication on Progress sets out how we uphold the universally accepted principles on key issues to create a better world – from protecting human rights and the environment, to ending discrimination and corruption.

Publication

In voluntary communications

Status

Complete

Attach the document

SASB Disclosure 2020.pdf

Page/Section reference

Pages 2-6, 8,

Content elements

Emissions figures

Comment

While we've used SASB to inform our reporting in previous years, 2020 was the first time we've published mapping of our reporting as part of our annual reporting suite. We've therefore aimed to focus our first-year response on areas that are most relevant to our business and in some instances, used our own methodology where this is more applicable. As necessary, we'll aim to review and improve disclosure over time.

Publication

In voluntary communications

Status

Complete

Attach the document

How to turn ambitious sustainability targets into effective action - Final - UK.pdf

Page/Section reference

p8

Content elements

Strategy
Risks & opportunities
Emissions figures

Comment

Meeting stakeholder expectations necessitates setting top down targets which, by their nature, are not based on detailed plans. Where plans do exist, levels of preparedness to implement them may be low. We published a guide for senior executives to help them deliver effective climate action in their organisations. We outline our approach and progress so far to act as a guide for others.

C15. 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.

C15.1

(C15.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Chief Executive Officer	Chief Executive Officer (CEO)