Equinor - Climate Change 2018

C0. Introduction

C0.1

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

Equinor is an international energy company with operations in over 30 countries and approximately 20,500 employees worldwide. The company's headquarter is in Stavanger, Norway. The company was founded as The Norwegian State Oil company (Statoil) in 1972, and became listed on the Oslo Børs (Norway) and New York Stock Exchange (US) in June 2001. Statoil merged with Hydro`s oil and gas division in October 2007.

On 15 May 2018 the shareholders through the Annual General Meeting accepted the Board of Directors' proposal to change the name of the company from Statoil to Equinor. The new name supports the company's strategy and development to a broad energy company.

Equinor is among the world's largest net sellers of crude oil and condensate, and is the second largest supplier of natural gas to the European market. Equinor also has substantial processing and refining operations. Equinor's New Energy Solutions division was set up in 2015 to drive business development in renewables and low-carbon solutions across Equinor. In 2017 Equinor's new energy solutions activities included offshore wind production, the conclusion of our first investment in solar power, and our entry into partnerships to progress new business opportunities such as creating CO2 transport and storage infrastructure for industrial customers and exploring the use of hydrogen as a fuel in power, heating and transport.

Equinor's aim is to generate value through safe and efficient operations, innovative solutions and technology. Equinor's competitiveness is founded on our values based performance culture, with a strong commitment to transparency, cooperation and continuous operational improvement.

Equinor has eight business areas: Development and Production Norway (DPN), Development and Production International (DPI), Development and Production USA (DPUSA), Marketing, Midstream and Processing (MMP), Technology, Projects and Drilling (TPD), Exploration (EXP), New Energy Solutions (NES) and Global Strategy and Business Development (GSB).

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	Select the number of past reporting years you will be providing emissions data for
Row 1	January 1 2017	December 31 2017	No	<Not Applicable>
Row 2	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Row 3	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Row 4	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>

C0.3

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

Bahamas
Brazil
Canada
Denmark
Germany
Norway
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.

USD

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 consolidation approach to your Scope 1 and Scope 2 greenhouse gas inventory.

Operational control

C-OG0.7

(C-OG0.7) Which part of the oil and gas value chain and other areas does your organization operate in?

Row 1

Oil and gas value chain

Upstream
Downstream
Chemicals

Other divisions

Biofuels
Grid electricity supply from gas
Grid electricity supply from renewables
Carbon capture and storage/utilization

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) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Board/Executive board	Equinor ASA's board of directors (BoD) reviews and monitors sustainability issues, including climate-related business risks and opportunities. Jon Erik Reinhardsen is Chair of the Board. The BoD safety, sustainability and ethics committee (BoD SSEC) assists the BoD in its supervision of the company's sustainability policies, systems and principles. This includes oversight of climate-related strategy, risk and performance. The committee has been established to ensure high focus and commitment also on board level on climate and sustainability issues. At year-end 2017, the safety, sustainability and ethics committee was chaired by Roy Franklin and the other members are Bjørn Tore Godal, Wenche Agerup, Stig Lægreid (employee-elected board member) and Per Martin Labråten (employee-elected board member).

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 annual budgets Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues	Establishing and maintaining a committee dedicated to safety, sustainability and ethics is intended to ensure that the board of directors has a strong focus on and knowledge of these complex, important and constantly evolving areas. The committee acts as a preparatory body for the board of directors and, among other things, monitors and assesses the effectiveness, development and implementation of policies, systems and principles in the areas of safety, sustainability and ethics, with the exception of aspects related to "financial matters". The committee also reviews the annual Sustainability Report. On a regular basis, the corporate executive committee and board of directors review and monitor climate change-related business risks and opportunities. In 2017, the board discussed climate-related issues in four out of eight meetings (including one risk update), and the safety, sustainability and ethics committee discussed climate-related issues in all of the five committee meetings held.

C1.2

(C1.2) Below board-level, provide the highest-level management 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	More frequently than 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.

Executing the company's climate ambition is a line responsibility. This means that all Business areas are responsible for translating strategy into actions. This is monitored through KPIs and targets.

However, the Corporate Sustainability Unit (CSU) is responsible for monitoring progress on the Climate roadmap and reporting on sustainability and climate risk issues and performance at group level, to the corporate executive committee and the board of directors. CSU is headed by SVP Sustainability, and this position reports tothe CEC member, Executive Vice President for Global Strategy and Business Development (GSB).

On a regular basis, the corporate executive committee and board of directors review and monitor climate change-related business risks and opportunities.

Climate issues are monitored through regular risk and performance updates and through monitoring indicators and targets. The main sustainability KPI monitored on Board and CEC level is CO2 intensity for the upstream oil and gas portfolio (kg CO2 per boe). Other climate-related indicators monitored at CEC level include CO2 emission reductions (tonnes), share of R&D expenses that is used at energy efficiency and low carbon projects and capex in New energy solutions.

C1.3

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

Yes

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues.

Who is entitled to benefit from these incentives?

Chief Executive Officer (CEO)

Types of incentives

Monetary reward

Activity incentivized

Efficiency target

Comment

In 2017, the assessment of the reward for the CEO's delivery, within the HSE perspective, was based on the targets set for two of the corporate level key performance indicators (KPIs): total serious incident frequency (SIF) and CO2 intensity for the upstream oil and gas portfolio. The targets set in 2017 were 0.6 (number of incidents per million hours worked) for total SIF and to be within the top quartile of the International association of oil and gas producers (IOGP) benchmark for CO2 intensity of our upstream oil and gas portfolio.

Who is entitled to benefit from these incentives?

Other C-Suite Officer

Types of incentives

Monetary reward

Activity incentivized

Emissions reduction target

Comment

Target for EVP DPN: Achieve CO2 emission reductions of 2 million tonnes in 2030, compared to 2017. Similarily the other members of the Corporate Executive Committe has targets linked to their respective Business area targets. Individual performance goals are established to define the individual's role in contributing to Equinor's ambitions and strategies. As a part of the annual performance appraisal, the leader concludes his/her performance assessment based on "what and how" the individual has performed throughout the year. The conclusions is manifested with an adjustment upwards/downwards of the individual's annual variable pay per cent within the financial framework given by corporate PL.

Who is entitled to benefit from these incentives?
All employees

Types of incentives
Monetary reward

Activity incentivized
Efficiency target

Comment
General bonus based on an overall assessment of the company's performance in 2017: In 2017, Equinor delivered on its strategy, continued its investment in high quality next generation portfolio, and strengthened its financial position. The serious incident frequency had a positive development and came in at target and CO2 emissions intensity was reduced by more than 10%.

Who is entitled to benefit from these incentives?
All employees

Types of incentives
Recognition (non-monetary)

Activity incentivized
Other, please specify (Best practice projects)

Comment
The CEO's sustainability award is awarded annually, with the purpose of driving and rewarding significant efforts within environment, climate and social responsibility. In 2017, the CEO's sustainability price was awarded to Hammerfest LNG for a CO2 emission reduction initiative.

Who is entitled to benefit from these incentives?
Environmental, health, and safety manager

Types of incentives
Monetary reward

Activity incentivized
Efficiency target

Comment
Energy efficiency targets/KPIs related to operational efficiency are commonly used for sustainability managers throughout the company. In our process for managing people development, deployment, performance and reward (People@Equinor), we set goals for what and how we want to deliver as teams andindividuals, and to drive our personal development. Employees' performance is assessed in a holistic way, including both assessment of "what we deliver" and "how we deliver".

C2. Risks and opportunities

C2.1

(C2.1) Describe what your organization considers to be short-, medium- and long-term horizons.

	From (years)	To (years)	Comment
Short-term	0	1	In the context of climate change the risk horizons tend to be longer than for other business risks. However, Equinor's enterprise risk management process consists of a more thorough assessment of potential impacts, probabilities and uncertainties on a running 12 months horizon. Hence the short term horizon is set to 1 year. Risk issues further out in time are assessed qualitatively, and illustrated on a risk issues radar on a 1-3 years horizon or a beyond 3 years horizon. Additionally, a quantitative stress test is conducted against IEA scenarios, with a long term horizon (2040).
Medium-term	1	3	In the context of climate change the risk horizons tend to be longer than for other business risks. However, Equinor's enterprise risk management process consists of a more thorough assessment of potential impacts, probabilities and uncertainties on a running 12 months horizon. Hence the short term horizon is set to 1 year. Risk issues further out in time are assessed qualitatively, and illustrated on a risk issues radar on a 1-3 years horizon or a beyond 3 years horizon. Additionally, a quantitative stress test is conducted against IEA scenarios, with a long term horizon (2040).
Long-term	3	20	In the context of climate change the risk horizons tend to be longer than for other business risks. However, Equinor's enterprise risk management process consists of a more thorough assessment of potential impacts, probabilities and uncertainties on a running 12 months horizon. Hence the short term horizon is set to 1 year. Risk issues further out in time are assessed qualitatively, and illustrated on a risk issues radar on a 1-3 years horizon or a beyond 3 years horizon. Additionally, a quantitative stress test is conducted against IEA scenarios, with a long term horizon (2040).

C2.2

(C2.2) Select the option that best describes how your organization's processes for identifying, assessing, and managing climate-related issues are integrated into your overall risk management.

Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes

C2.2a

(C2.2a) Select the options that best describe your organization's frequency and time horizon for identifying and assessing climate-related risks.

	Frequency of monitoring	How far into the future are risks considered?	Comment
Row 1	Six-monthly or more frequently	>6 years	The corporate executive committee (CEC) and Equinor ASA board of directors (BoD) review and monitor sustainability issues, including climate-related business risks and opportunities. Enterprise risk management updates are held with the BoD each year. Sustainability related risk factors and risk issues and climate-related business risks and opportunities are addressed in these discussions. The BoD safety, sustainability and ethics committee (BoD SSEC) assists the BoD in its supervision of the company's sustainability policies, systems and principles. This includes two reviews per year of sustainability risk factors and risk issues, including those related to climate change; regular reviews of sustainability performance; the review of the sustainability reporting strategy and materiality assessment; and the review of the draft sustainability reporting products. These risk reviews are brought to and discussed in the CEC before submittal to the BoD SSEC.

C2.2b

(C2.2b) Provide further details on your organization's process(es) for identifying and assessing climate-related risks.

Equinor's risk management process is based on ISO31000 Risk management – principles and guidelines. The process provides a standardised framework and methodology for assessing and managing risk. A standardisation of the process across Equinor ASA and its subsidiaries allows for comparable risk levels and efficiency in decisions and it enables the organisation to create sustainable value while seeking to avoid incidents. The process seeks to ensure that risks are identified, analysed, evaluated and managed. Risk adjusting actions are subject to a cost benefit evaluation (except certain safety or integrity related risks which could be subject to specific regulations).

Enterprise and task risk management in Equinor follows a common, corporate-wide documented process valid for all parts of our business. It includes non-negotiable requirements, a specific work process and good practice guidance. These governing documents have a prominent place in our management system which is available to all employees and relevant for all entities.

Equinor regularly assesses climate-related business risk, whether political, regulatory, market, physical or related to reputation impact, as part of the enterprise risk management process. This includes assessment of both upsides (opportunities) and downsides. Equinor uses tools such as internal carbon pricing, scenario analysis and sensitivity analysis of the project portfolio against various oil and gas price assumptions. We monitor technology developments and changes in regulation and assess how these might impact the oil and gas price, the cost of developing new assets and the demand for oil and gas and opportunities in renewable energy and low carbon solutions.

This risk management process is based on a bottom-up risk identification, assessment, action-setting and reporting process combined with a top-down assessment. Climate-related risks are included in those processes, and their types will depend on the nature of the business (e.g. physical impacts for operations entities, market related risks/transition risks for units making investment decisions and/or marketing oil and gas, market risks (including upside risk) for our renewables activities and general risks such as reputation, litigation, market, regulation and technology development at company level).

We use both quantitative and qualitative assessment methods. Pre-defined risk factor checklists are available in support of these assessments, including for climate. The bottom-up process is complemented with a top-down risk identification and assessment carried out by corporate functions and through leadership teams' risk review meetings.

Additionally, to assess energy transition-related risks, Equinor conducts an annual sensitivity analysis ("stress test") of its project portfolio (equity production and expected production from accessed exploration acreage) against the assumptions regarding commodity and carbon prices in the International Energy Agency's (IEA) energy scenarios, as laid out in their "World Economic Outlook 2017" report. (Ref. page 69 in 2017 Annual Report and Form 20-F; https://www.Equinor.com/content/dam/Equinor/documents/annual-reports/2017/Equinor-annual-report-20f-2017.pdf).

An effect on Equinor's expected net present value beyond 5% is considered substantive.

Risks that are identified at a medium or lower level in the organization, are discussed in management teams' risk review meetings and are either managed at that level or lifted to the next level, and might be reported to and reviewed by the Corporate Executive Committee and the Board, or the relevant Board's committee. This reporting to the CEC and the Board or Board's committee takes place every six months.

Furthermore, Equinor is making its own scenario analyses which informs identification and assessment of long-term risk issues, and the alternative price scenarios mentioned above. (Ref. Equinor's Energy Perspectives).

C2.2c

(C2.2c) Which of the following risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Understanding of potential changes in relevant regulation, e.g related to: - taxation of GHG emissions (e.g. Norwegian CO2 taxes and EU emission allowances), - emission monitoring and reporting, - low-emission solutions in field development particularly in Norway where all new field developments are required to assess electrification This applies to all relevant parts of our organization, and forms basis for risk assessments.
Emerging regulation	Relevant, always included	Emerging policies and regulations are followed closely by relevant offices, for example in our offices in Brussels and Washington, and sustainability staff in our business areas. EU's Industry Emission Directive is a specific example. Another example is monitoring of potential introduction of GHG taxes in new countries, or changes to existing taxes (e.g Norwegian CO2 tax or EU ETS quota prices). Such regulatory risk assessments form the basis for Equinor's internal carbon price assumptions used in investment analysis.
Technology	Relevant, always included	Because of Equinor's strategic direction towards a low carbon future, many teams address technology related risks (upside/downside), for example related to CCUS, hydrogen, low CO2 intensity solutions, improvements in methane emissions and application of renewables in oil and gas production.
Legal	Relevant, always included	Ongoing and emerging climate-related litigation is monitored, and potential effects on policy-making assessed. The focus is on litigations that may affect energy companies in jurisdictions where we operate (e.g. Chevron's filed claim to include Equinor as defendant in California climate change lawsuits, and the lawsuit by environmental groups against the Norwegian state on Arctic drilling).
Market	Relevant, always included	Potential future changes in demand for our products (oil, gas and renewable energy in key markets) are analysed in our "Energy Perspectives" which is published annually. This publication for 2018 contains market-related analyses and discussions of global energy demand (fuel mix outlook, power sector outlook, energy demand in transport), the global oil market, the global gas market, and renewable energy.
Reputation	Relevant, always included	Climate-related issues are always part of our assessments of reputational risks. A current example is stakeholders' views on the oil and gas industry, and potential activism from environment-oriented NGOs, e.g. the recent demonstrations against potential exploration activities in the Great Australian Bight and NGO opposition against our activities in the Barents Sea.
Acute physical	Relevant, sometimes included	Changes in physical climate parameters could impact Equinor's operations, for example through restrained water availability, rising sea level, changes in sea currents and increasing frequency of extreme weather events. Although Equinor's facilities are designed to withstand extreme weather events, there is significant uncertainty regarding the magnitude of impact and time horizon for the occurrence of physical impacts of climate change, which leads to considerable uncertainty regarding the potential impact on Equinor. As most of Equinor's physical assets are located offshore, the most relevant potential physical climate impact is expected to be rising sea level.
Chronic physical	Relevant, always included	Changes in physical climate parameters could impact Equinor's operations, for example through restrained water availability, rising sea level, changes in sea currents and increasing frequency of extreme weather events. As most of Equinor's physical assets are located offshore, the most relevant potential physical climate impact is expected to be rising sea level.
Upstream	Relevant, always included	Equinor is mainly an upstream energy producer, as such our key upstream climate related risks are some of the risks types described above including the company specific examples, e.g. carbon pricing, regulatory changes (e.g. power from shore, access to hydrocarbon resources) and climate related litigation.
Downstream	Relevant, always included	Equinor does not have a downstream branch, but is selling crude oil, refined oil products, liquified gas products, natural gas and electricity on commodity markets or on contracts with downstream companies for further distribution, processing or manufacturing. Hence risks in this area are covered by some of the risk types described above e.g. regulatory, technology and market

C2.2d

(C2.2d) Describe your process(es) for managing climate-related risks and opportunities.

Climate considerations are integrated in our vision, strategy and performance management. Both our Corporate Executive Committee and our Board of Directors frequently discuss the business risks and opportunities associated with climate change, including regulatory, market, technological and physical risk factors. We stress test our portfolio against IEA's World Energy Outlook scenarios on an annual basis. The analysis covers all accessed acreage from exploration licenses to fields in production over the lifetime of the assets.

Our management of climate-related risks and opportunities follows the same approach as outlined in C2.2b. Once upside and downside risks have been identified and assessed, mitigating or value-enhancing actions including indications of responsible persons, are proposed and agreed upon. Such action setting is an integral and mandatory part of our risk management process. Actions are reported and followed up in the Risk Management tool in MIS, which is part of our main tool for performance management, also called "Ambition to Action". The proposed actions are reviewed and possibly modified by management at a higher

level. If relevant, a risk and the relevant action(s) can be shared with another entity, and responsibility agreed upon. If an action requires significant investments, a project will be initiated and the case matured through feasibility, concept select and concept definition phases before a final investment decision is taken.

Actions will stay and be followed up on a regular basis (frequency defined by each business area), until it is closed. Additionally, in support of improving CO2 emissions, a corporate KPI and target on carbon intensity has been established for our upstream portfolio. Furthermore, Equinor applies an internal carbon price of minimum USD 50 per tonne carbon dioxide equivalents from 2020 to all potential projects and investments. In countries where the actual carbon price is higher than USD 50 (e.g. in Norway), Equinor uses the actual price and predicted future carbon price in the investment analysis.

Transition risk

An example of a transition risk is that stricter climate regulations and climate policies could impact Equinor's financial outlook, whether directly through changes in taxation and regulation, or indirectly through changes in consumer behaviour. This comprehensive risk area is managed by a set of approaches, e.g.

- through the implementation of the 'Equinor Climate Roadmap',

- by embedding climate principles into our decision making including a corporate-wide requirement for the assessment of carbon intensity and emission reduction opportunities, and also application of an internal carbon price of minimum USD 50 per tonne carbon dioxide equivalents from 2020 to all potential projects and investments.

- by specific discussions of climate-related risks in the CEC and the BoD

- and by analyzing potential future impacts in line with the recommendations from Financial Stability Board's Task Force on Climate-related Financial Disclosure (TCFD).

All of these are informed by scenario analyses described in our 'Energy Perspectives'. All the approaches above stem from actions identified through strategy and performance management processes, including risk management, and are now either institutionalized as requirements, firmly followed up towards identified targets or established as regular processes.

Transition opportunity

An example of a transition opportunity identified and acted upon by Equinor is the earlier establishment of New Energy Solutions as a separate business area in Equinor (2015), and subsequent CAPEX potential per year of around USD 500-750 million in renewables/new energy solutions in the period 2017-2020, and further growth towards 750-1500 million USD annually invested in the years 2020-2025. This significant move for the company is a response to an early identification of expected changes in energy systems and that our company should take part in the shaping of this. Hence this transition opportunity is reflected in our strategic vision "Shaping the future of energy", in our strategic objectives and top level actions and goals.

Physical risk

An example of a physical risk is a potential rise of sea level. Information from IPCC reports on this topic has informed definition of design basis for new offshore facilities. An example is the case of the ongoing development of the Johan Sverdrup field for which the air gap (distance from normal sea level to lowest deck) was augmented by 10% compared to the required air gap at the time of submission of the PDO (Plan for Development and Operations).

Physical opportunity

Increasing temperatures creates in general a larger demand for electric power for cooling purposes. This is in support of a market for power generated in wind and solar farms, and potentially also for gas for power generation. Drivers for changes in demand for energy products are analysed in our 'Energy Perspectives' report.

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

Transition risk

Primary climate-related risk driver

Policy and legal: Increased pricing of GHG emissions

Type of financial impact driver

Policy and legal: Increased operating costs (e.g., higher compliance costs, increased insurance premiums)

Company- specific description

It is expected that EU ETS emission quota prices will increase significantly after 2020. In addition, there is a possibility that CO2 prices outside Norway and EU will increase. This would imply higher production costs due to higher taxes and/or quota prices on our GHG emissions and could potentially make some marginal projects less likely. However, Equinor's production in Norway is already underlain Norwegian CO2 taxation (2/3 of existing production is already subject to CO2 tax) and EU climate quota regulations.

Time horizon

Medium-term

Likelihood

Very likely

Magnitude of impact

Low

Potential financial impact

Explanation of financial impact

Equinor conducts an annual sensitivity analysis ("stress test") of its project portfolio (equity production and expected production from accessed exploration acreage) against the price assumptions in the International Energy Agency's (IEA) energy scenarios. The sensitivity analysis for 2017 demonstrated a positive impact of around 20% on Equinor's net present value (NPV) when replacing Equinor's relevant price assumptions with the price assumptions in the IEA's New Policies Scenario, a positive impact of 42% for the Current Policies Scenario, and a negative NPV impact of approximately 13% for the Sustainable Development Scenario. Increased carbon price had limited effect.

Management method

Our management method includes the use of an internal carbon price and evaluation of carbon intensity in our investment decisions, the use of energy scenarios to inform our strategy and planning, stress testing and monitoring of climate policy and regulatory outlook in relevant countries. For all projects outside of Norway, we apply a minimum carbon price of USD 50 in all investment analysis pertaining to projects after 2020, to ensure that the effect of a potential higher future carbon cost is taken into account in our investment decisions, and to make our project portfolio robust toward such potential increases. For projects in Norway, we apply the actual carbon cost (around USD 60 per tonne CO2 in 2017). A key methodology in our project development processes is the 'Design to Cost' approach. This methodology implies that cost-driving solutions above minimum are challenged early in the project development phases, and by applying a cost on carbon the solutions driving GHG emissions are challenged similarly. See description of how we stress test our portfolio in "Explanation of financial impact" above.

Cost of management
0

Comment
The management cost for this risk issue is negligible because carbon price sensitivity is integrated into our investment analysis.

Identifier
Risk 2

Where in the value chain does the risk driver occur?
Direct operations

Risk type
Transition risk

Primary climate-related risk driver
Technology: Costs to transition to lower emissions technology

Type of financial impact driver
Technology: Costs to adopt/deploy new practices and processes

Company- specific description
Other regulatory risks related to climate change include potential direct regulations, for example requirements to assess the use of power from shore for offshore fields at the Norwegian Continental Shelf. This could impact Equinor's operational costs. If this risk realizes, it is expected that installations and plants with lowest abatement costs will be targeted first. A mitigation measure would be to execute voluntary plant modification projects. An example of what we are evaluating is the possibility of supplying power from land to three platforms (Troll C, Sleipner Field Centre, Gudrun) that are currently powered by gas turbines.

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
Medium-low

Potential financial impact

Explanation of financial impact
The financial impact of potential replacement of offshore power generation based on natural gas with hydroelectric power from shore would consist of investment costs, changes in annual operations costs and reduced annual CO2 taxes and quota costs.

Management method
Projects for electrification of offshore platforms with power from shore will be managed as any major project in Equinor's project portfolio, following well established project development work processes. The projects will follow a phased approach consisting in feasibility, concept select, definition and execution phases with decision gates at the end of each phase. By carrying out these early phase assessments, we are able to identify the best business cases for such emission reduction initiatives, enhance our ability to stay in control of which measures to implement, instead of being potentially instructed to implement. An example is the potential electrification of Troll C, Sleipner and Gudrun (as mentioned above) which would imply a reduction in CO2 emissions of 600,000 tonnes per year.

Cost of management

Comment
Management costs for investment projects, including electrification projects, would typically be in the area of 10-15 % of total investment costs.

Identifier
Risk 3

Where in the value chain does the risk driver occur?
Direct operations

Risk type
Transition risk

Primary climate-related risk driver
Policy and legal: Mandates on and regulation of existing products and services

Type of financial impact driver
Policy and legal: Increased operating costs (e.g., higher compliance costs, increased insurance premiums)

Company- specific description
New US EPA regulations (subpart OOOOa) that target methane emissions have become effective in the US that have impacted our onshore operations through increased CAPEX and operational costs e.g. through purchase of infrared (FLIR) cameras for methane leakage detection, contract support for inspections, repair costs that resulted from the inspections. Some uncertainty does exist regarding future US state and federal methane regulations on oil and gas production, however, impacts are anticipated to be minimal since we have lowered methane emissions over 80% since 2014 and will continue to implement methane reductions as part of our Climate Roadmap.

Time horizon
Long-term

Likelihood
About as likely as not

Magnitude of impact
Low

Potential financial impact

Explanation of financial impact
These numbers are cost estimates for equipment upgrades/replacement to reduce emissions, based on recent projects. The compliance costs related to potential upcoming regulations on existing emission sources will depend on the nature of the regulation.

Management method
Technology will continue to play a strong supporting role in managing emission identification and reduction opportunities. Equinor has dedicated research personnel and funding to focus on this issue. Research and Technology (R&T) personnel have been involved in various internal and external initiatives to mature our understanding of this challenge and are investigating new technologies for more robust and cost-effective ways to manage methane emissions. In 2017, as part of Equinor's Climate Roadmap project, we surveyed methane emissions in our US onshore operations using optical path laser spectroscopy (OPLS) to establish methane baselines in each operating area so that emission reductions could be prioritized and implemented in the near term to ensure compliance with the regulations.

Cost of management
5000000

Comment
Costs incurred are mainly related to asset-specific emissions identification and reduction activities.

Identifier
Risk 4

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

Risk type
Transition risk

Primary climate-related risk driver
Market: Uncertainty in market signals

Type of financial impact driver
Market: Reduced demand for goods and/or services due to shift in consumer preferences

Company- specific description
There is continuing uncertainty over demand for oil and gas after 2030, due to factors such as technology development, climate policies, changing consumer behaviour and demographic changes. Equinor uses scenario analysis to outline different possible energy futures. Technology development and increased cost-competitiveness of renewable energy and low-carbon technologies represent considerable upside with some threats for Equinor. As an example, the development of battery technologies could allow more intermittent renewables to be used in the power sector. This could impact Equinor's gas sales, particularly if subsidies of renewable energy in Europe were to increase and/or costs of renewable energy were to significantly decrease. On the other hand, Equinor’s renewable energy business could be impacted if such subsidies were reduced or withdrawn. As such, there is significant uncertainty regarding the long-term implications to costs and opportunities for Equinor in the transition to a lower-carbon economy.

Time horizon

Long-term

Likelihood
More likely than not

Magnitude of impact
Medium-low

Potential financial impact

Explanation of financial impact
Equinor has analysed the sensitivity with changing the oil and gas prices and keeping other parameters constant, of its project portfolio (equity production and expected production from accessed exploration acreage) against the assumptions regarding commodity and carbon prices in the International Energy Agency's (IEA) energy scenarios, as laid out in their "World Economic Outlook 2017" report. The sensitivity analysis demonstrated a positive impact of around 20% on Equinor's net present value (NPV) when replacing Equinor's price assumptions as of 1 December 2017 with the price assumptions in the IEA's New Policies Scenario, a positive impact of 42% when using the price assumptions in the Current Policies Scenario, and a negative NPV impact of approximately 13% when using the price assumptions in the Sustainable Development Scenario. Furthermore, Equinor's expectations is to significantly grow investments in New Energy Solutions (to 15-20% of CAPEX per year by 2030).

Management method
Our management method is described in C2.2d. It includes research and technology development, diversification into new products/, carbon intensity and emission reduction targets and reduction of costs. Some examples/cases are: 1. Establishment of a separate business area for new energy solutions and the following investments in wind and solar farms (expected that this could amount to 15-20% of annual capex by 2030) 2. Through cost reduction initiatives achieved efficiency improvements of USD 1,3 billion in 2017, and established a next generation portfolio of 3.2 billion barrels with a breakeven price of USD 21. 3. Through CO2 emission reduction measures achieved a CO2 intensity of around 3 kg/boe (100% basis) for our next generation portfolio. 4. Through R&D efforts. Equinor's target is to reach a 25% share of R&D expenditure committed to energy efficiency and low carbon projects by 2020.

Cost of management
55000000

Comment
In 2017, our R&D expenditure committed to projects within low carbon technologies and energy efficiency was USD 55 million (18% of total R&D expenditure). Of these USD 55 million, USD 19 million were spent on CCUS and renewables and the rest on projects related to energy efficiency Capital expenditure (capex) for new energy solutions during 2017 was in line with the ambition for annual investments of between USD 500 million and 750 million.

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
Markets

Primary climate-related opportunity driver
Use of public-sector incentives

Type of financial impact driver
Increased revenues through access to new and emerging markets (e.g., partnerships with governments, development banks)

Company- specific description
Incentives for renewable energy production and targets in many jurisdictions create opportunities for Equinor within offshore wind and other renewable energy sources. Within EU, Equinor's offshore wind projects in the UK and Germany are benefitting from such incentives. Similarly, incentive regimes are under discussion for our projects in Poland as well as in the US. Tax and fiscal incentives in Argentina and Brazil to promote development of renewable energy have been important factors for our solar projects in such countries. Our strategy indicates a growth ambition within new energy solutions from around 500 million USD in capex 2017 to 750-1500 million USD annually invested in the years 2020-2025 and a potential of constituting up to 15-20% of total corporate capex in 2030. (Indicative, based on potential future corporate portfolio).

Time horizon
Medium-term

Likelihood
Very likely

Magnitude of impact
Medium-high

Potential financial impact

Explanation of financial impact
The financial impact is the result of increased revenues, and related investment and operational costs. Net present value is expected to be positive. Equinor has indicated a CAPEX potential per year of around USD 500-750 million in renewables/new energy solutions in the period 2017-2020. Source: Statoil Capital Markets Update 2017: https://www.equinor.com/content/dam/statoil/documents/ir/events-and-presentations/statoil-september-business-update-incl-2q17-260917.pdf Wind farm projects so far had an internal rate of return in the order of 9% to 11%.

Strategy to realize opportunity
Our management method includes R&D activities, pilot projects and investments in projects through joint ventures. Equinor's business area "New Energy Solutions" manages investments in offshore wind projects (fixed and floating), solar and other new energy solutions. By the end of 2017, Equinor had four wind projects in operation: Hywind Demo (Norway), Sheringham Shoal UK), Dudgeon (UK) and Hywind Scotland (UK). Arkona (Germany), Dogger Bank (UK) and Empire Wind (US) are offshore wind projects under development. See 2017 Sustainability Report page 22 for more information about our offshore wind projects. Additionally, through our Equinor Energy Venture Fund, we plan to invest up to USD 200 million in new energy solutions over the next 4-7 years.

Cost to realize opportunity
500000000

Comment
During 2017 Equinor had a capital expenditure (capex) spending of about USD 5 00 million related to already sanctioned projects within new energy solutions. Expected CAPEX to new energy solutions going forward is described in "Explanation of financial impacts". Additionally, in 2017 the share of the total research and development (R&D) operating expenditure allocated to new energy solutions and energy efficiency remained at approximately the same level as for 2016, at 18%. Equinor's target is to reach a 25% share of R&D operational expenditure committed to low carbon projects by 2020.

Identifier
Opp2

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Resilience

Primary climate-related opportunity driver
Resource substitutes/diversification

Type of financial impact driver
Other, please specify (Attractiveness)

Company- specific description
Equinor's approach to create a low carbon advantage as laid out in our Climate Roadmap could strengthen the company's reputation, the attractiveness on the stock market, as well as strengthen employee motivation and talent attraction. This approach consists of a number of specific goals and measures for building a lower carbon oil and gas portfolio and creating a material

industrial position in new energy solutions. Examples are: - Reduce CO2 emissions by 3 million tonnes per year by 2030, compared to 2017 - Achieve a portfolio carbon intensity of 8 kg CO2/boe by 2030 - Eliminate routine flaring by 2030 - Develop new energy solutions with a potential to represent around 15-20% of CAPEX by 2030 - Utilise up to 25% of research funds to new energy solutions and energy efficiency by 2020 - Invest USD 200 million through our new energy venture fund - Partner in the USD 1 billion OGCI Climate Investments - Continued support for carbon pricing - Apply an internal carbon price of USD 50 per tonne CO2 (or higher if local prices are higher) - Embed climate risk and performance into strategy, incentives and decision making - Amplify our climate actions through collaboration Equinor is already a leader in the industry on carbon intensity. We believe maintaining this position while growing renewables and low carbon energy solutions will help Equinor to manage the energy transition smoothly – and at the same time position us to ensure a competitive advantage in a low carbon world. Equinor was awarded the Rystad Energy ''green initiator of the year'' award in February 2018, in recognition of our climate strategy and environmental goals, and the energy improvement measures we have implemented in recent years, through a company culture that enables contributions from across the company.

Time horizon
Long-term

Likelihood
More likely than not

Magnitude of impact
Medium-low

Potential financial impact

Explanation of financial impact
Quantitative assessments are not available. We consider attracting and retaining talent as important to remain competitive.

Strategy to realize opportunity
For Equinor our regular reputation surveys in key markets (general public) demonstrate that climate and environment performance are key drivers for trust and reputation. Therefore Equinor's Climate Roadmap (as described above) has been extensively communicated to external and internal stakeholders, including presentations at several universities and events relevant for recruitment like the Norwegian University of Science and Technology (NTNU), NHH Norwegian School of Economics , Harvard, MIT, Duke, Yale, Columbia, Imperial College and Climate Week NYC). Equinor has experienced a good effect on number and relevance of applications for graduate positions of this external outreach. In a survey among 12000 students from 26 universities and colleges in Norway, Equinor was ranked as the most attractive employer among technology students. The study from April 2018 is described here: https://universumglobal.com/thanks-1/rankings-emea/ In an internal context there has been a comprehensive engagement through our ‘climate ambassadors program’, numerous presentations in and support to leadership teams, and with unions.

Cost to realize opportunity
1300000

Comment
Equinor spend an estimate of USD 1,3 mill. annually to support recruitment communication related to our climate roadmap. This includes recruitment fairs, student outreach and brand activities.

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

Type of financial impact driver
Increased revenue through demand for lower emissions products and services

Company- specific description
Through our activities within carbon capture, utilisation and storage (CCUS), we are building capabilities and a competitive position for future business opportunities (e.g. injection and storage of CO2 from 3rd party customers), also influencing positively Equinor’s attractiveness as a business partner. This would imply a new revenue stream related to disposal of CO2 gas from customers, and would also be basis for solutions for decarbonised hydrogen as an energy product which would also be a flexible solution to backup intermittent renewables in Europe. In 2017, Equinor was tasked to lead studies of behalf of the Norwegian authorities to develop full-scale CCS in Norway. The concept includes capturing CO2 emissions from onshore industrial plants in Norway and

transporting it by ships to an onshore terminal, from which it will be injected and permanently stored it in a reservoir 1000-2000 meters below the seabed. Equinor also submitted a project of common interest proposal to the EU in 2017 covering CO2 ship transportation between emission points in the Netherlands and the UK and Norwegian storage sites.

Time horizon
Long-term

Likelihood
More likely than not

Magnitude of impact
Medium-high

Potential financial impact

Explanation of financial impact
The financial impact of this potential future business opportunity would be the bottom line result of revenues from 3rd party customers for disposal of their CO2 gas in our storage solutions, reduced taxes and/or quota costs for avoided CO2 emissions from own operations, minus investment and operating costs.

Strategy to realize opportunity
Our strategy to realise this opportunity includes R&D, pilot projects and a concept studies. Equinor has long been a pioneer in CCUS, and we are currently operating some of the largest carbon capture and storage projects worldwide (Sleipner and Snøhvit fields in Norway). This has demonstrated the technical viability of CCUS. Additionally, Equinor is operating 'Test Center Mongstad' the world's largest facility for testing and improving CO2 capture. In 2016, Equinor participated in a Norwegian government-led study that confirmed the feasibility of offshore carbon storage on the Norwegian continental shelf. The next phase is a front end engineering and design study for CO2 storage, and Equinor was assigned a contract for this purpose in 2017, and shortly after Equinor entered into a partnership with Shell and Total to mature this opportunity jointly. Equinor has a broad portfolio of R&D projects with the objective of reducing costs and risks for CCUS. Examples are innovative facility concepts and smart monitoring of CO2 injection.

Cost to realize opportunity

Comment
In 2017 the share of the total research and development (R&D) operating expenditure allocated to new energy solutions and energy efficiency remained at approximately the same level as for 2016, at 18%. Statoil's target is to reach a 25% share of R&D operational expenditure committed to low carbon and energy efficiency projects by 2020.

Identifier
Opp4

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Resource efficiency

Primary climate-related opportunity driver
Use of more efficient production and distribution processes

Type of financial impact driver
Reduced operating costs (e.g., through efficiency gains and cost reductions)

Company- specific description
Equinor has a target to implement CO2 emission reduction measures equivalent to 3 million tonnes annually from its emissions between 2017 and 2030 and continues to make progress towards this goal. A significant portfolio of projects and initiatives has been established through 2017 with variable maturity to accomplish the 2030 commitments. Emission reductions of this size constitute a significant reduction in total CO2 emissions from our operated assets which for 2017 was 15,4 million tonnes of CO2, and will be important for achieving the carbon intensity goal of 8 kg CO2/boe in 2030. Several CO2 emission reduction initiatives were implemented in 2017, amounting to a total of around 360,000 tonnes of CO2. The largest contributor was energy efficiency measurements at Hammerfest LNG in which annual CO2 emissions were cut by 120,000 tonnes creating annual savings of about NOK 50 million. The CO2 emissions of the projects in our next-generation portfolio of USD 21 breakeven will be around 3 kilos per barrel.

Time horizon
Medium-term

Likelihood

Likely

Magnitude of impact
Low

Potential financial impact

Explanation of financial impact
The financial impact of energy efficiency measures is the result of reduced CO2 costs (taxes and quotas), less maintenance costs if energy consuming facilities are less used, higher revenues because gas can be sold on the market rather than being used for own power generation, and potentially higher investments and other operations costs. Almost all of the energy efficiency projects are NPV positive with a payback time of 3 to 4 years

Strategy to realize opportunity
To reach our emission reduction ambitions we have established KPIs, KPI incentives, performance monitoring and follow-up. We have engaged broadly with employees to create climate awareness including e-learning and climate ambassador courses. An example of top management attention is hat emission reduction initiatives have received the CEO Sustainability award. Equinor has a target to implement CO2 emission reduction measures equivalent to 3 million tonnes annually from its emissions between 2017 and 2030 and continues to make progress towards this goal. Several CO2 emission reduction initiatives were implemented in 2017, amounting to a total of around 360,000 tonnes of CO2. The largest contributor was energy efficiency measurements at Hammerfest LNG in which annual CO2 emissions were cut by 120,000 tonnes creating annual savings of about NOK 50 million. A significant portfolio of projects and initiatives has been established through 2017 with variable maturity to accomplish the 2030 commitments. Examples are related to reduction of non-routine flaring, optimisation of process conditions, reduced water injection rates, and energy efficiency measures. We also aim to reduce the carbon intensity of our upstream oil and gas portfolio to 8 kg CO2/boe by 2030

Cost to realize opportunity

Comment
The CAPEX level was around USD 10 million for these initiatives in 2017 for our operations in Norway.

Identifier
Opp5

Where in the value chain does the opportunity occur?
Customer

Opportunity type
Products and services

Primary climate-related opportunity driver
Development of new products or services through R&D and innovation

Type of financial impact driver
Increased revenue through demand for lower emissions products and services

Company- specific description
Reformation of natural gas into hydrogen, combined with permanent storage of released CO2, constitutes a new business opportunity. If successful, hydrogen could become a new decarbonised energy product (e.g. for heating and cooling of buildings, power generation and heavy transportation fuel) in Equinor’s portfolio. One of the projects that we're working together with Nuon and Gasunie on in the Netherlands is to convert CCGT, a gas fired power plant, and to run that on clean hydrogen. The use of hydrogen for this purpose would offer a flexible backup for intermittent renewable sources. Equinor is also looking at using the gas distribution network in the North of England, convert that to be run on hydrogen, and we do believe that liquid hydrogen would be and is a viable solution to decarbonize the heavier parts of the transportation segments, such as shipping. This would create a significant market for hydrogen as an energy product.

Time horizon
Long-term

Likelihood
About as likely as not

Magnitude of impact
Medium

Potential financial impact

Explanation of financial impact
Financial impact would be bottom line outcomes of a new business line.

Strategy to realize opportunity
Strategy to realise this opportunity consists in R&D initiatives and early phase projects including those in collaboration with others, for example the project we are working on together with Nuon and Gasunie on in the Netherlands is to convert CCGT, a gas fired power plant, and to run that on clean hydrogen.

Cost to realize opportunity

Comment
The cost for the first projects will be about twice the level of current natural gas solutions. The added cost includes all elements for making the energy solution clean, such as CO2 management. There is potential to reduce the extra cost with targeted technology development, more projects and standardization (economy of scale)

Identifier
Opp6

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

Type of financial impact driver
Increased revenue through demand for lower emissions products and services

Company- specific description
An opportunity identified and acted upon by Equinor is the earlier establishment of New Energy Solutions as a separate business area in Equinor (2015), and subsequent CAPEX potential per year of around USD 500-750 million in renewables/new energy solutions in the period 2017-2020, and further growth towards 750-1500 million USD annually invested in the years 2020-2025. This significant move for the company is a response to an early identification of expected changes in energy systems and that our company should take part in the shaping of this. Hence this transition opportunity is reflected in our strategic vision “Shaping the future of energy”, in our strategic objectives and top level actions and goals.

Time horizon
Medium-term

Likelihood
Very likely

Magnitude of impact
Medium

Potential financial impact
12000000000

Explanation of financial impact
Equinor's investment ambitions towards 2030 within the New Energy Solutions business area.

Strategy to realize opportunity
Equinor's intends to create a material industrial position in new energy solutions. Main strategic elements are: - Develop new energy solutions with a potential to represent around 15-20% of CAPEX by 2030 - Utilise up to 25% of research funds to new energy solutions and energy efficiency by 2020 - Invest USD 200 million through our new energy venture fund

Cost to realize opportunity
19000000

Comment
R&D in renewables and carbon capture in 2017.

C2.5

(C2.5) Describe where and how the identified risks and opportunities have impacted your business.

	Impact	Description
Products and services	Impacted	The identified risks and opportunities related to climate change have impacted our business in several ways. In the area of products and services some examples are: - Establishment of New Energy Solutions as a new business area, and subsequent large investments (about USD 500 million in 2017) with a potential to constitute around 15-20% of annual CAPEX in 2030. - The transaction to divest Equinor's 100% owned Kai Kos Dehseh (KKD) oil sands projects in the Canadian province of Alberta. Following this transaction Equinor no longer owns or operates any oil sand assets. - The European gas demand has increased by more than 70 Bcm over the last three years. An important component of European gas demand growth is the electricity sector, where gas generation is gaining ground at the expense of coal due to rising coal and CO2 emission prices. - The role Equinor has been awarded in the front end engineering and design studies for CO2 storage as part of a CCS value chain - The early phase studies of developing solutions for conversion of natural gas to hydrogen (ref. https://www.equinor.com/en/news/evaluating-conversion-natural-gas-hydrogen.html)
Supply chain and/or value chain	Impacted for some suppliers, facilities, or product lines	In the supply chain the logistics area has particularly been impacted by measures related to climate change, encompassing technical, operational and fuel related measures to achieve results. Examples are battery-hybridization and LNG powered supply vessels, shore-power supply for vessels, optimising sailing routes and planning for green vessel speed maximising vessel and helicopter capacity utilisation and a truck pool with the highest euro class. We focus on fuel efficiency when entering into new vessel contracts; incentive schemes further encourage suppliers to ensure fuel efficient operations. (Ref. https://www.equinor.com/en/how-and-why/climate-change/the-supply-chain.html)
Adaptation and mitigation activities	Impacted for some suppliers, facilities, or product lines	Equinor's facilities are largely constructed to withstand more severe weather impacts within safety margins. Numerous mitigating measures to reduce emissions have been implemented and more are expected in the future. Examples are the decision to provide hydroelectric power from shore for the Johan Sverdrup field which is under development, and measures to significantly reduce flaring in our US Onshore Bakken operations (ref. https://www.equinor.com/en/how-and-why/climate-change/flaring.html)
Investment in R&D	Impacted	Equinor has a focused R&D activity related to low carbon and energy efficiency, with an expected 25% share of our total R&D budget in 2020. For example we have a broad portfolio of R&D projects with the objective of reducing costs and risks for CCUS, like on innovative facility concepts and smart monitoring of CO2 injection
Operations	Impacted	Equinor introduced in 2017 a new portfolio target for CO2 emissions per barrel produced, delivering 20% reductions by 2030 – from 10kg to 8kg – well below the industry average. This target entails emission reductions of 3 million tonnes of CO2 by 2030, compared to 2017. In combination with other reductions, the already delivered savings in Equinor's upstream and midstream activities and the new 2030 target amount to around 5 million tonnes of CO2 reductions (ref. https://www.equinor.com/en/news/2030-climate-roadmap.html)
Other, please specify	Not impacted	

C2.6

(C2.6) Describe where and how the identified risks and opportunities have factored into your financial planning process.

	Relevance	Description
Revenues	Impacted	Our activities related to business opportunities in renewable energy production were organized into a new business area (New Energy Solutions – NES) in 2015. As for all other business areas, NES carries out financial planning according to Equinor requirements and practices. Future prognoses for oil and gas revenues are based on production prognoses and oil, gas and CO2 price forecasts, which take into account expected and potential effects stemming from climate change. The same approach is used in business case analyses for investment decisions.
Operating costs	Impacted	Costs related to existing CO2 taxes and quota prices are included as cost elements in our financial planning. These costs are calculated based on CO2 emission prognoses.
Capital expenditures / capital allocation	Impacted	CAPEX estimates for approved emission reduction projects and CAPEX estimates of the portfolio of potential future projects are included in our financial planning. Similarly, CAPEX estimates for our New Energy Solutions business area are included.
Acquisitions and divestments	Impacted	Equinor is no longer exploring for heavy oil, and will no longer own or operate any oil sands assets.
Access to capital	Not yet impacted	
Assets	Impacted for some suppliers, facilities, or product lines	The transaction to divest Equinor's 100% owned Kai Kos Dehseh (KKD) oil sands projects in the Canadian province of Alberta has had an impact on our financial planning.
Liabilities	Not yet impacted	
Other	Not evaluated	

C3. Business Strategy

C3.1

(C3.1) Are climate-related issues integrated into your business strategy?

Yes

C3.1a

(C3.1a) Does your organization use climate-related scenario analysis to inform your business strategy?

Yes, qualitative and quantitative

C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b)

(C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b) Indicate whether your organization has developed a low-carbon transition plan to support the long-term business strategy.

Yes

C3.1c

(C3.1c) Explain how climate-related issues are integrated into your business objectives and strategy.

i) How the business strategy has been influenced: In 2017 Equinor launched a new strategy with the strategic goals "Always safe; High value; Low carbon", embedding "low carbon" as a strategic principle at the core of the strategy. The strategy outlines Equinor's ambition to develop from a focused oil and gas company to a broad energy company that is competitive in a low carbon economy.

ii) Example of how the business strategy has been influenced: Our strategic response to climate change is outlined in our Climate roadmap, which was established to support the "low carbon" strategic goal. It sets out an action plan and clear 2030 targets within the following areas: a) Build a high value, lower carbon oil and gas portfolio; b) Create a material industrial position in new energy solutions; and c) Accountability and collaboration.

iii) What aspects of climate change have influenced the strategy: The key aspects that have influenced the strategy are risks and opportunities related to changing energy markets, policy and regulatory changes and technology development. We shape our portfolio according to our strategic principles "Always safe, High value, Low carbon" to stay competitive in a carbon constrained world.

iv) How the short term strategy has been influenced by climate change: In Equinor's short term strategy, maintaining a competitive carbon footprint in our own operations is key. To achieve this, we have established an ambitious carbon intensity target for 2020 (9kg CO2/boe produced). Industry average is 17kg CO2/boe produced. Furthermore, our target is to commit 25% of our R&D spending on low carbon technologies and energy efficiency by 2020. Over the last year we have through our recently established New Energy Solutions business area made significant investments in offshore wind and in solar. We expect annual capex to new energy solution sto be around USD 500-750 the next years.

v) How the long term strategy has been influenced by climate change: Equinor is one of the world's most carbon efficient oil and gas producers, and our ambition is to maintain this position. To achieve this, we have established 2030 targets for upstream carbon intensity (8kg CO2/boe produced) and emission reductions. We expect that annual CAPEX to new energy solutions could be around 15-20% in 2030. We apply a minimum internal carbon price of USD 50 per tonne CO2 to all projects in our investment analysis.

vi) How we build a competitive advantage; Equinor is already an industry leader in carbon efficiency. In 2016 CDP ranked us as the oil and gas company best prepared for a low carbon future ("In the pipeline" report). Now we are further embedding climate into our strategy. We do this in two ways: First, we are building a high value oil and gas portfolio with a lower carbon footprint, ensuring that the right hydrocarbons are produced and that they are produced as carbon and cost efficiently as possible. Second, we are building a material industrial position in new energy solutions. Our strategy enables us to capture business opportunities arising from energy transition. At the same time, diversificaiton makes us more resilient both strategically and financially. Equinor embraces the energy transition as an opportunity for sustainable growth. We believe maintaining our position as an industry leader in carbon efficiency while growing renewables and low carbon energy solutions will help Equinor to manage the energy transition smoothly – and at the same time position us to ensure a competitive advantage in a low carbon world.

vii) What have been the most substantial business decisions made in 2017 that have been influenced by the climate change driven aspects of the strategy;

• Launched a new corporate strategy, with "low carbon" as core principle (Capital Markets Update, February 2017).

• Investment decision in Arkona, a 400 MW offshore wind farm in Germany.

• Won the tender regarding evaluation of permanent carbon storage on the Norwegian continental shelf (NCS). The contract was awarded by Gassnova on behalf of Norwegian authorities. This will be the first storage site in the world receiving CO2 from industrial sources.

• Invested in a joint venture with Scatec Solar and acquired a 40% share in the construction ready 162MW Apodi solar asset in Brazil.

• Initiated a project with Gasunie and Nuon to convert a gas fired power plant to run on hydrogen in Netherlands.

• Signed a three-year contract with the Norwegian government, Shell and Total, to extend carbon capture testing at the Technology Centre Mongstad (TCM).

• Awarded a contract to Younicos to deliver a 1MW battery system that will be connected to Hywind Scotland, as part of the Batwind project in collaboration with Masdar.

In 2017, Equinor furhter embedded climate principles into decision-making. This included the introduction of a corporate-wide requirement for the assessment of the carbon intensity and emission reduction opportunities for all potential projects and investments.

viii) How the Paris Agreement has influenced the business strategy (e.g. the process of transition planning alongside the ratcheting of Intended Nationally Determined Contributions (INDCs)): The Climate roadmap explains how Equinor plans to deliver on our strategic ambition to create a low carbon advantage and develop our business in support of the ambitions of the Paris climate agreement and of the United Nations sustainable development goals (SDGs) 7 and 13. The Climate roadmap responds to risks and opportunities arising from the energy transition and emphasises collaboraiton. An example is Equinor's participation in the Oil and Gas Climate Initiative (OGCI) to accelaratee the oil and gas industry's response to climate change.

ix) Forward-looking scenario analyses, including a 2°C scenario, to inform our organization's businesses, strategy, and/or financial planning: Equinor publishes an annual analysis of the long term macro and energy market outlook, including scenario analysis in our "Energy perspectives" report. This includes a scenario ("Renewal) that is aligned with the 2DC ambition (Energy Perspectives 2017; Energy Perspectives 2018). The analysis informs strategy, risk aassessment and financial planning. In addition, Equinor conducts an annual stress test towards the IEA's scenarios (World Economic Outlook). The resulst in 2017 demonstrated that the ''New policies scenario'' could have a positive impact of around 20% and the ''Current policies scenario'' a positive impact of around 42% on Equinor's baseline NPV compared to Equinor's internal planning assumptions as of 1 December 2017. The "Sustainable development scenario", which is largely compatible with a global warming of a maximum of two degrees Celsius with 50% probability, could have a negative impact of approximately 13% on Equinor's NPV.

C3.1d

(C3.1d) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenarios	Details
IEA Sustainable development scenario	To implement our Climate roadmap, we have focused on three broad areas for our Equinor operated portfolio: • Realising a lower carbon oil and gas portfolio • Building an industrial position in new energy • Stress testing our portfolio and disclosure of climate-related business risk. Equinor has for several years tested all investment projects after 2020 against a global CO2 price of USD 50 per tonne (or higher in countries where a higher price is used and/or predicted) and we have a high share of production with relatively low CO2 intensity. This makes our portfolio robust against the introduction of higher CO2 costs in all regions where we are present. 60% of forecast CAPEX in 2025 is related to activities that have not yet been sanctioned, so there is a significant potential for continued investments in high value oil and gas projects, renewable energy and low carbon solutions. Conventional oil and gas is forecasted at 75% of total production in 2025, while heavy oil contributes less than 4%. The analysis conducted in 2017 demonstrated that due to the significant differences in assumptions around oil and gas prices in the different IEA scenarios, the impact on Equinor's net present value (NPV) varies significantly in the various scenarios. Due to the combination of a high CO2 price used by Equinor in internal planning assumptions, and a relatively low CO2 intensity (around half of the industry average19) the changes in value are almost entirely driven by the oil and gas price assumptions. IEA's ''New policies scenario'' could have a positive impact of around 20% and the ''Current policies scenario'' a positive impact of around 42% on Equinor's baseline NPV compared to Equinor's internal planning assumptions as of 1 December 2017. The "Sustainable development scenario", which is largely compatible with a global warming of a maximum of two degrees Celsius with 50% probability, could have a negative impact of approximately 13% on Equinor's NPV. Portfolio optimisation and efficiency improvements have substantially strengthened the robustness of our portfolio during the past few years, and despite the negative impact on NPV in the ''sustainable development scenario'', we see very limited stranding of assets. Equinor's portfolio continued to improve its robustness in 2017 compared to 2016 – achieving a breakeven oil price of USD 21 per barrel for next generation projects. This analysis is based on Equinor's and the IEA's energy scenario assumptions which may not be accurate and which are likely to develop over time as new information becomes available. Scenarios should not be mistaken for forecasts or predictions. Accordingly, there can be no assurance that the assessment is a reliable indicator of the actual impact of climate change on Equinor's portfolio.

C-AC3.1e/C-CE3.1e/C-CH3.1e/C-CO3.1e/C-EU3.1e/C-FB3.1e/C-MM3.1e/C-OG3.1e/C-PF3.1e/C-ST3.1e/C-TO3.1e/C-TS3.1e

(C-AC3.1e/C-CE3.1e/C-CH3.1e/C-CO3.1e/C-EU3.1e/C-FB3.1e/C-MM3.1e/C-OG3.1e/C-PF3.1e/C-ST3.1e/C-TO3.1e/C-TS3.1e) Disclose details of your organization's low-carbon transition plan.

Sustainability means not only lower greenhouse gas emissions, but also higher standards of living for billions of people in emerging economies. Higher standards of living require, among other things, improved access to electricity and clean energy. The simultaneous pursuance of climate targets and welfare targets could, unless efforts are coordinated and shaped to minimize the risk of progress in one area driving set-backs in the other, lead to stalemate on both counts. In the developed regions of the world, the link between economic growth and energy demand growth appears to have been broken. Replicating this achievement on a global scale, and ensuring that remaining energy demand growth does not drive emission growth, are tremendous challenges. Possible future outcomes for global energy demand and fuel mix therefore vary significantly, depending on many interacting and very uncertain factors. This is particularly true when we look beyond the near future towards 2050, as we do for the first time in the 2017 edition of Energy Perspectives.

As before, we therefore present three significantly different tales of the future, or scenarios, from now and onwards. The scenarios rest on different assumptions about regional and global economic growth, technological developments, market behaviour, conflict levels and implications, and energy and climate policies. Since political and policy developments are unpredictable, we refrain from ascribing probabilities to the individual outlooks. All the scenarios are possible. We hope that they together provide a realistic impression of the very wide outcome space for developments in global energy.

The central scenario, Reform, proceeds from current macroeconomic and energy market trends and – in climate policy terms – from the Nationally Determined Contributions (NDCs) in the Paris agreement, with a gradually less prevalent role for market-correcting policies as market-based solutions drive and deliver energy efficient and low-carbon technologies.

Renewal is as before a story about a technically possible, but very challenging pathway to energy-related CO2 emissions consistent with the 2° target for global warming. It includes rapid and coordinated policy changes, accelerated energy efficiency improvements, and large changes in the global energy mix driven by revolutionary development in electricity generation and parts of the transport sector.

Rivalry is a story about a multipolar world, characterised by mounting distrust in conventional politics and policy making, populism, protectionism and geopolitical conflict, and where focus on security of supply and other priorities overshadow global climate targets. Average global economic growth ranges from 1.9% to 2.6% per year, with global GDP in 2050 at between 1.9 and 2.6 times that of the level in 2014. Improvements in energy efficiency are larger than the progress that was achieved between 1990 and 2014 in all scenarios, but vary significantly, resulting in total primary energy demand in 2050 being 6% lower (Renewal), 25% higher (Reform) or 30% higher (Rivalry) than in 2014. The challenge in Renewal is particularly daunting: Global GDP is 170% higher in 2050 than today, but demand for energy is 10% lower. The future global energy mix also varies significantly: Oil demand in 2050 varies between 63 and 123 million barrels per day, reflecting annual average growth rates between -1.1% and 0.8%, respectively. Gas demand in 2050 varies between 2,900 and 4,550 billion cubic metres (bcm), compared to 3,385 bcm in 2014. There is significant need for new investments in both oil and gas in all scenarios, since production from existing reserves cannot keep up with demand development. Coal demand is the most important key to global CO2 emission levels in our scenarios – average annual growth rates vary between -3.1% and 0.4%, resulting in coal demand in 2050 between 30% and 110% of the 2014 level. New renewable sources of electricity, in particular solar and wind, will grow significantly in importance, delivering between 8 and 18 times more electricity in 2050 than in 2014. Global energy-related CO2 emissions in 2050 vary enormously, between 13.5 and 39.5 billion tons, or 42-123% of the emission level in 2014.

In 2016 our stress test, using the IEA's 450 two degrees celsius scenario, showed a positive impact of 6% over our assumptions. The difference is largely related to significantly different oil and gas price assumptions in the IEA scenario which now includes factors such as access to energy and reduction of pollution, alongside climate goals.

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

Scope
Scope 1

% emissions in Scope
100

% reduction from base year
20

Base year
2016

Start year
2017

Base year emissions covered by target (metric tons CO2e)
14802856

Target year
2030

Is this a science-based target?
No, but we anticipate setting one in the next 2 years

% achieved (emissions)
12

Target status
Underway

Please explain
We are committed to delivering energy CO2 emission reductions of 3 million tonnes of CO2 by 2030, compared to the start of 2017. We are on track with delivering reductions towards 2030. In 2017 a total of 355.000 tonnes of CO2 were reported saved through reduction measures. Equinor defines emission reductions as follows: The total estimated quantity of CO2 resulting from CO2 emission reduction projects/initiatives passing DG4 maturity level on Statoil operated activities/assets in production. At DG4 a project is handed over to production and is declared completed. Equinor's targets are based on emission forecasts, assumed portfolio changes, assumptions regarding potential improvements and technical development. There is considerable uncertainity in all future targets since prerequisites and portfolio may change. Equinor has chosen to set targets for 2030 as uncertainity increases the longer ahead we provide estimates for. Equinor focuses on reducing our own emissions according to the «polluter pays principle». In addition we have considerable growth ambitions in low carbon R&D and renewable investments. Our investment criteria takes into consideration the different energy scenarios, including a 2 degree scenario.

Target reference number
Abs 2

Scope
Scope 1

% emissions in Scope
61

% reduction from base year
11

Base year
2007

Start year
2008

Base year emissions covered by target (metric tons CO2e)
10483970

Target year
2020

Is this a science-based target?
No, but we anticipate setting one in the next 2 years

% achieved (emissions)
100

Target status
Replaced

Please explain
For our offshore operations in Norway, we are committed to delivering CO2 emission reductions of 1.2 million tonnes of CO2 per year by 2020, compared to 2007. The original target set in 2008 was to save 800,000 tonnes of CO2 per year by 2020. Over 250 large and small energy efficiency projects implemented by the end of 2016 enabled us to achieve that target already in 2015. As a result, we raised the 2020 target by 50%. This revised target was achieved in 2017. Equinor's targets are based on emission forecasts, assumed portfolio changes, assumptions regarding potential improvements and technical development. There is considerable uncertainity in all future targets since prerequisites and portfolio may change. Equinor has chosen to set targets for 2030 as uncertainity increases the longer ahead we provide estimates for. Equinor focuses on reducing our own emissions according to the «polluter pays principle». In addition we have considerable growth ambitions in low carbon R&D and renewable investments. Our investment criteria takes into consideration the different energy scenarios, including a 2 degree scenario.

C4.1b

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

Target reference number
Int 1

Scope
Scope 1

% emissions in Scope
62

% reduction from baseline year
10

Metric
Other, please specify (kg CO2/boe)

Base year
2016

Start year
2017

Normalized baseline year emissions covered by target (metric tons CO2e)

10

Target year
2020

Is this a science-based target?
No, but we anticipate setting one in the next 2 years

% achieved (emissions)
100

Target status
Underway

Please explain
The target was set in 2016, when the CO2 intensity upstream was 10kg/barrel of oil equivalent (boe). At the end of 2017 our upstream CO2 intensity was 9kg CO2/barrel of oil equivalent (boe). Still, we see our target as challenging to reach, given several mature fields in our portfolio. We have established a KPI and a 2020 target of 9kg CO2/barrel of oil equivalent (boe) for our upstream (exploration and production) activities. We believe that the target is ambitious, but achievable, and it reflects our ambition to be an industry leader in carbon efficiency. To further enhance this ambition, upstream carbon intensity is incorporated as a key performance indicator at corporate level. However, it should be noted that the development in absolute scope 1 emissions is dependent on overall production.

% change anticipated in absolute Scope 1+2 emissions
-10

% change anticipated in absolute Scope 3 emissions
0

Target reference number
Int 2

Scope
Scope 1

% emissions in Scope
62

% reduction from baseline year
20

Metric
Other, please specify (kg CO2/boe)

Base year
2016

Start year
2017

Normalized baseline year emissions covered by target (metric tons CO2e)
10

Target year
2030

Is this a science-based target?
No, but we anticipate setting one in the next 2 years

% achieved (emissions)
50

Target status
Underway

Please explain
The target was set in 2016, when the CO2 intensity upstream was 10kg/barrel of oil equivalent (boe). At the end of 2017 our upstream CO2 intensity was 9kg CO2/barrel of oil equivalent (boe). Still, we see our target as challenging to reach, given several mature fields in our portfolio. The corporate KPI on kg CO2/barrel of oil equivalent (boe) for our upstream (exploration and production) activities has a long term target in 2030 of 8. This is a tough, but still achievable target. However, it should be noted that

the development in absolute scope 1 emissions is dependent on asset portfolio and production development. Equinor's targets are based on emission forecasts, assumed portfolio changes, assumptions regarding potential improvements and technical development. There is considerable uncertainity in all future targets since prerequisites and portfolio may change. Equinor has chosen to set targets for 2030 as uncertainity increases the longer ahead we provide estimates for. Equinor focuses on reducing our own emissions according to the «polluter pays principle». In addition we have considerable growth ambitions in low carbon R&D and renewable investments. Our investment criteria takes into consideration the different energy scenarios, including a 2 degree scenario.

% change anticipated in absolute Scope 1+2 emissions
-20

% change anticipated in absolute Scope 3 emissions
0

C4.2

(C4.2) Provide details of other key climate-related targets not already reported in question C4.1/a/b.

Target
R&D investments

KPI – Metric numerator
Annual research expenditures used on new energy solutions and energy efficiency technologies.

KPI – Metric denominator (intensity targets only)
Total annual research & development expenditures (USD).

Base year
2016

Start year
2017

Target year
2020

KPI in baseline year
18

KPI in target year
25

% achieved in reporting year
0

Target Status
Underway

Please explain
The KPI is measured as the share (%) of total annual R&D expenditures that is allocated to low carbon/energy efficiency. The basis for technologies and research activities includes: energy efficiency, CCUS and/or decarbonisation, methane emissions, wind, solar and other renewables. Technologies included must have a business case definition with documented low carbon potential. The technologies may have effect on scope 1, 2 or 3 of Equinor’s emissions.

Part of emissions target
Our R&D investment target supports both our intensity and emission reductions targets through maturing new low emission technology.

Is this target part of an overarching initiative?
No, it's not part of an overarching initiative

Target
Other, please specify (New energy solutions CAPEX)

KPI – Metric numerator
Annual capex potential for Equinor's new energy business (USD million)

KPI – Metric denominator (intensity targets only)

Base year
2016

Start year
2017

Target year
2030

KPI in baseline year
500

KPI in target year
1500

% achieved in reporting year
100

Target Status
Underway

Please explain
We will grow significantly within new energy solutions and expect to invest around 15-20% of our annual capital expenditure (capex) in new energy solutions by 2030. Equinor expects annual investments in the range of 500-750 million USD towards 2020, and 750-1500 million USD between 2020 and 2025. Capital expenditure (capex) for new energy solutions during 2017 was in line with the ambition for annual investments of between USD 500 million and 750 million.

Part of emissions target

Is this target part of an overarching initiative?
No, it's not part of an overarching initiative

C-OG4.2a

(C-OG4.2a) Explain, for your oil and gas production activities, why you do not have a methane-specific emissions reduction target or do not incorporate methane into your targets reported in C4.2; and forecast how your methane emissions will change over the next five years.

Equinor's methane emissions are very low compared to the industry average, and we have in our Climate Roadmap declared that we will ensure that the methane emissions from our gas value chain to Europe are below 0.3% of gas delivered to the market. We have not set a companywide methane target, but are rather focusing on specific reduction measures, company specific technical requirements, development of detection/reduction technologies and sharing best practice within the oil and gas industry. We are also contributing to the process of setting a common methane target for the Oil and Gas Climate initiative (OGCI). Eni has set a target of reducing fugitive methane emissions by 80 % within 2025. Equinor is already below Eni's planned emission level 8 years from now. BP's has set a methane intensity target of 0.2 % by 2025. In 2017 the corresponding methane intensity for Equinor was 0.02%.

For our production and processing of gas in Norway the methane leakage rate is 0.017 %, compared to an average of 0.4% for all gas consumed in Europe (source: NGVA/thinkstep 2017). In the US the methane leakage rate for Equinor's gas production is 0.08%, compared to an industry average of 1.2 % (source: NETL 2018). Equinor's total methane emissions are only about 3 % of the total GHG emissions. Through OGCI Equinor is committed to work towards zero methane emissions. We have also signed the Methane Guiding Principles on reducing methane emissions that was launched Nov 2017. In addition we participate in methane reduction initiatives like CCAC oil and gas methane partnership, OneFuture, and API environmental partnership. Equinor considers to set a separate target for methane reduction during 2018. Equinor's total methane emissions were 20.100 tonnes in 2017. We are working with the Norwegian authorities to improving the quantification methodologies for our downstream operations in Norway. This may result in lower reported numbers for coming years due to methodical changes. When it comes to actual reductions we expect that planned measures will result in about 10-15 % reduction the next five years. Given the current low emission level this will require significant efforts and investments.

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 projects at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of projects	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	2	110000
To be implemented*	25	61493
Implementation commenced*	7	24200
Implemented*	38	247831
Not to be implemented	2	53000

C4.3b

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

Activity type
Energy efficiency: Processes

Description of activity
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
1250

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
130000

Investment required (unit currency – as specified in CC0.4)
20000

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment
Reduced gas consumption due to updated software (MPC monitoring process control) for destillation column. These columns can now be operated with reduced pressure and in a lower energy consumption operational area. Kalundborg

Activity type
Energy efficiency: Processes

Description of activity
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
4400

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
470000

Investment required (unit currency – as specified in CC0.4)
50000

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment
Change of material in the gas drying unit giving shorter regeneration time, lower regeneration gas flowrate and fewer regeneration cycles. The energy reduction is impacting the fuel gas consumption. Hammerfest

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Activity type
Energy efficiency: Processes

Description of activity
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
3900

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
410000

Investment required (unit currency – as specified in CC0.4)
10000

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment
Change of gas routing from flare to fuelgas. The gas from off gas drum used to be flared due to high N2 content. New analysis results after RS2016 show acceptable N2 content and the gas is now used as fuel gas. Mongstad

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Activity type
Energy efficiency: Processes

Description of activity
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
12500

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
1330000

Investment required (unit currency – as specified in CC0.4)
400000

Payback period
<1 year

Estimated lifetime of the initiative
16-20 years

Comment
Hammerfest. New inlet pipe to N2 stripper installed. The new one is in stainless steal, the old one was in aluminum. Now it is possible to significant increase the flow and hence the energy consumption for cooling is reduced. 2,5 MW in reduction.

Activity type
Energy efficiency: Processes

Description of activity
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
10000

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
1060000

Investment required (unit currency – as specified in CC0.4)
1500000

Payback period
1-3 years

Estimated lifetime of the initiative
16-20 years

Comment
Hammerfest. Change of antisurge vent part 2 (trim), has made it is possible to reduce and tune the antisurge in much larger extent., and fuel gas consumption is reduced

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Activity type
Energy efficiency: Processes

Description of activity
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
10000

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
1060000

Investment required (unit currency – as specified in CC0.4)
600000

Payback period
<1 year

Estimated lifetime of the initiative
16-20 years

Comment
Hammerfest. Reduce flaring during trip. Second stage of modification: Change of vent (aktuator). The new one closes within 1 min, the old one used 20 min (gives less flaring). Calculations are based on 8 trips/yr.

Activity type
Energy efficiency: Processes

Description of activity
Machine replacement

Estimated annual CO2e savings (metric tonnes CO2e)
37

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
0

Investment required (unit currency – as specified in CC0.4)
40000

Payback period
11-15 years

Estimated lifetime of the initiative
6-10 years

Comment
Kalundborg. Change of several pumps which are more energy efficient.

Activity type
Energy efficiency: Processes

Description of activity
Machine replacement

Estimated annual CO2e savings (metric tonnes CO2e)
36

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
0

Investment required (unit currency – as specified in CC0.4)
30000

Payback period
4 - 10 years

Estimated lifetime of the initiative
6-10 years

Comment
Kalundborg. Change of engine to product blender/mixer. The new one is more energy efficient.

Activity type
Energy efficiency: Processes

Description of activity
Machine replacement

Estimated annual CO2e savings (metric tonnes CO2e)
68

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
10000

Investment required (unit currency – as specified in CC0.4)
60000

Payback period
4 - 10 years

Estimated lifetime of the initiative
6-10 years

Comment
Kalundborg. Change of 28 engines to air-cooler ventilators.

Activity type
Process emissions reductions

Description of activity
New equipment

Estimated annual CO2e savings (metric tonnes CO2e)
8500

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
900000

Investment required (unit currency – as specified in CC0.4)
10000

Payback period
<1 year

Estimated lifetime of the initiative
16-20 years

Comment
Hammerfest. Change of strainers in cooling circulation. Pressure loss is reduced and less energy consumption during start-up.

Activity type
Energy efficiency: Processes

Description of activity
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
12500

Scope
Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
1330000

Investment required (unit currency – as specified in CC0.4)
100000

Payback period
<1 year

Estimated lifetime of the initiative
16-20 years

Comment
Hammerfest. Removal of ice-formations in heat exchanger. Installed drain vent and changed operational procedures; avoiding humidity and increased flow. The result is reduced loading of compressors and reduced gas consumption.

Activity type
Energy efficiency: Processes

Description of activity
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
9500

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
1010000

Investment required (unit currency – as specified in CC0.4)
1000000

Payback period
<1 year

Estimated lifetime of the initiative
16-20 years

Comment
Hammerfest. Change of antisurge vent part 2 (trim). Now it is possible to reduce and tune the antisurge in much larger extent. Larger effect than earlier estimated.

Activity type
Energy efficiency: Processes

Description of activity
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
5500

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
580000

Investment required (unit currency – as specified in CC0.4)
10000

Payback period
<1 year

Estimated lifetime of the initiative
16-20 years

Comment
Hammerfest. Change of set-point in controller to the cooling process. The compressors are now on lower gas consumption.

Activity type
Energy efficiency: Processes

Description of activity
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
28

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
0

Investment required (unit currency – as specified in CC0.4)
500000

Payback period
>25 years

Estimated lifetime of the initiative
6-10 years

Comment
Kalundborg. Change of two mixers (TK-1301 /TK-1302)

Activity type
Process emissions reductions

Description of activity
Changes in operations

Estimated annual CO2e savings (metric tonnes CO2e)
600

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
80000

Investment required (unit currency – as specified in CC0.4)
10000

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment
Tjeldbergodden. New procedure during trip of syntese production gives less gas to flare, since the gas is routed to primary reformer.

Activity type
Energy efficiency: Processes

Description of activity
Machine replacement

Estimated annual CO2e savings (metric tonnes CO2e)
2700

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
290000

Investment required (unit currency – as specified in CC0.4)
400000

Payback period
1-3 years

Estimated lifetime of the initiative
6-10 years

Comment
Mongstad. Installed new soot blowers (SG-1531/2). Increased steam production and reduced loading of the boilers. 12 of 20 are replaced.

Activity type
Energy efficiency: Processes

Description of activity
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
6480

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
690000

Investment required (unit currency – as specified in CC0.4)
10000

Payback period
<1 year

Estimated lifetime of the initiative
16-20 years

Comment
Hammerfest. Reduced ventilation of CO2 during test of vents. Due to a new CO2 well, the test routines can change, reducing the emissions of CO2 twice a year.

Activity type
Process emissions reductions

Description of activity
Changes in operations

Estimated annual CO2e savings (metric tonnes CO2e)
35000

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
3720000

Investment required (unit currency – as specified in CC0.4)
10000

Payback period
<1 year

Estimated lifetime of the initiative
16-20 years

Comment
Hammerfest. Closure of one gas turbine during weekdays.

Activity type
Process emissions reductions

Description of activity
Changes in operations

Estimated annual CO2e savings (metric tonnes CO2e)
15870

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
1690000

Investment required (unit currency – as specified in CC0.4)
600000

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment
Kårstø. Revamp of damper and exhaust channel for Åsgard A compressor. Increased integrity and uptime of TEG process.

Activity type
Energy efficiency: Processes

Description of activity
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
10830

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
1150000

Investment required (unit currency – as specified in CC0.4)

10000

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment
Kårstø. Reduced steam production in Åsgard unit due to new procedure. Also installed new vents. And steam is transfered to other units, giving in total less steam production.

Activity type
Energy efficiency: Processes

Description of activity
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
1300

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
162500

Investment required (unit currency – as specified in CC0.4)
25000

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment
Heidrun. Pressure relief back to process instead of routing to flare, flaring avoided

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Activity type
Energy efficiency: Processes

Description of activity
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
4100

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
512500

Investment required (unit currency – as specified in CC0.4)
37500

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment

Åsgard A. Changed operation of a DLE turbine, operating with a closed DDP valve

Activity type
Energy efficiency: Processes

Description of activity
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
800

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
100000

Investment required (unit currency – as specified in CC0.4)
31250

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment
Troll C. Changed pressure in order to reduce compressor work

Activity type
Energy efficiency: Processes

Description of activity
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
1300

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
162500

Investment required (unit currency – as specified in CC0.4)
125000

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment
Heidrun. Automatic regulation of reinjection compressor

Activity type
Process emissions reductions

Description of activity
Changes in operations

Estimated annual CO2e savings (metric tonnes CO2e)

1300

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
162500

Investment required (unit currency – as specified in CC0.4)
12500

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment
Heidrun. Better control of flaring

Activity type
Energy efficiency: Processes

Description of activity
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
460

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
57500

Investment required (unit currency – as specified in CC0.4)
312500

Payback period
4 - 10 years

Estimated lifetime of the initiative
6-10 years

Comment
Statfjord A. Recovery of gas during testing of ASV and GLV valves

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Activity type
Process emissions reductions

Description of activity
Changes in operations

Estimated annual CO2e savings (metric tonnes CO2e)
700

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
87500

Investment required (unit currency – as specified in CC0.4)
106250

Payback period
1-3 years

Estimated lifetime of the initiative
6-10 years

Comment
Troll C, Adjustment of control line at injection compressor

Activity type
Low-carbon energy installation

Description of activity
Solar PV

Estimated annual CO2e savings (metric tonnes CO2e)
2950

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
368750

Investment required (unit currency – as specified in CC0.4)
687500

Payback period
1-3 years

Estimated lifetime of the initiative
6-10 years

Comment
Huldra, Installation of solar cells at Huldra (cold platform) for energy generation

---

Activity type
Process emissions reductions

Description of activity
Changes in operations

Estimated annual CO2e savings (metric tonnes CO2e)
3900

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
487500

Investment required (unit currency – as specified in CC0.4)
62500

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment

Heidrun. Operational measures to reduced flaring

Activity type
Energy efficiency: Processes

Description of activity
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
1900

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
237500

Investment required (unit currency – as specified in CC0.4)
375000

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment
Heidrun. Reduced water rate from well, installed straddle to reduce water rate

Activity type
Energy efficiency: Processes

Description of activity
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
26000

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
3250000

Investment required (unit currency – as specified in CC0.4)
37500

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment
Norne. Shut down of 1 water injection pump, optimized need for water with reservoir engineering

Activity type
Process emissions reductions

Description of activity
New equipment

Estimated annual CO2e savings (metric tonnes CO2e)

822

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
102750

Investment required (unit currency – as specified in CC0.4)
250000

Payback period
1-3 years

Estimated lifetime of the initiative
6-10 years

Comment
Oseberg F. Installation of new N2-package that uses less energy

---

Activity type
Process emissions reductions

Description of activity
Changes in operations

Estimated annual CO2e savings (metric tonnes CO2e)
500

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
62500

Investment required (unit currency – as specified in CC0.4)
43750

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment
Oseberg Sør. Implementation of new flaring strategy

Activity type
Process emissions reductions

Description of activity
Changes in operations

Estimated annual CO2e savings (metric tonnes CO2e)
34700

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
4337500

Investment required (unit currency – as specified in CC0.4)
50000

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment
Gullfaks. Improved follow up of flaring strategy, new tool installed to follow up flaring,

---

Activity type
Process emissions reductions

Description of activity
Changes in operations

Estimated annual CO2e savings (metric tonnes CO2e)
1000

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
125000

Investment required (unit currency – as specified in CC0.4)
37500

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment
Oseberg F. Improved operation of water injection pumps

Activity type
Energy efficiency: Processes

Description of activity
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
7400

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
925000

Investment required (unit currency – as specified in CC0.4)
25000

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment

Kristin. Stop of 1 water injection pump

Activity type
Energy efficiency: Processes

Description of activity
Combined heat and power

Estimated annual CO2e savings (metric tonnes CO2e)
5000

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
62500

Investment required (unit currency – as specified in CC0.4)
10000

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment
Snorre B. Upgrade of speed control on steam turbine, improved operations

Activity type
Energy efficiency: Processes

Description of activity
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
4000

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
500000

Investment required (unit currency – as specified in CC0.4)
10000

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment
Kristin. Removal of strainers, reduced loss of pressure in well, reduced compressor work

C4.3c

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

Method	Comment
Compliance with regulatory requirements/standards	Compliance with external requirements: Equinor's operations in Europe are subject to emissions allowances according to the EU Emissions Trading System (EU ETS). Equinor's Norwegian operations are subject to both the Norwegian offshore CO2 tax and EU ETS quotas. All operating fields and installations in Europe have a discharge permit and a permit for climate quota bound CO2 emissions given by national authorities. The permits include requirements i.a. on energy efficiency, energy management and use of Best Available Technology (BAT) (ref IPPC directive). Compliance to the requirements are followed up locally and are continuously being monitored by the authorities during frequent audits. In the US, the Environmental Protection Agency has taken steps to regulate greenhouse gas emissions under the Clean Air Act authority by proposing a Clean Power Plan (CPP). The plan aims to reduce emissions from the US power sector by setting performance standards for power plants. In 2015, the EPA also proposed new source performance standards, in addition to those issued in 2012, targeting volatile organic compound emissions, that are intended to further reduce oil and gas methane emissions. For our US operations, the USEPA's new source performance standards (NSPS) on the federal level set restrictions on venting gas so that gas from hydraulic fracturing flowbacks, tank ventilations systems, etc., is captured and flared or put in the sales line instead of being vented to the atmosphere. In North Dakota, however, the state additionally requires operators to implement a gas capture plan to reduce the amount of produced gas being flared thereby increasing the volume of gas going to sales in a phased approach to 2020. Regulations on methane emissions in the USA are likely to be revised over the next years with stricter requirements for existing emission sources. This could lead to increased costs for onshore shale activities. The exact impact is unknown and will depend on the nature of the regulations. Compliance with internal requirements: Requirements for use of BAT; minimum requirements for energy efficiency, non- production flaring or evaluation requirements for CO2 reduction projects are part of our corporate technical requirements/ corporate policies. Non-compliance with the internal requirement requires a formal dispensation and a mitigation plan.
Dedicated budget for energy efficiency	Equinor's internal requirements demand that annual Energy Management Plans are established for each facility/installation. This plan should contain an energy efficiency target and the list of potential initiatives to achieve the target. When approved by the facility/installation manager, budget will be allocated. Plan and expenditure are closely monitored during the year.
Dedicated budget for low-carbon product R&D	Equinor's total R&D investment has been app. 300 million USD on average per year for the last three years. Investments in R&D for carbon reduction technologies such as energy efficiency programme, CCS, offshore wind technologies, energy storing technology and geothermal has received approximately 18% of the annual R&D investment budget. (See 2017 Sustainability report page 25).
Employee engagement	Encouraging cycling to work, arranging for Company buses for transportation between airport and offices and providing bus transportation for commuters between hotel and offices (for larger offices) to reduce use of individual taxi. Approximately 7000 Equinor employees participated in the "Sustainability matters" communication campaign running up to the COP21. In 2017 we arranged "Climate Ambassador training" for our employees, in order to create employee knowledge of and engagement in Equinor's climate roadmap.
Internal price on carbon	Equinor considers the potential cost of a project's CO2 emissions in all investments decisions. We use an internal carbon price of USD 50 per tonne of CO2 to all potential projects and investments after 2020. In countries where the actual carbon price is higher than USD 50 (e.g. in Norway), we use the actual price and predicted future carbon price in our investment analysis.
Internal incentives/recognition programs	Annual CEO Safety and Sustainability (SSU) Award. This is a price which could be proposed by anyone in the organization. In 2018 the CEO's sustainability award was given to the program for CO2 emission reductions at Hammerfest LNG plant.
Other	Konkraft commitment. Target ID: Abs.2 (Listed in question 4.1a). Konkraft, with respect to the climate issue, is an industry led voluntary initiative in partnership with government to drive emission reductions in order to reach future anticipated regulatory requirements.
Marginal abatement cost curve	We have developed Marginal Abatement Curve for evaluating our emissions reduction projects across the company, considering equity, scale and economy. These provide a method of evaluating potential emissions reductions activities by comparing the largest equity CO2 reduction measures and other relevant factors.
Partnering with governments on technology development	In cooperation with Gassnova (which represents the Norwegian government in CCS matters), Norske Shell and Sasol, Equinor started up the Carbon dioxide Technology Centre Mongstad (TCM) in 2012. The 600 million USD test centre is unique in the global context. Two different technologies can be tested on two different exhaust gas sources (Combined heat and power plant and refinery). This makes the findings from TCM relevant to both gas- and coal-fired power plants.
Partnering with governments on technology development	Equinor is evaluating new CO2 storage project on the Norwegian continental shelf . Gassnova has assigned Equinor to evaluate the development of carbon storage on the Norwegian continental shelf (NCS). This will be the first storage site in the world receiving CO2 from several industrial sources. The storage project is part of Norwegian authorities' efforts to develop full-scale carbon capture and storage in Norway. It will capture CO2 from three onshore industrial facilities in Eastern Norway and transport CO2 by ship from the capture area to a receiving plant onshore located on the west-coast of Norway. At the receiving plant CO2 will be pumped over from the ship to tanks onshore, prior to being sent through pipelines on the seabed to several injection wells east of the Troll field on the NCS. There are several possible locations for the receiving plant, and the final choice will be based on criteria such as safety, costs and expansion flexibility. Gassnova has previously been awarded the assignments for carbon capture and transportation in the project. The storage solution to be evaluated by Equinor will have the potential to receive CO2 from both Norwegian and European emission sources. The results of studies performed in 2016 show that it is technically feasible to realise a carbon capture and storage chain in Norway. The next phase of the project, which Equinor has been assigned to perform, will involve concept and pre-engineering studies in order to evaluate the possibilities in more detail, and to get accurate cost estimates towards a possible investment decision. An investment decision for project implementation is expected to be made by the Norwegian Parliament in 2019. The technologies for carbon capture and storage in geological formations are known and established. There are 21 full-scale carbon capture and storage projects worldwide in the development or operations phase. Equinor's CCS projects at Sleipner and Snøhvit are among these, and have given Equinor more than 20 years of operational carbon storage experience. The Norwegian CCS project will be a collaboration project between onshore industry, government authorities and companies with offshore expertise, such as Equinor. Future carbon storage may also help realise a hydrogen market.

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

Product

Description of product/Group of products

Low Carbon Electricity (Offshore wind) in UK . In 2017, we took over operatorship of the Sheringham Shoal wind farm, and started operations at Dudgeon off the Norfolk coast of England and at the first of its kind Hywind floating wind farm in Scotland. We now supply renewable energy to 630,000 households in the UK through our offshore wind farms. Providing clean energy to households substituting electricity from coal plants or gas power plants.

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

Please select

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

Comment

Equinor's New Energy Solutions division was set up in 2015 to drive business development in renewables and low-carbon solutions across Equinor. In 2017 Equinor's new energy solutions activities included offshore wind production, the conclusion of our first investment in solar power, and our entry into partnerships to progress new business opportunities such as creating CO2 transport and storage infrastructure for industrial customers and exploring the use of hydrogen as a fuel in power, heating and transport. Offshore wind - In 2017, we took over operatorship of the Sheringham Shoal wind farm, and started operations at Dudgeon off the Norfolk coast of England and at the first of its kind Hywind floating wind farm in Scotland. We now supply renewable energy to 630,000 households in the UK through our offshore wind farms. With production at Arkona in the Baltic Sea in Germany scheduled to start in 2019, we are on track to supply electricity to more than 400,000 households in Germany by 2019. Equinor is also a partner in the Dogger Bank offshore wind development project off the north-east coast of England. Having achieved consent for an agreed target installed capacity of 4.8 GW, this ranks as the world's largest undeveloped offshore wind project with the potential to supply power to almost 5 million British homes. Equinor is a 50% partner in 3.6 GW of the target installed capacity. In the USA, work has begun on developing and submitting a site assessment plan (SAP) for the New York offshore wind lease, Empire Wind, acquired at the end of 2016.

Level of aggregation

Product

Description of product/Group of products

Norwegian natural gas accounts for more than 20 % of Europe's total natural gas consumption. In 2016 Equinor exported 305 million boe of natural gas to Europe. This represents about two-thirds of Norwegian gas to Europe. Equinor's export of gas to Europe varies from year to year, but is in the order of 400 TWh. This excludes gas that Equinor sells on behalf of others such as the Norwegian state. A significant amount of the gas that Equinor sells to Europe is used in the power sector, potentially replacing coal. A coal fired power plant emits more than twice as much CO2 per kWh electricity as a gas fired power plant. Natural gas therefore plays an important role in reducing power sector emissions in Europe. Theoretically natural gas could reduce CO2 emissions in Germany alone by as much as 280 million tonnes if all lignite and coal power plants were substituted with gas power plants (that would amount to more than 25% reduction in total German CO2 emissions). Assuming that the share of Equinor's gas used for power generation is around 25%, this amounts to 100 TWh. 100 TWh gas can generate 50 TWh of power with emissions of around 20 million tonnes. To generate a similar amount of power from coal, emissions would have been 45 million tonnes, giving savings of around 25 million tonnes. Natural gas also contributes to reduce emissions in other sectors. The remaining gas sold by Equinor, 300 TWh, can be assumed to be used for heating or in industry. When combusted, this gas will emit around 60 million tonnes of CO2.

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

Please select

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

Comment

Level of aggregation
Product

Description of product/Group of products
Low Carbon Product: Hydrogen to enable clean flexible power generation

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 (Feasibility study, early stage.)

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

Comment
With a CO2 storage in place, we have the ability to convert our natural gas into hydrogen. The natural gas can be split into hydrogen and CO2 using steam methane reforming, a well-known technology. If you store the CO2, you have converted your gas into an emission-free gas. The beauty of hydrogen in a gas form is that you can basically use it in all the same segments as you're currently using natural gas. One of the projects that we're working together with Nuon and Gasunie on, in Netherlands is to convert CCGT, gas fire power plant, to run that on hydrogen. And it is very simple, you just have to change the boiler. And this project has a tremendous, and similar projects has a tremendous impact, when it comes to CO2 emission reductions. That single project can take away the equivalent amount of CO2 as 2 million cars. We're also looking at using the gas distribution network in the city of Leeds in the U.K. It can be converted to be run on hydrogen, and we do believe that liquid hydrogen would be and is a viable solution to decarbonize the heavier parts of the transportation segments, such as shipping, for instance.

C-OG4.6

(C-OG4.6) Describe your organization's efforts to reduce methane emissions from oil and gas production activities.

In Norway, since 2014, Equinor has worked together with industry and the environmental regulator, on projects to improve our understanding of methane emission sources – initially in upstream production operations, and more recently in land-based refining and processing activities. Through these projects, an improved understanding of direct methane emission sources, quantification methodologies and abatement opportunities has been achieved. As a result of the offshore-focused project, the emission quantification methodologies used for regulatory reporting have been updated. These updates have increased the precision in our methane quantification and resulted in an approx. 50% reduction in reported methane emissions from direct sources in our NCS operations. A similar quantification methodology improvement process is currently underway for land-based plants in Norway. Using the most appropriate, source-specific methane emissions figures allows us to evaluate and prioritize potential emission reduction opportunities.

In the US, measuring and reducing methane emissions from our US shale gas operations is a key priority for Equinor. For our Bakken asset, we completed during 2017, the upgrading of tank ventilation and flare systems to minimize leaks and ensure that flares can accommodate the tank vapors flowing to them.

Equinor also supports methane emission reductions within the oil and gas industry, as a member of several collaborative initiatives to reduce methane emissions through voluntary programs. Some of the most relevant initiatives and associated key activities undertaken in 2017 are described below:

· **Guiding principles on reducing methane emissions across the natural gas value chain** – We joined with seven other major energy groups, the Environmental Defense Fund and the International Energy Agency, to develop and commit to a series of guiding principles to reduce methane emissions in our own operations, improve regulations and work with suppliers and customers to cut leakage in the entire value chain. The guiding principles were signed in November 2017.

· **The Environmental Partnership** - In the US, we joined the Environmental Partnership, comprised of companies in the US natural gas and oil industry, committed to continuously improving the industry's environmental performance. Through our participation we will, starting in January 2018, implement three specific performance programs focused on minimizing emissions of methane and volatile organic compounds (VOCs) in onshore operations.

· **One Future coalition** - In 2017, Equinor joined the One Future coalition. Member companies are committed to continuously improving their emissions management to assure efficient energy production and delivery. One Future's members include some of the largest natural gas production, processing, transmission and distribution companies in the US representing nearly the entire natural gas value chain.

· **Climate and Clean Air Coalition Oil and Gas Methane Partnership (OGMP)** - Equinor is a founding partner of the OGMP, that was established in 2014. Through this partnership, we are committed to systematically addressing methane emissions from nine 'core' methane emission sources and reporting on annual progress (from 2015). Our offshore, production installations on the NCS, representing nearly 90% of our operated oil and gas production, are included in the scope for this partnership. The 2017 OGMP report will be published in 2018.

· **Oil and gas Climate Initiative (OGCI)** - Through our membership in the OGCI, we provided financial and technical backing for two major global studies of methane emissions from the natural gas value chain. One with UN Environment and the other with Imperial College London. It is anticipated that these could help identify new emission reduction initiatives and provide a scientific foundation to inform policy. We have also committed to work towards near zero methane emissions from the natural gas value chain, and setting a target to be announced by the end of 2018.

COG4.7

(C-OG4.7) Does your organization conduct leak detection and repair (LDAR) or use other methods to find and fix fugitive methane emissions from oil and gas production activities?

Yes

C-OG4.7a

(C-OG4.7a) Describe the protocol through which methane leak detection and repair or other leak detection methods, are conducted for oil and gas production activities, including predominant frequency of inspections, estimates of assets covered, and methodologies employed.

We want to emphasize that LDAR (Leak Detection and Repair) is a generic term which is open to interpretation.

For our upstream, offshore production operations on the Norwegian Continental Shelf and our processing and refining activities in Norway and Denmark, leak detection is carried out using a variety of technical and operational solutions, including e.g. pressure monitoring in pressurized systems, stationary gas detection and regular inspection routines. Stationary gas detection is typically implemented through the installation of IR detectors. Open path / line detectors are used to increase the detection probability of small leaks. Safety critical valves are checked for leakages using nitrogen after actuation and shut downs. Also of note, for our Norwegian, land-based processing and refining facilities, measurement using DIAL (Differential Absorption Lidar) is conducted every three years.

When it comes to inspections, for our upstream, offshore, as well as mid-stream, operations fugitive hydrocarbon emissions are monitored as a part of the regular routines. Each plant is required to define the interval for monitoring of fugitive hydrocarbon emissions, at least once a week. These regular, routine inspections could be described as AVO inspections, were hand-held “sniffer” gas detectors are used to confirm leakages. Each plant maintains a log for fugitive hydrocarbon emissions, where the leakage is described (location, tag numbers, etc.). Necessary actions (corrective maintenance, limitation of nearby activity, shut-down etc.) shall be considered based on size and development of the leakage. When the leakage has been repaired it shall be signed out of the log for fugitive emissions and tags shall be removed. The log for fugitive hydrocarbon emissions shall be updated after performed measurements. Leakages above a specific threshold level are also registered and followed-up in our safety incident management tool, Synergi.

Leakages are identified during inspections using a variety of tools, the most common being “sniffers”. IR-cameras are playing an increasingly relevant role in complementing existing identification and control methods. Many plant-wide OGI inspections have been conducted on our NCS assets in the last couple of years, with each plant subjected to a comprehensive baseline inspection in 2016 or 2017. This “baseline” inspection was also carried-out for plants where IR inspections had been conducted previously and some of these plants were subjected to multiple inspections within 2016-2017.

For our US onshore activities, leak detection and repair (LDAR) programme, in addition to other routine operations and maintenance activities, are also in place to monitor the integrity and functionality of oil and gas processing equipment and emissions sources to ensure that emissions remain low. Emission reduction programs aimed at finding and fixing leakages have been implemented. IR camera are used to support in the identification of emission sources. These programs have prioritized focus on emission sources found from experience to be most relevant to our particular operations, e.g. storage tanks in the Bakken and pneumatic controllers in the Eagle Ford.

In 2017, we extended the use of infrared camera technology, that we are already using for our USA onshore and Norwegian continental shelf (NCS) assets, to our mid-stream facilities in order to understand and quantify the emissions and evaluate potential management options.

In our US operations, we also added optical path laser spectroscopy (OPLS), a cutting-edge technology, to our suite of methane detection and repair measures for our US shale gas operations. This has been used to establish methane baselines through detection and quantification of methane emissions from multiple sources. The methane sensor is mounted on a drone which enables assessment of individual leaks from specific equipment types as well as total emissions from an entire facility. The OPLS data collected in 2017 indicates that measured methane emissions are lower than the EPA Subpart W calculated emissions. Further work is ongoing to validate the methodology for reporting measured methane emissions at operations level in the USA.

C-OG4.8

(C-OG4.8) If flaring is relevant to your oil and gas production activities, describe your organization's efforts to reduce flaring, including any flaring reduction targets.

Flaring is relevant for Equinor's oil and gas production activities, both onshore and offshore. We are working towards a 2020 upstream flaring intensity target of 2 tonnes of gas flared per 1000 tonnes of hydrocarbons produced (0,2% of hydrocarbons produced) for Equinor operated production . This was set in 2012 as part of our commitment to the Sustainable Energy for All global initiative. This compliments our corporate ambition to eliminate production flaring by 2030, in line with our commitment made through our participation in the Global Gas Flaring Reduction initiative that is coordinated by the World Bank Group. We are also committed to working actively to help achieve the same objective in our partner-operated assets.

In 2017, we reduced flaring at our US onshore Bakken asset by 6% compared to 2016 levels through coordination of our midstream and drilling operations. We continue to work together with neighboring partners and technology providers to develop flaring reduction solutions for our US activities.

In Norway, regulation compared with proximity to gas infrastructure have contributed to the relatively low levels of flaring in our upstream operations compared to the industry average. All upstream offshore installations have developed flaring strategies, which describes how upset situations shall be handled, e.g. how fast oil producers with associated gas should be shut down (after 1 hour, 2 hours, 5 hours, etc), if the gas export/injection compressors should fall out. Improved tools (e.g. digitalization and visualization) have also contributed to that it is easier for the operational people to follow up the flaring, and flaring results are on the agenda together with production results in daily and weekly operation meetings. As an example of improved flaring results, due to improved follow up tools and improved focus the Gullfaks field has reduced flaring by 35000 tons CO2/year.

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 2007

Base year end
December 31 2007

Base year emissions (metric tons CO2e)
15222876

Comment

Scope 2 (location-based)

Base year start
January 1 2007

Base year end
December 31 2007

Base year emissions (metric tons CO2e)
106674

Comment

Scope 2 (market-based)

Base year start
January 1 2007

Base year end
December 31 2007

Base year emissions (metric tons CO2e)
1687512

Comment

C5.2

(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.

American Petroleum Institute Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry, 2009
Canadian Association of Petroleum Producers, Calculating Greenhouse Gas Emissions, 2003
Energy Information Administration 1605B
Environment Canada, Sulphur hexafluoride (SF6) Emission Estimation and Reporting Protocol for Electric Utilities
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)
US EPA Mandatory Greenhouse Gas Reporting Rule
Other, please specify (See 5.2a)

C5.2a

(C5.2a) Provide details of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.

- Norwegian Oil and Gas Association (NOROG) - Guideline for annual emissions and discharge report

- EU Emission Trading Scheme- Brazil National/Local reporting requirements (IBAMA)

- Norwegian Directorate of Tax and Excise - emissions of NOx - ISO standard ISO 6976

- Calculation of heating values, density, relative density and Wobbe - ISO 6976

- US EPA Technology Transfer Network Clearinghouse for Inventories and Emissions Factors, Emisson Factors and AP42, Fifth Edition

- European Commission (EC) Eurostat: EC Statistics2006 IPCC Guidelines for Natural Greenhouse Gas Inventories

- US Energy Information Administration

- eGRID Web (Emissions and Generation Resource Integrated Database)

- RE-DISS Reliable Disclosure Systems for Europe Country profiles

C6. Emissions data

C6.1

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

Row 1

Gross global Scope 1 emissions (metric tons CO2e)
15391778

End-year of reporting period
<Not Applicable>

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
Location based Scope 2 emissions are calculated using available regional emissions factor (kg CO2/MWh) for the physical mix available on the local/regional grid. Market based Scope 2 emissions are calculated using RE-DISS residual mix factors (kg CO2/MWh) for countries where GoO (Guarantees of Origin) mechanisms are implemented. For countries without GoO mechanisms, physical mix is used. Available factors do not take CH4 contribution into account.

C6.3

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

Row 1

Scope 2, location-based
257765

Scope 2, market-based (if applicable)
2619064

End-year of reporting period
<Not Applicable>

Comment

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
Scope 2 CH4 from all operations.

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 the source is excluded
CH4 emissions from imported energy are not easily available. They are also negligible compared to CO2 emissions from imported energy.

C6.5

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

Purchased goods and services

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

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

Explanation
Assumed to be negligible in comparison to our main Scope 3 category - "Use of sold products".

Capital goods

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

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

Explanation
Assumed to be negligible in comparison to our main Scope 3 category - “Use of sold products”.

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

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

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

Explanation
Assumed to be negligible in comparison to our main Scope 3 category - “Use of sold products”.

Upstream transportation and distribution

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

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

Explanation
Assumed to be negligible in comparison to our main Scope 3 category - “Use of sold products”.

Waste generated in operations

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

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

Explanation
Assumed to be negligible in comparison to our main Scope 3 category - “Use of sold products”.

Business travel

Evaluation status
Relevant, calculated

Metric tonnes CO2e
54705

Emissions calculation methodology
The emission factors are set by the UK Department of Business, Energy and Industrial Strategy. UK Government GHG Conversion Factors for Company Reporting:https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2016

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Explanation
Based on the "Carbon Report" from our business travel provider "HRG Consulting" for domestic, continental and intercontinental travel in 2016.

Employee commuting

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

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

Explanation
Assumed to be negligible in comparison to our main Scope 3 category - “Use of sold products”.

Upstream leased assets

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

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

Explanation
No upstream leased assets

Downstream transportation and distribution

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

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

Explanation
Assumed to be negligible in comparison to our main Scope 3 category - “Use of sold products”.

Processing of sold products

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

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

Explanation
Assumed to be negligible in comparison to our main Scope 3 category - “Use of sold products”. Our own processing of sold products is included in scope 1 and 2. The rest of oil and gas products are sold worldwide, making it very challenging to analyze the processing of our products.

Use of sold products

Evaluation status
Relevant, calculated

Metric tonnes CO2e
310000000

Emissions calculation methodology
Based on gas and liquids sold and applying emission factors based on Norwegian Environment Agency (NEA) guidelines

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

Explanation
Based on gas and liquids sold and applying emission factors based on Norwegian Environment Agency (NEA) guidelines.

End of life treatment of sold products

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

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

Explanation
Assumed to be negligible in comparison to our main Scope 3 category - “Use of sold products”. It is assumed that all sold products are burnt or oxidized; therefore, no end-of life treatment of sold products is needed.

Downstream leased assets

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

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

Explanation
Assumed to be negligible in comparison to our main Scope 3 category - “Use of sold products”.

Franchises

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

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

Explanation
Not applicable to our operations.

Investments

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

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

Explanation
Not applicable to our operations.

Other (upstream)

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

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

Explanation
Assumed to be negligible in comparison to our main Scope 3 category - “Use of sold products”.

Other (downstream)

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

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

Explanation

Assumed to be negligible in comparison to our main Scope 3 category - “Use of sold products”.

C6.7

(C6.7) Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?

No

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
0.26

Metric numerator (Gross global combined Scope 1 and 2 emissions)
15649542

Metric denominator
unit total revenue

Metric denominator: Unit total
61187000

Scope 2 figure used
Location-based

% change from previous year
25

Direction of change
Decreased

Reason for change
There has been a decrease in scope 1 and 2 emissions in 2017 compared to 2016, from 15.7 mill tonnes CO2 eq to 15.6 mill tonnes CO2 eq. Total revenues and other income has also increased from 45,873 mill USD in 2016 to 61,187 mill USD in 2017. Please note that to be meaningful this indicator should use equity based emissions, because revenues are based on equity. However we report here on operated assets as according to the guideline. Source: https://www.equinor.com/en/investors.html#annual-reports

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Intensity figure
9.2

Metric numerator (Gross global combined Scope 1 and 2 emissions)
9729504

Metric denominator
Other, please specify (mboe)

Metric denominator: Unit total
1055115

Scope 2 figure used
Location-based

% change from previous year
11

Direction of change
Decreased

Reason for change
The scope of this intensity is limited to the upstream segment. The main driver for the change is a decrease in upstream CO2 emissions. The decrease in scope 1 and 2 emissions are mainly attributed the divestment of Canadian oil sand projects, resulting in the associated emissions being excluded from the end of January 2017 . Emissions reductions activities also contributed to the decrease.

C-OG6.12

(C-OG6.12) Provide the intensity figures for Scope 1 emissions (metric tons CO2e) per unit of hydrocarbon category.

Unit of hydrocarbon category (denominator)
Other, please specify (Thousand barrels of marketed hydrocarbon)

Metric tons CO2e from hydrocarbon category per unit specified

20

% change from previous year
3

Direction of change
Increased

Reason for change
Heavy oil segment: The CO2e intensity of the Heavy Oil segment has increased from 19,2tonnes CO2e per mBOE in 2016 to 19,82 tonnes CO2e per mBOE in 2017. There is an increase in both CO2 and production. Production has increased as a result of improved production efficiency in 2017. The increase in CO2 is related to increased flare levels at Peregrino (Brazil). The increase is related to conservative estimates on flared gas in 2017 due to equipment failure, rather than actual increase.

Comment

Unit of hydrocarbon category (denominator)
Other, please specify (Thousand barrels of marketed hydrocarbon)

Metric tons CO2e from hydrocarbon category per unit specified
61

% change from previous year
3

Direction of change
Decreased

Reason for change
Extra Heavy Oil: The CO2e intensity of the Extra Heavy Oil segment has decreased from 62,39 tonnes CO2e per mBOE in 2016 to 60,77 tonnes CO2e per mBOE in 2017. Equinor divested its Oil sand segment on January 31st 2017, so there is only 1 month of data in 2017.

Comment

Unit of hydrocarbon category (denominator)
Other, please specify (Thousand barrels of marketed hydrocarbon)

Metric tons CO2e from hydrocarbon category per unit specified
23

% change from previous year
1

Direction of change
Decreased

Reason for change
LNG (Liquefied Natural Gas): The CO2e intensity of the LNG segment has decreased from 23,49 tonnes CO2e per mBOE in 2016 to 23.37 tonnes CO2e per mBOE in 2017.

Comment

Unit of hydrocarbon category (denominator)
Other, please specify (Thousand barrels of marketed hydrocarbon)

Metric tons CO2e from hydrocarbon category per unit specified
21

% change from previous year
1

Direction of change
Decreased

Reason for change
Tight Oil: The CO2e intensity of the Tight oil segment has decreased from 20,86 tonnes CO2e per mBOE in 2016 to 20.65 tonnes CO2e per mBOE in 2017. The main reason for the positive development in the CO2 emissions is the continuing efforts to reduce production flaring by establishing produced gas infrastructure at Bakken.

Comment

Unit of hydrocarbon category (denominator)
Other, please specify (Thousand barrels of marketed hydrocarbon)

Metric tons CO2e from hydrocarbon category per unit specified
12

% change from previous year
32

Direction of change
Increased

Reason for change
Shale gas: The CO2e intensity of the Shale Gas segment has increased from 9,38 tonnes CO2e per mBOE in 2016 to 12.35 tonnes CO2e per mBOE in 2017. There is an increase in both emissions and production with 51% and 13 % respectively. The increase in CO2 is mainly due to the addition of Repsol facilities into the Eagle Ford portfolio April 1th 2016, causing an increase in fuel gas consumption for compressions, but also large emissions from flares. The increase in production is mainly a result of new wells on stream.

Comment

Unit of hydrocarbon category (denominator)
Other, please specify (Thousand barrels of marketed hydrocarbon)

Metric tons CO2e from hydrocarbon category per unit specified
8

% change from previous year
8

Direction of change
Decreased

Reason for change
Conventional Oil & Gas: The CO2e intensity of the Conventional Oil and gas segment has decreased from 9,25 tonnes CO2e per mBOE in 2016 to 8,47 tonnes CO2e per mBOE in 2017. The main driver for the decrease in CO2 intensity is an elevated gas export rate from Troll and also from Oseberg and Gullfaks. Troll A is electrified and there are no CO2 emissions associated with the processing of the Troll gas. In addition the CO2 intensity is reduced due to Njord and Volve (Maersk Inspirer) being taken off stream during 2016.

Comment

C-OG6.13

(C-OG6.13) Report your methane emissions as percentages of natural gas and hydrocarbon production or throughput.

Oil and gas business division
Upstream

Estimated total methane emitted expressed as % of natural gas production or throughput at given division
0.02

Estimated total methane emitted expressed as % of total hydrocarbon production or throughput at given division
0.01

Comment
Production: tonnes CH4: Tonnes

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization have greenhouse gas emissions other than carbon dioxide?

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	14890302	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	501475	IPCC Fourth Assessment Report (AR4 - 100 year)

C-OG7.1b

(C-OG7.1b) Break down your total gross global Scope 1 emissions from oil and gas value chain production activities by greenhouse gas type.

	Gross Scope 1 CO2 emissions (metric tons CO2)	Gross Scope 1 methane emissions (metric tons CH4)	Gross Scope 1 emissions (metric tons CO2e)	Comment
Fugitives (Oil:Total)	0	0	0	See category allocations. E&P related emissions are allocated to oil and gas value chain by multiplying emissions with oil and gas fraction of produced volumes.
Fugitives (Oil: Venting)	0	0	0	Venting is currently not reported consistently throughout the company, so all venting has therefore been included in the "Fugitives (Oil:E&P, excluding venting and flaring)" section
Fugitives (Oil: Flaring)	522399	440	533394	Includes CO2 from combustion in flare Includes flaring from oil refineries Some methane emissions from flaring at oil refineries are included in the Fugitives (Oil: E&P, excluding venting and flaring) category. This is related to the application of area measurements which do not distinguish between sources.
Fugitives (Oil: E&P, excluding venting and flaring)	0	9159	228967	Fugitive CO2 is considered an insignificant contributor to fugitives, and is not captured. Some venting, flaring and combustion related emissions may be included in this category, see comments in other sections.
Fugitives (Oil: All Other)	0	0	0	All fugitives have been allocated to categories
Fugitives (Gas: Total)	0	0	0	See category allocations. E&P related emissions are allocated to oil and gas value chain by multiplying emissions with oil and gas fraction of produced volumes.
Fugitives (Gas: Venting)	0	0	0	Venting is currently not reported consistently throughout the company, so all venting has therefore been included in the "Fugitives (Gas: E&P, excluding venting and flaring)" section
Fugitives (Gas: Flaring)	736942	891	759218	Includes flaring from onshore gas processing/NGL facilities, LNG facility, and chemicals production. Some methane emissions from onshore facilities are included in the Fugitives (Gas: E&P, excluding venting and flaring) category. This is related to the application of area measurements which do not distinguish between sources.
Fugitives (Gas: E&P, excluding venting and flaring)	0	6421	160514	Fugitive CO2 is considered an insignificant contributor to fugitives, and is not captured. Some venting, flaring and combustion related emissions may be included in this category, see comments in other sections. Some venting related emissions are included in this category due to the lack of granulation in the data consolidation process.
Fugitives (Gas: Midstream)	0	0	0	Not a relevant segment for the company

	Gross Scope 1 CO2 emissions (metric tons CO2)	Gross Scope 1 methane emissions (metric tons CH4)	Gross Scope 1 emissions (metric tons CO2e)	Comment
Fugitives (Gas: All other)	0	0	0	All fugitives have been allocated to categories
Combustion (Oil: Upstream, excluding flaring)	4002603	1347	4036282	Some combustion related emissions at land based facilities may have been included in the fugitives section. This is related to the application of area measurements which do not distinguish between sources.
Combustion (Gas: Upstream, excluding flaring)	4384897	1656	4426300	Some combustion related emissions at land based facilities may have been included in the fugitives section. This is related to the application of area measurements which do not distinguish between sources.
Combustion (Refining)	0	0	0	Includes combustion from onshore gas processing/NGL facilities, LNG facility Some methane emissions from combustion at land based facilities like oil refineries are included in the Fugitives (Oil: E&P, excluding venting and flaring), or Fugitives (Gas: E&P, excluding venting and flaring) category. This is related to the application of area measurements which do not distinguish between sources.
Combustion (Chemicals production)	303503	0	303503	Methane emissions in the chemicals production segment are recorded as fugitives, even though they are combustion of flare related. This is related to the application of area measurements which do not distinguish between sources.
Combustion (Electricity generation)	24506	0	24506	Combustion related to offshore wind power segment.
Combustion (Other)	0	0	0	All combustion related GHG emissions have been allocated to categories
Process emissions	1110616	0	1110616	
Emission not elsewhere classified	0	0	0	

C7.2

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

Country/Region	Scope 1 emissions (metric tons CO2e)
Norway	13530960
Brazil	480613
Canada	47128
Germany	14451
United Kingdom of Great Britain and Northern Ireland	33305
United States of America	690285
Denmark	594745
Bahamas	290

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)
DPUSA	690285
CFO GBS	101
DPI	521377
DPN	8350152
MMP	5728328
EXP	45684
TPD	31345
NES	24506

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	Net Scope 1 emissions , metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Electric utility generation activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	9638944	<Not Applicable>	
Oil and gas production activities (downstream)	5728328	<Not Applicable>	
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

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 in market-based approach (MWh)
Norway	39532	2331249	5281988	0
Denmark	65363	130386	381952	0
United States of America	135980	135980	164932	0
Canada	6970	6970	20492	0
Bahamas	1965	1965	2934	0
United Kingdom of Great Britain and Northern Ireland	1238	1652	5737	0
Germany	6717	10862	26628	0

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 emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
DPN	8404	556797
MMP	104113	1854952
CFO GBS	688	40628
TPD	215	14249
NES	1394	9489
DPUSA	135980	135980
DPI	6970	6970

C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7

(C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7) Break down your organization's total gross global Scope 2 emissions by sector production activity in metric tons CO2e.

	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	152043	740375	Offshore wind power sector not included
Oil and gas production activities (downstream)	104328	1869200	Offshore wind power sector not included
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

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	0	No change	0	Location based approached used, no low carbon purchases. Variations in emissions as a result of changes in renewables in local grid mixes may occur but these are not controlled by the company and not accounted for here.
Other emissions reduction activities	312933	Decreased	2	Last year 0.3 million tonnes CO2eq were reduced by our emissions reduction projects. Equinor`s total Scope 1 and Scope 2 emissions in 2016 were 15 729 304 tonnes CO2eq. The percentage decrease is therefore (312 933/15 729 304)*100= 2 %. The largest contributor to the decrease is energy efficiency measurements at The largest contributor to the decrease is energy efficiency measurements at Equinor's LNG facilities at Hammerfest.
Divestment	546293	Decreased	3	Last yeat, changes in divestment contributed to a decrease of 546 293 tonnes CO2 eq. Equinor`s total scope 1 and scope 2 emissions in 2016 were 15 729 304 CO2eq. The percentage decrease is therefore (546 293/15 729 304)*100= 3%. The decrease is due to divestment of Canadian oil sand projects in early 2017.
Acquisitions	74154	Increased	0.5	Acquisitions contributed to an increase of 74 154 tonnes CO2 eq between 2016 and 2017. Equinor`s total Scope 1 and Scope 2 emissions in 2016 were 15 729 304 tonnes CO2eq. The percentage increase is therefore (74154/15729304) *100= 0.5%. The increase is mainly due to the addition of new shale gas assets into US Onshore portfolio.
Mergers		<Not Applicable>		
Change in output	212478	Increased	1	Last year, changes in output contributed to an increase of 212 478 tonnes CO2eq. Equinor`s total Scope 1 and Scope 2 emissions in 2016 were 15 729 304 tonnes CO2eq. The percentage increase is therefore (212 478 /15 729 304) *100= 1%. The increase has many contributors, but worth mentioning is production start-up of new field, Gina Krog, on NCS (Norwegian Continental Shelf), in 2017.
Change in methodology	115192	Decreased	1	Changes in methodologies contributed to a decrease of 115 192 tonnes CO2eq in 2017. Equinor`s total Scope 1 and Scope 2 emissions in 2016 were 15 729 304 tonnes CO2eq. The percentage decrease is therefore (115 192/15 729 304)*100=1 %. The decrease is for the most part related to new approaches to methane calculations/measurements in parts of Equinor's onshore gas processing and refinery segment.
Change in boundary		<Not Applicable>		
Change in physical operating conditions	659640	Increased	4	Changes in physical operating conditions led to an increase of 659 640 tonnes CO2eq in 2017. Equinor`s total Scope 1 and Scope 2 emissions in 2016 were 15 729 304 tonnes CO2eq. The percentage increase is therefore (659 640/15 729 304)*100= 4%. The main driver for this increase is several turnarounds that occurred in 2016, particularly in the NCS (Norwegian Continental Shelf), which have caused a increase in emissions from 2016 to 2017.
Unidentified		<Not Applicable>		
Other	51616	Decreased	0.3	Last year, changes in emissions allocated to the category "Other" decreased by 51 616 tonnes CO2eq. Equinor`s total Scope 1 and Scope 2 emissions in 2016 were 15 729 304 tonnes CO2eq. The percentage decrease is therefore (51 616/15 729 304)*100= 0.3%. The "other" category includes emissions related to drilling and exploration activities, which decreased in 2017 compared to 2016.

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?

Location-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 undertakes this energy-related activity
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	Yes
Consumption of purchased or acquired steam	Yes
Consumption of purchased or acquired cooling	Yes
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 MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	0	61109794	61109794
Consumption of purchased or acquired electricity	<Not Applicable>	5304372	378350	5682722
Consumption of purchased or acquired heat	<Not Applicable>	0	14864	14864
Consumption of purchased or acquired steam	<Not Applicable>	0	186658	186658
Consumption of purchased or acquired cooling	<Not Applicable>	0	420	420
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	0	<Not Applicable>	0
Total energy consumption	<Not Applicable>	5304372	61690086	66994458

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 steam	Yes
Consumption of fuel for the generation of cooling	No
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)

Butane

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization
145189

MWh fuel consumed for the self-generation of electricity
0

MWh fuel consumed for self-generation of heat
145189

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

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

Fuels (excluding feedstocks)
Coke

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
2919702

MWh fuel consumed for the self-generation of electricity
0

MWh fuel consumed for self-generation of heat
2919702

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

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

Fuels (excluding feedstocks)
Other, please specify (CoLGO)

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
69

MWh fuel consumed for the self-generation of electricity
0

MWh fuel consumed for self-generation of heat
69

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

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

Fuels (excluding feedstocks)

Diesel

For diesel powered engines, one assumes that that all energy consumption is dedicated to generate electricity. Some boilers and turbines are also powered by diesel. The energy is converted to steam, and used for heat or electricity generation. The energy consumed by the diesel fired turbines are partly used to generate electricity, partly used for direct mechanical power. Due to the lack of appropriate category for mechanical power, this fraction of the energy consumption has been allocated to heat generation

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
3234153

MWh fuel consumed for the self-generation of electricity
2686940

MWh fuel consumed for self-generation of heat
547214

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

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

Fuels (excluding feedstocks)
Natural Gas

Most of our offshore turbines are powered by gas. For this purpose, we estimate that about 40% and associated gas consumption in the turbines are dedicated to the generation of electricity. Some heat is also produced - which may be utilized for heating or producing more electricity. The rest of the turbines power compressors directly, also with heat recovery. Due to the lack of appropriate category for mechanical power, this fuel consumption has been allocated to heat.

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
44933575

MWh fuel consumed for the self-generation of electricity
13991278

MWh fuel consumed for self-generation of heat
24376598

MWh fuel consumed for self-generation of steam
187038

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
6378662

Fuels (excluding feedstocks)
Other, please specify (Fuel Oil)

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
375

MWh fuel consumed for the self-generation of electricity
0

MWh fuel consumed for self-generation of heat

375

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

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

Fuels (excluding feedstocks)
Other, please specify (LOFS)

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
4005

MWh fuel consumed for the self-generation of electricity
0

MWh fuel consumed for self-generation of heat
4005

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

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

Fuels (excluding feedstocks)
Other, please specify (Not assigned)

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
811434

MWh fuel consumed for the self-generation of electricity
811173

MWh fuel consumed for self-generation of heat
261

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

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

Fuels (excluding feedstocks)
Other, please specify (Propane)

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
2

MWh fuel consumed for the self-generation of electricity

0

MWh fuel consumed for self-generation of heat
2

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

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

Fuels (excluding feedstocks)
Refinery Gas

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
8503862

MWh fuel consumed for the self-generation of electricity
0

MWh fuel consumed for self-generation of heat
3470608

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
5033253

Fuels (excluding feedstocks)
Other, please specify (Spill gas)

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
65623

MWh fuel consumed for the self-generation of electricity
0

MWh fuel consumed for self-generation of heat
65623

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

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

Fuels (excluding feedstocks)
Other, please specify (Tail gas)

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization

180863

MWh fuel consumed for the self-generation of electricity
0

MWh fuel consumed for self-generation of heat
180863

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

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

Fuels (excluding feedstocks)
Other, please specify (Purge gas)

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
310943

MWh fuel consumed for the self-generation of electricity
0

MWh fuel consumed for self-generation of heat
310943

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

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

C8.2d

(C8.2d) List the average emission factors of the fuels reported in C8.2c.

Butane

Emission factor
3.02

Unit
metric tons CO2 per metric ton

Emission factor source
Asset-specific emissions factor

Comment
An average - emission factor may vary throughout the year

Coke

Emission factor
3.57

Unit
metric tons CO2 per metric ton

Emission factor source
Asset-specific emissions factor

Comment
An average - emission factor may vary throughout the year

Diesel

Emission factor
3.17

Unit
metric tons CO2 per metric ton

Emission factor source
Most commonly used - Norwegian Climate and Pollution Agency

Comment

Natural Gas

Emission factor
2.41

Unit
metric tons CO2 per metric ton

Emission factor source
Gas composition calculations

Comment
The figure is an approximate average. The emission factors are asset-specific and may vary even on a daily basis.

Refinery Gas

Emission factor
2.6

Unit
metric tons CO2 per metric ton

Emission factor source
Asset and source specific emission factor

Comment
Emission factor varies through the year, sometimes updated on a daily basis.

Other

Emission factor
2

Unit
metric tons CO2 per metric ton

Emission factor source
Average of several sources and fuel sources.

Comment
Emission factor varies through the year

C8.2e

(C8.2e) 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	12281842	9492801	1862511	0
Heat	14420375	14420375	0	0
Steam	93519	93519	0	0
Cooling	0	0	0	0

C8.2f

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

Basis for applying a low-carbon emission factor
Other, please specify (see comment)

The low carbon factor is applied to the amount of low carbon energy in purchased electricity, when using the marked based approach. No energy attribute certificates have been purchased.

Low-carbon technology type
Nuclear

MWh consumed associated with low-carbon electricity, heat, steam or cooling
1175737

Emission factor (in units of metric tons CO2e per MWh)
0

Comment
The low carbon factor is applied to the amount of nuclear power in electricity mix, when using the marked based approach. No energy attribute certificates have been purchased.

Basis for applying a low-carbon emission factor
Other, please specify (see comment)

Low-carbon technology type
Hydropower

MWh consumed associated with low-carbon electricity, heat, steam or cooling
639309

Emission factor (in units of metric tons CO2e per MWh)
0

Comment
The low carbon factor is applied to the amount of hydropower in electricity mix, when using the marked based approach. No energy attribute certificates have been purchased.

Basis for applying a low-carbon emission factor
Other, please specify (see comment)

Low-carbon technology type
Wind

MWh consumed associated with low-carbon electricity, heat, steam or cooling
88098

Emission factor (in units of metric tons CO2e per MWh)
0

Comment
The low carbon factor is applied to the amount of wind power in electricity mix, when using the marked based approach. No energy attribute certificates have been purchased.

Basis for applying a low-carbon emission factor
Other, please specify (see comment)

Low-carbon technology type
Biomass (including biogas)

MWh consumed associated with low-carbon electricity, heat, steam or cooling
27311

Emission factor (in units of metric tons CO2e per MWh)
0

Comment
The low carbon factor is applied to the amount of biomass energy in electricity mix, when using the marked based approach. No energy attribute certificates have been purchased.

Basis for applying a low-carbon emission factor
Other, please specify (see comment)

Low-carbon technology type
Solar PV

MWh consumed associated with low-carbon electricity, heat, steam or cooling
25093

Emission factor (in units of metric tons CO2e per MWh)
0

Comment
The low carbon factor is applied to the amount of solar energy in electricity mix, when using the marked based approach. No energy attribute certificates have been purchased.

Basis for applying a low-carbon emission factor
Other, please specify (see comment)

Low-carbon technology type
Other low-carbon technology, please specify (Geothermal)

MWh consumed associated with low-carbon electricity, heat, steam or cooling
12064

Emission factor (in units of metric tons CO2e per MWh)
0

Comment
The low carbon factor is applied to the amount of geothermal energy in electricity mix, when using the marked based approach. No energy attribute certificates have been purchased.

Basis for applying a low-carbon emission factor
Other, please specify (see comment)

Low-carbon technology type
Tidal

MWh consumed associated with low-carbon electricity, heat, steam or cooling
205

Emission factor (in units of metric tons CO2e per MWh)
0

Comment
The low carbon factor is applied to the amount of tidal energy in electricity mix, when using the marked based approach. No energy attribute certificates have been purchased.

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

Description
Other, please specify (Upstream flaring intensity)

Metric value
2.1

Metric numerator
tonnes of hydrocarbon flared

Metric denominator (intensity metric only)
1000 tonnes of hydrocarbons produced

% change from previous year
16

Direction of change
Decreased

Please explain
We are working towards a 2020 upstream flaring intensity target of 2 tonnes of gas flared per 1000 tonnes of hydrocarbons produced (0.2% of hydrocarbons produced) for Equinor operated production. This was set in 2012 as part of our commitment to the Sustainable Energy for All global initiative. This compliments our corporate ambition to eliminate production flaring by 2030, in line with our commitment made through our participation in the Global Gas Flaring Reduction initiative that is coordinated by the World Bank Group. We are also committed to working actively to help achieve the same objective in our partner-operated assets.

Description
Other, please specify (Low carbon R &D)

Metric value
18

Metric numerator
Low carbon R&D expenditure (NOK)

Metric denominator (intensity metric only)
Total R&D expenditure (NOK)

% change from previous year
0

Direction of change
No change

Please explain
The goal is to increase the research efforts within new energy solutions and energy efficiency, which again will reduce our carbon footprint globally. The technologies may have effect on scope 1, 2 or 3 of Equinor's emissions. Equinor's target is to reach a 25% share of R&D operational expenditure committed to low carbon projects by 2020.

Description
Other, please specify (CAPEX for new energy solutions)

Metric value
500

Metric numerator
Million USD

Metric denominator (intensity metric only)

% change from previous year

Direction of change
<Not Applicable>

Please explain
Capital expenditure (capex) for new energy solutions is a new indicator so the trend cannot be determined. The ambition is to have annual investments for new energy solutions between USD 500 million and 750 million.

C-OG9.2a

(C-OG9.2a) Disclose your net liquid and gas hydrocarbon production (total of subsidiaries and equity-accounted entities).

	In-year net production	Comment
Crude oil and condensate, million barrels	355.2	Equity production in million bo. Liquids as reported minus approximate NGL production (see below). Total liquid production as reported is 408,5 including NGL.
Natural gas liquids, million barrels	60	Approximation, we do not disclose NGL production separately.
Oil sands, million barrels (includes bitumen and synthetic crude)	0.7	Leismer production prior to sale of asset in 2017.
Natural gas, billion cubic feet	343.4	Expressed in million boe.

C-OG9.2b

(C-OG9.2b) Explain which listing requirements or other methodologies you use to report reserves data. If your organization cannot provide data due to legal restrictions on reporting reserves figures in certain countries, please explain this.

As we are listed on the NYSE, we report proved reserves (1P) as defined and required by the US Securities and Exchange Commission (SEC).

We do not report 2P or 3P reserves, which is optional under SEC since 2009 (previously not allowed).

C-OG9.2c

(C-OG9.2c) Disclose your estimated total net reserves and resource base (million boe), including the total associated with subsidiaries and equity-accounted entities.

	Estimated total net proved + probable reserves (2P) (million BOE)	Estimated total net proved + probable + possible reserves (3P) (million BOE)	Estimated net total resource base (million BOE)
Row 1			19000

C-OG9.2d

(C-OG9.2d) Provide an indicative percentage split for 2P, 3P reserves, and total resource base by hydrocarbon categories.

	Net proved + probable reserves (2P) (%)	Net proved + probable + possible reserves (3P) (%)	Net total resource base (%)
Crude oil / condensate / Natural gas liquids			46
Natural gas			54
Oil sands (includes bitumen and synthetic crude)			0

C-OG9.2e

(C-OG9.2e) Provide an indicative percentage split for production, 1P, 2P, 3P reserves, and total resource base by development types.

Development type
Onshore

In-year net production (%)
14

Net proved reserves (1P) (%)
13

Net proved + probable reserves (2P) (%)

Net proved + probable + possible reserves (3P) (%)

Net total resource base (%)
24

Comment

Development type
Shallow-water

In-year net production (%)
71

Net proved reserves (1P) (%)
74

Net proved + probable reserves (2P) (%)

Net proved + probable + possible reserves (3P) (%)

Net total resource base (%)
53

Comment
Less than 500 m water depth.

Development type
Deepwater

In-year net production (%)
11

Net proved reserves (1P) (%)
10

Net proved + probable reserves (2P) (%)

Net proved + probable + possible reserves (3P) (%)

Net total resource base (%)
8

Comment
500-1500 m water depth.

Development type
Ultra-deepwater

In-year net production (%)
4

Net proved reserves (1P) (%)
3

Net proved + probable reserves (2P) (%)

Net proved + probable + possible reserves (3P) (%)

Net total resource base (%)
15

Comment
More than 1500 m water depth.

Development type
Arctic

In-year net production (%)
3

Net proved reserves (1P) (%)
10

Net proved + probable reserves (2P) (%)

Net proved + probable + possible reserves (3P) (%)

Net total resource base (%)
9

Comment

Development type
Oil sand/extra heavy oil

In-year net production (%)
1

Net proved reserves (1P) (%)
0

Net proved + probable reserves (2P) (%)

Net proved + probable + possible reserves (3P) (%)

Net total resource base (%)
0

Comment
In year net production <1%. 5% heavy oil, no extra heavy/oil sand.

Development type
Tight/shale

In-year net production (%)
11

Net proved reserves (1P) (%)
11

Net proved + probable reserves (2P) (%)

Net proved + probable + possible reserves (3P) (%)

Net total resource base (%)
22

Comment

Development type
LNG

In-year net production (%)
8

Net proved reserves (1P) (%)
7

Net proved + probable reserves (2P) (%)

Net proved + probable + possible reserves (3P) (%)

Net total resource base (%)
6

Comment
NGL.

C-OG9.3a

(C-OG9.3a) Disclose your total refinery throughput capacity in the reporting year in thousand barrels per year.

	Total refinery throughput capacity (Thousand barrels per day)
Capacity	

C-OG9.3b

(C-OG9.3b) Disclose feedstocks processed in the reporting year in million barrels per year.

	Throughput (Million barrels)	Comment
Oil		
Other feedstocks		
Total		

C-OG9.3c

(C-OG9.3c) Are you able to break down your refinery products and net production?
Please select

C-OG9.3e

(C-OG9.3e) Please disclose your chemicals production in the reporting year in thousand metric tons.

Product	Production, Thousand metric tons	Capacity, Thousand metric tons
High value chemicals (Steam cracking)	944	950

C-CO9.6/C-EU9.6/C-OG9.6

(C-CO9.6/C-EU9.6/C-OG9.6) Disclose your investments in low-carbon research and development (R&D), equipment, products, and services.

Investment start date
January 1 2017

Investment end date
December 31 2017

Investment area
R&D

Technology area
Renewable energy

Investment maturity
Applied research and development

Investment figure
19000000

Low-carbon investment percentage
34

Please explain
Equinor's low carbon R&D program consists of approximately 180 projects. Some of these are basic academic, while others are applied R&D or pilot demonstrations. Numbers given in this table refers to our low carbon R&D segments as given in our sustainability report (19 million USD on CCUS and renewables and 36 million USD on energy efficiency). This was 18% of the total R&D spend in 2017.

Investment start date
January 1 2017

Investment end date
December 31 2017

Investment area
R&D

Technology area
Other energy efficiency measures in the oil and gas value chain

Investment maturity
Applied research and development

Investment figure
36000000

Low-carbon investment percentage
66

Please explain
Equinor's low carbon R&D program consists of approximately 180 projects. Some of these are basic academic, while others are applied R&D or pilot demonstrations. Numbers given in this table refers to our low carbon R&D segments as given in our sustainability report (19 million USD on CCUS and renewables and 36 million USD on energy efficiency). This was 18% of the total R&D spend in 2017.

C-OG9.7

(C-OG9.7) Disclose the breakeven price (US$/BOE) required for cash neutrality during the reporting year, i.e. where cash flow from operations covers CAPEX and dividends paid/ share buybacks.
50

C-OG9.8

(C-OG9.8) Is your organization involved in the sequestration of CO2?

Yes

C-OG9.8a

(C-OG9.8a) Provide, in metric tons CO2, gross masses of CO2 transferred in and out of the reporting organization (as defined by the consolidation basis).

	CO2 transferred – reporting year (metric tons CO2)
CO2 transferred in	0
CO2 transferred out	0

C-OG9.8b

(C-OG9.8b) Provide gross masses of CO2 injected and stored for the purposes of CCS during the reporting year according to the injection and storage pathway.

Injection and storage pathway	Injected CO2 (metric tons CO2)	Percentage of injected CO2 intended for long-term (>100 year) storage	Year in which injection began	Cumulative CO2 injected and stored (metric tons CO2)
CO2 injected into a geological formation or saline formation for long-term storage	1359741	100	January 1 1996	22283621

C-OG9.8c

(C-OG9.8c) Provide clarification on any other relevant information pertaining to your activities related to transfer and sequestration of CO2.

Carbon capture, usage and storage (CCUS)

Equinor has over 20 years' experience in CCUS, currently the main technology for decarbonising fossil fuels. We capture and store CO2 at our Sleipner and Snøhvit fields on the Norwegian continental shelf. To date we are storing around 22 million tonnes.

In 2017, Equinor was tasked to lead studies of behalf of the Norwegian authorities to develop full-scale carbon capture and storage in Norway. The concept includes capturing CO2 emissions from onshore industrial plants in Norway and transporting it by ships to an onshore terminal, from which it will be injected and permanently stored in a reservoir 1000-2000 meters below the seabed. Equinor also submitted a project of common interest proposal to the EU in 2017 covering CO2 ship transportation between emission points in the Netherlands and the UK and Norwegian storage sites.

Hydrogen

In 2017, we partnered with various parties to explore the feasibility of producing hydrogen, a carbon-neutral fuel. This would involve the extraction of hydrogen from natural gas, capturing and storing the CO2 produced in the process and establishing the infrastructure to transport hydrogen to users for power generation, heating, shipping and industrial purposes.

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 and/or Scope 2 emissions and attach the relevant statements.

Scope
Scope 1

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Reasonable assurance

Attach the statement
statoil-sustainability-report-2017.pdf

Page/ section reference
https://www.equinor.com/content/dam/statoil/documents/sustainability-reports/statoil-sustainability-report-2017-23march.pdf Please refer to page 63 in our sustainability report, for KPMG's statement of assurance scope and findings.

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

Scope
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
statoil-sustainability-report-2017.pdf

Page/ section reference
https://www.equinor.com/content/dam/statoil/documents/sustainability-reports/statoil-sustainability-report-2017-23march.pdf Please refer to page 63 in our sustainability report, for KPMG's statement of assurance scope and findings.

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

Scope
Scope 2 market-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
statoil-sustainability-report-2017.pdf

Page/ section reference
https://www.equinor.com/content/dam/statoil/documents/sustainability-reports/statoil-sustainability-report-2017-23march.pdf Please refer to page 63 in our sustainability report, for KPMG's statement of assurance scope and findings.

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope
Scope 3- at least one applicable category

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Attach the statement
statoil-sustainability-report-2017.pdf

Page/section reference
https://www.equinor.com/content/dam/statoil/documents/sustainability-reports/statoil-sustainability-report-2017-23march.pdf Please refer to page 63 in our sustainability report, for KPMG's statement of assurance scope and findings.

Relevant standard
ISAE3000

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?
Yes

C10.2a

(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C5. Emissions performance	Year on year emissions intensity figure	ISAE3000	Intensity figures are published in our annual sustainability report, externally verified. 2/3 of our scope 1 emissions are subject to EU-ETS quota verification (Norwegian Continental Shelf), Mariner (UK) and Kalundborg (Denmark). All information in Sustainability report is verified by KPMG. It is referred to revision declaration as stated on page 63 in our Sustainability report . Climate indicators which has reasonable level of assurance are Energy consumption (TWh), Scope 1 GHG emissions (million tonnes CO2 equivalents), CO2 emissions (million tonnes), CH4 emissions (thouns tonnes). Other data in sustainability report (indicators, targets etc.) also subject to assurance (limited).
C5. Emissions performance	Year on year change in emissions (Scope 3)	ISAE3000	Our Scope 3 emissions are published in our annual sustainability report, externally verified. 2/3 of our scope 1 emissions are subject to EU-ETS quota verification (Norwegian Continental Shelf), Mariner (UK) and Kalundborg (Denmark). All information in Sustainability report is verified by KPMG. It is referred to revision declaration as stated on page 63 in our Sustainability report . Climate indicators which has reasonable level of assurance are Energy consumption (TWh), Scope 1 GHG emissions (million tonnes CO2 equivalents), CO2 emissions (million tonnes), CH4 emissions (thouns tonnes). Other data in sustainability report (indicators, targets etc.) also subject to assurance (limited).
C5. Emissions performance	Other, please specify (Hydrocarbon flared)	ISAE3000	Externally verified.
C4. Targets and performance	Emissions reduction activities	ISAE3000	Externally verified.

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

Norway carbon tax

C11.1b

(C11.1b) Complete the following table for each of the emissions trading systems in which you participate.

EU ETS

% of Scope 1 emissions covered by the ETS
67

Period start date
January 1 2017

Period end date
December 31 2017

Allowances allocated
6303143

Allowances purchased
5751000

Verified emissions in metric tons CO2e
12054143

Details of ownership
Facilities we own and operate

Comment
The sum of free allowances is 1.805.835 for MMP and 4.058.453 for DPN – making it 5.864.288 for Equinor in 2017. In addition is Kalundborg with 438 855. Total sum is 6303143.

C11.1c

(C11.1c) Complete the following table for each of the tax systems in which you participate.

Norway carbon tax

Period start date
January 1 2017

Period end date
December 31 2017

% of emissions covered by tax
100

Total cost of tax paid
485003889

Comment
Applicable to 100% of all gas streams with more than 50 % hydrocarbons. Total paid Norwegian CO2 tax in 2017 was 4 007 587 137 NOK. The number reported above is in USD, using official exchange rates from the Norwegian Central Bank (https://www.norges-bank.no/en/Statistics/exchange_rates/).

C11.1d

(C11.1d) What is your strategy for complying with the systems in which you participate or anticipate participating?

Our first objective is to ensure that we are in compliance with the schemes in which we participate, and in addition that transaction cost is minimized. Equinor operates facilities which are subject to Norwegian and European climate legislation. The company must each year submit quotas corresponding to the entire (oil and gas production on the Norwegian and UK continental shelf) or parts (other activities) of its carbon emissions. Emission allowances are purchased in the market to meet these compliance obligations. The emission trading group is responsible for compliance related CO2 trading for all Equinor operated licenses. There are continued small emissions exposure for Mariner on the UK Continental Shelf. Full production from Mariner is expected late in 2018. Equinor has been active in the carbon market since 2005, and was the first company to execute European Carbon Allowances (EUAs) (2005) and Certified Emission Reduction (CERs) (2007) on the first carbon exchange in the world. In addition to EUAs Equinor is using CERs, generated by Clean Development Mechanism (CDM) projects, for compliance purposes. Equinor supports the developments of new emission trading schemes in different parts of the world. We recognize it as the most cost-efficient way to cut emissions. Allowances purchased are subject to third party verification.

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 (Verified credits purchased on exchange.)

Project identification

Purchased credits for Equinor business travel not covered by EU ETS.

Verified to which standard

Other, please specify (Certified Emission Reduction (CER).)

Number of credits (metric tonnes CO2e)

29000

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

29000

Credits cancelled

Yes

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
Change internal behavior
Drive energy efficiency
Stress test investments

GHG Scope
Scope 1

Application
The internal carbon price is applicable across Equinor for all potential projects and investments after 2020.

Actual price(s) used (Currency /metric ton)
50

Variance of price(s) used
Equinor applies an internal carbon price of USD 50 per tonne of CO2 to all potential projects and investments after 2020. In countries where the actual carbon price is higher than USD 50 (e.g. in Norway), we use the actual price and predicted future carbon price in our investment analysis.

Type of internal carbon price
Shadow price

Impact & implication
CARBON TAXES AND QUOTAS Our operations in Europe are part of the EU Emission Trading Scheme (EU ETS). Equinor buys EU ETS quotas for these emissions. We receive a share of free quotas (allowances). However this share is expected to be significantly reduced over the next years. In addition, our operations in Norway are subject to Norwegian offshore CO_2 tax. In 2017, the cost of EU ETS quotas around USD 6/tonne CO_2 and the Norwegian CO_2 tax was around USD 63/tonne CO_2.

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
Engagement & incentivization (changing supplier behavior)

Details of engagement
Run an engagement campaign to educate suppliers about climate change
Climate change performance is featured in supplier awards scheme
Offer financial incentives for suppliers who reduce your operational emissions (Scopes 1 &2)
Offer financial incentives for suppliers who reduce your upstream emissions (Scopes 3)

% of suppliers by number
100

% total procurement spend (direct and indirect)
100

% Scope 3 emissions as reported in C6.5
0

Rationale for the coverage of your engagement
Applicable to all suppliers (100% of suppliers, 100% of procurement spend): Equinor has approximately 9,400 suppliers around the world. In 2017, our purchases of goods and services were around USD 18 billion. Equinor is committed to working with suppliers that maintain high standards of sustainability performance. Suppliers to Equinor are requested to sign our supplier declaration, where the suppliers commit to "work according to internationally recognized environmental management principles and practices, and aim for continuous improvement". See supplier requirements regarding resource efficiency and environmental impact (Code of Conduct, Supplier declaration etc.): https://www.equinor.com/en/supply-chain.html Focus area green logistics: Our main priority within the supply chain is working with emission reduction in logistics (shipping and transport of oil and gas products), as this is the most significant source of emissions in our supply chain. The fleet of marine vessels supporting Equinor's operations includes around 90 tankers sailing at any given time, around 40-50 other marine vessels supporting our daily activities , 19 helicopters in daily operations, plus roughly 150.000 truck transportation assignments per year. Our logistics activities accounted for around 0.3 million tonnes CO2 in 2017, and our spend for marine supply vessels only in 2017 was approximately 134 million USD. These emissions are partly covered by our scope 1 emissions (in the cases where we have long-term contracts with supply vessels). However, emissions from our supply chain are not included in our reported scope 3 emissions, as we (aligned with industry practice, e.g. IPIECA sustainability reporting guidelines) include "emissions from products sold" and business travel in our scope 3 reported emissions. Compared to the emissions from the use of products, however, supply chain emissions is regarded as a "non-material" scope 3 emissions category as the contribution to the total emissions is negligible.

Impact of engagement, including measures of success
Equinor has worked actively for many years to encourage carbon efficiency in the fleet of marine vessels. Working together with long-term suppliers, we can incentivize emission reductions through technology and fuel efficiency improvements within these areas: - Battery technology (installing battery systems onboard allows vessel to run on fewer fossil generators). - Onshore power supply. - Propel polishing and hull cleaning. - Allowing for "green speed". - Optimal trim study. - Conversion to LED lights. We use technical, operational and fuel related measures to achieve results. Examples are battery-hybridization and LNG powered supply vessels, shore-power supply for vessels, optimising sailing routes and planning for green vessel speed, maximising vessel and helicopter capacity utilisation and a truck pool with the highest euro class. We focus on fuel efficiency when entering into new vessel contracts; incentive schemes further encourage suppliers to ensure fuel efficient operations. In 2017 Equinor engaged with 25 supply-, anchor handler- and standby vessels in Norway. CO2 emissions from these vessels were reduced by 25% from 2011 to 2017, adjusted for activity level. The actual CO2 emissions from our marine vessel activities decreased with 5% from 2016 to 2017, in absolute numbers. We discuss performance in regular meetings with suppliers. In addition we monitor fuel consumption and benchmark results against other ship owners. We use supplier contracts that financially reward suppliers that are able to reduce fuel consumption. Success is measured through several parameters such as actual delivery of expected service, number of serious personal injuries related to the vessel, fuel consumption (directly paid by Equinor) and overall emissions from the vessel activity. Other benefits such as lower noise levels and NOx emissions from a vessel with shore power connection, while at shore, may also be taken into consideration. Equinor has meetings every quarter with license partners. These meetings include discussions about larger investments for emission reducing measures. From 2017 to end of 2018 batteries for hybrid operation will be installed in 9 vessels. One marine base has already installed onshore power for marine vessels during stay in harbor. Fuel incentive agreements established with 10 marine vessels.

Comment
More information is available at our web site www.equinor.com Green logistics: https://www.equinor.com/en/how-and-why/climate-change.html# Supplier requirements (Code of Conduct, Supplier declaration etc.): https://www.equinor.com/en/supply-chain.html

C12.1b

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

Type of engagement
Collaboration & innovation

Details of engagement
Run a campaign to encourage innovation to reduce climate change impacts

Size of engagement
9

% Scope 3 emissions as reported in C6.5
7

Please explain the rationale for selecting this group of customers and scope of engagement
Coverage explanation: Equinor engages with customers and the broader industry on climate through a range of measures, ranging from R&D to pilot projects and broad climate initiatives. Describing the exact range of emissions covered by this engagement is challenging due to uncertainty (early phase), commercial sensitivity and/or efforts targeting other emission scopes than scope 3 (e.g. minimising methane emissions in the gas value chain). The estimate of emissions covered/size of engagement is a rough estimate of potential avoided emissions compared to overall scope 3 emissions (2017), based only on projects described below under New energy solutions, which only represents a small part of the relevant collaboration. New energy solutions: Examples of how we collaborate with customers in pilot projects/studies through our New Energy Solutions business area include i) carbon storage for third parties in Norway (assessment of permanent storage), ii) a pilot project to convert a gas-fired power plan to run on hydrogen (Netherlands) and iii) a study looking at the potential for converting natural gas to hydrogen to be used for heating etc. (Leeds City Gate project, UK). These projects could lead to significant avoided emissions and the two latter have been included in the range above. However, the number is uncertain as the projects are early stage. The CCUS project falls outside of Equinor's scope 3 emissions. Low carbon R&D: Several of our R&D projects within low carbon technologies involve collaboration with customers and industry partners. However, these projects have not been included in the range above due to uncertainty (early phase) and commercial sensitivity. Other initiatives: Equinor participates in a range of climate-related initiatives, including the Oil and Gas Climate Initiative (OGCI), The Environmental Partnership, the One Future Coalition, the Climate and Clean Air Coalition Oil and Gas Methane Partnership, C2ES, and the Technology Centre Mongstad, to mention some. Several of these initiatives focus on reducing methane emissions in the gas value chain (production, transportation and distribution). Thus, these measures target emissions other than scope 3 emissions. The effect not possible to attribute to an individual company’s scope 3 emissions. These efforts are therefore not included in the range above.

Impact of engagement, including measures of success
Measures of success: Carbon storage pilot in Norway: Establish a CCS value chain which will be available for 3rd party companies who are planning to capture their CO2. Hydrogen pilot project with Nuon and Gas Unie in Netherlands: Demonstrate that a Combined Cycle Gas Turbine (CCGT) can run in a flexible, dispatchable mode burning clean hydrogen with energy efficiency comparable to traditional CCGTs. Hydrogen project in UK: Demonstrate a design of very large scale hydrogen solution which can form a basis for a hydrogen / CCS policy to address decarbonization of the heat sector. The Guiding principles on reducing methane emissions across the natural gas value chain: We joined with seven other major energy groups, the Environmental Defense Fund and the International Energy Agency, to develop and commit to a series of guiding principles to reduce methane emissions in our own operations, improve regulations and work with suppliers and customers to cut leakage in the entire value chain. The guiding principles were signed in November 2017. Equinor will monitor the methane emissions in our value chain to make sure that we reduce these emissions going forward.

C12.1c

(C12.1c) Give details of your climate-related engagement strategy with other partners in the value chain.

The Financial Stability Board's (FSB) Task Force on Climate Related Financial Disclosure (TCFD) Preparer Forum - In 2017, we joined the TCFD Preparer Forum for oil and gas companies in order to engage with the TCFD on efficient and feasible ways to implement the TCFD recommendation for disclosure, including considerations on how to present forward-looking information of high uncertainty, and the need for flexibility regarding where to disclose additional information that is not regarded as financially material.

The Environmental Partnership - In the USA, we joined the Environmental Partnership, comprised of companies in the USA natural gas and oil industry, committed to continuously improving the industry's environmental performance. Through our participation we will, starting in January 2018, implement three specific performance programmes focused on minimising emissions of methane and volatile organic compounds (VOCs) in onshore operations.

One Future coalition - In 2017, Equinor joined the One Future coalition. Member companies are committed to continuously improving their emissions management to assure efficient energy production and delivery. One Future's members include some of the largest natural gas production, processing, transmission and distribution companies in the USA representing nearly the entire natural gas value chain.

Climate and Clean Air Coalition Oil and Gas Methane Partnership (OGMP) - Equinor is a founding partner of the OGMP, that was established in 2014. Through this partnership, we are committed to systematically addressing methane emissions from nine 'core' methane emission sources and reporting on annual progress (from 2015). Our offshore production installations on the Norwegian Continental Shelf, representing nearly 90% of our operated oil and gas production, are included in the scope for this partnership. The 2017 OGMP report will be published in 2018.

Oil and gas Climate Initiative (OGCI) - Through our membership of the OGCI, we provided financial and technical backing for two major global studies of methane emissions from the natural gas value chain. One with UN Environment and the other with Imperial College London. It is anticipated that these could help identify new emission reduction initiatives and provide a scientific foundation to inform policy. We have also committed to work towards near zero methane emissions from the natural gas value chain, and setting a target to be announced by the end of 2018.

Technology center Mongstad - In 2017, Equinor also signed a three-year contract with the Norwegian government, Shell and Total, to extend carbon capture testing at the Technology Centre Mongstad (TCM). TCM proved to be a valuable facility to test capture technologies under strict emission conditions. TCM is the world's largest testing institution, cooperating closely with vendors, researchers and other institutions such as National Energy Technology Laboratory (NETL) in the USA.

Equinor has cooperation agreements with universities and research institutes in many countries. Among the universities we have agreements with are UiTromsø, UiStavanger, UiOslo, UiBergen, NTNU, BI Norwegian Business School, SNF - Institute for Research in Economics and Business Administration (NHH), IFP School, Imperial College and The University of Texas at Austin.

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

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
Cap and trade	Support	Contributing to position papers by IOGP and Business Europe. Equinor engages directly with policy makers in key markets.	Supporting the strengthening of EU ETS; including support to Market Stability Reserve, and ambitious 2030 GHG target for the EU.
Cap and trade	Support	Member of steering committee of the International Emission Trading Association's B-PMR, to support building on carbon markets initiatives around the world. Equinor is a founding Member of The World Bank's Carbon Pricing leadership Coalition.	Equinor actively advocates for an international price on carbon and supports initiatives on carbon pricing and linking of carbon market schemes through direct engagement with stakeholders and conference speeches.
Energy efficiency	Support with minor exceptions	Introduction of emission performance standards in the power sector Introduction of emission performance standards in the power sector in the USA.	112 d and 112 f power plant rules in the USA.
Other, please specify (EU 2030 climate target)	Support	Norway aims to be included in EU's 2030 climate target of 40 % reduction from 1990 to 2030.	Endorsed by Norwegian Parliament March 2015. Equinor is a member of Norwegian government's climate council. Furthermore, we are also a member of Norway 20-30-40 business coalition to promote energy transition and green competitiveness.
Regulation of methane emissions	Support	Equinor has for many years undertaken a number of activities to respond to regulatory developments in US and Norway and has progressed on the objectives for methane improvement activities. In response to the (former) Obama Administration's increased focus on methane emissions, Equinor has been actively engaged on two fronts: (1) evaluating operational aspects and implementing reduction measures for our US onshore assets, and (2) engaging with industry and the Administration regarding the development of a voluntary program. In Norway, Equinor, and other industry peers, have been collaborating with the Norwegian Environment Agency (NEA) to improve the identification and quantification of methane and NMVOC emissions, and evaluate the possibilities for further emission reductions for existing and future operations. A key deliverable from this work was an update of the quantification methodologies for the regulatory reporting on methane and NMVOC emissions at the Norwegian Continental Shelf. 2016 was the first year in which Equinor utilized these updated quantification methodologies for the reporting of upstream methane and NMVOC emissions from our upstream activities in Norway. In 2017 we started a similar collaboration with Norwegian Environment Agency to address methane and NMVOC emissions at the onshore oil and gas facilities in Norway. In addition, Equinor has developed corporate principles on methane regulations to address: • How avoidable methane emissions in the oil and gas sector should be eliminated • Target the most significant emissions sources • Harmonisation of relevant monitoring, reporting and verification standards of methane emissions • Build upon industrial experiences and initiatives • Realistic reduction timeframe • Disclosure of methane emissions data. In 2017 Equinor carried out an internal study that indicates that the methane leakage rate for the natural gas value chain from offshore production in Norway to the customers in Germany and the UK is below 0.3%, which is well below the threshold for which the environmental benefit of natural gas vs coal is questioned.	The future of regulatory framework in the US remains uncertain. Regardless of the outcome of President Trumps decisions, Equinor continues to work towards lowering its carbon footprint across US operations. Equinor has taken discrete steps to address methane, NMVOC and CO2 emissions. Since 2014, Equinor developed a comprehensive US Onshore Emissions Reduction Program that focusses on: (i) operational improvements – Equinor has implemented a voluntary leak detection and repair program and has invested significant capital to modify/upgrade facility designs to minimize fugitive emissions from process equipment and capture flare gas; (ii) technology – Equinor is collaborating with a breadth of industrial and academic partners to accelerate the technology development of methane sensing and mitigation technologies; (iii) outreach – Equinor has joined the OneFuture coalition and the API Environmental Partnership in order to facilitate greater policy and technology outreach with industrial partners and regulatory agencies. In 2017 Equinor, together with seven other oil and gas companies, committed to reduce methane emissions by signing on methane guiding principles. Equinor is engaged in the global Environmental Defense Fund/UN Environment methane project through the Oil and Gas Climate Initiative (OGCI). Equinor is also a founding member of Climate and Clean Air Coalition Oil and Gas Methane Partnership and has in 2017 been giving advice to UNECE on regulation of methane in the UN member states. As part of the Norwegian government's action plan on methane, the Norwegian Environment Agency (NEA), in close cooperation with industry, initiated, in 2014, a project to improve methane and non-methane volatile organic compounds (NMVOC) management and reporting. Through this project: • a comprehensive mapping of all potential sources for direct emissions of methane and NMVOC emissions has been undertaken • quantification methodologies have been assessed and updated • reduction potentials for emission sources have been assessed. A key deliverable from this work was updated quantification methodology for the regulatory reporting on methane and NMVOC emissions, which Equinor implemented from the calendar year 2016. A summary report in English is available at the Environment Agency's website. http://www.miljodirektoratet.no/Documents/publikasjoner/M515/M515.pdf .
Other, please specify (TCFD Preparer Forum)	Support	The Financial Stability Board's (FSB) Task Force on Climate Related Financial Disclosure (TCFD) Preparer Forum.	In 2017, we joined the TCFD Preparer Forum for oil and gas companies in order to engage with the TCFD on efficient and feasible ways to implement the TCFD recommendation for disclosure, including considerations on how to present forward-looking information of high uncertainty, and the need for flexibility regarding where to disclose additional information that is not regarded as financially material.
Other, please specify (The guiding principles)	Support	Guiding principles on reducing methane emissions across the natural gas value chain.	We joined with seven other major energy groups, the Environmental Defense Fund and the International Energy Agency, to develop and commit to a series of guiding principles to reduce methane emissions in our own operations, improve regulations and work with suppliers and customers to cut leakage in the entire value chain. The guiding principles were signed in November 2017.

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Regulation of methane emissions	Support	The Environmental Partnership.	In the USA, we joined the Environmental Partnership, comprised of companies in the USA natural gas and oil industry, committed to continuously improving the industry's environmental performance. Through our participation we will, starting in January 2018, implement three specific performance programmes focused on minimizing emissions of methane and volatile organic compounds (VOCs) in onshore operations.
Other, please specify (One Future coalition.)	Support	One Future coalition.	In 2017, Equinor joined the One Future coalition. Member companies are committed to continuously improving their emissions management to assure efficient energy production and delivery. One Future's members include some of the largest natural gas production, processing, transmission and distribution companies in the USA representing nearly the entire natural gas value chain.
Other, please specify (OGMP)	Support	Climate and Clean Air Coalition Oil and Gas Methane Partnership (OGMP).	Equinor is a founding partner of the OGMP, that was established in 2014. Through this partnership, we are committed to systematically addressing methane emissions from nine 'core' methane emission sources and reporting on annual progress (from 2015). Our offshore, production installations on the Norwegian Continental Shelf, representing nearly 90% of our operated oil and gas production, are included in the scope for this partnership. The 2017 OGMP report will be published in 2018.
Other, please specify (OGCI)	Support	Oil and gas Climate Initiative (OGCI).	Through our membership of the OGCI, we provided financial and technical backing for two major global studies of methane emissions from the natural gas value chain. One with UN Environment and the other with Imperial College London. It is anticipated that these could help identify new emission reduction initiatives and provide a scientific foundation to inform policy. We have also committed to work towards near zero methane emissions from the natural gas value chain, and setting a target to be announced by the end of 2018.
Other, please specify (Technology center Mongstad (TCM).)	Support	Technology center Mongstad (TCM).	In 2017, Equinor also signed a three-year contract with the Norwegian government, Shell and Total, to extend carbon capture testing at the Technology Centre Mongstad (TCM). TCM proved to be a valuable facility to test capture technologies under strict emission conditions. TCM is the world's largest testing institution, cooperating closely with vendors, researchers and other institutions such as National Energy Technology Laboratory (NETL) in the USA.

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

American Petroleum Institute

Is your position on climate change consistent with theirs?

Mixed

Please explain the trade association's position

In favour of industry developed standards to reduce emission reductions. Less in favour of federal climate regulations and legislation in the US.

How have you, or are you attempting to, influence the position?

Equinor is a relatively small operating company in the US and has only limited influence on API's positions on climate change. However, we inform API when we disagree on positions they are taking.

Trade association

International Emission Trading Association

Is your position on climate change consistent with theirs?
Consistent

Please explain the trade association's position
Promoting market-based climate change legislations around the world.

How have you, or are you attempting to, influence the position?
Actively participating in working groups on different topics. Provide direct input to positions papers.

Trade association
Center for Environment Policy Studies (CEPS).

Is your position on climate change consistent with theirs?
Consistent

Please explain the trade association's position
Discussing international climate negotiations and market based climate legislations around the world.

How have you, or are you attempting to, influence the position?
Actively participating in working groups on different topics. Provide direct input to positions papers.

Trade association
IPIECA

Is your position on climate change consistent with theirs?
Unknown

Please explain the trade association's position
Not advocating on climate change legislation.

How have you, or are you attempting to, influence the position?
Not applicable as IPIECA does not do policy advocacy.

Trade association
International Association of Oil and Gas Producers, IOGP

Is your position on climate change consistent with theirs?
Mixed

Please explain the trade association's position
To represent and advocate industry views by developing effective proposals based on professionally established technical arguments in a societal context.

How have you, or are you attempting to, influence the position?
Equinor has a different view than IOGP on EU climate and energy policy and is providing input to position papers to adjust IOGP's position.

Trade association
Center for Climate and Energy Solutions (C2ES)

Is your position on climate change consistent with theirs?
Consistent

Please explain the trade association's position
Advocates for economy-wide, market-based approaches to emissions reductions in the US, varying sector-by-sector. Supports a fair, effective, and binding international framework on climate change.

How have you, or are you attempting to, influence the position?
Actively participating in initiatives and working groups that contribute to policy position papers.

Trade association
FuelsEurope

Is your position on climate change consistent with theirs?
Mixed

Please explain the trade association's position
To represent and advocate refinery industry interests in Europe.

How have you, or are you attempting to, influence the position?
Equinor has a different view than FuelsEurope on EU ETS. Are providing input to position papers to influence FuelsEurope's position.

Trade association
Oil and Gas Climate Initiative

Is your position on climate change consistent with theirs?
Consistent

Please explain the trade association's position
Aims to increase the ambition, speed and scale of the initiatives taken by the individual companies to reduce the greenhouse gas footprint of the oil and gas business – and to explore new businesses and technologies. Not advocating on climate change legislation.

How have you, or are you attempting to, influence the position?
Actively participating in work streams on different topics. Corresponding GHG emission reduction target implemented though the Climate Roadmap.

Trade association
Hydrogen Council

Is your position on climate change consistent with theirs?
Consistent

Please explain the trade association's position
Demonstrate hydrogen solutions and value chains to address decarbonization across the entire energy system, including those sectors which cannot be decarbonized with renewable solutions.

How have you, or are you attempting to, influence the position?
Equinor is taking a leading role in developing large scale hydrogen solutions based on natural gas reforming combined with CCS (permanent storage).

C12.3d

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

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?

Equinor has developed corporate climate positions that are aligned with our climate change strategy. The Corporate Sustainability Unit has frequent meetings with the Governmental and Public Affairs team and relevant colleagues in Equinor's Business Areas in order to develop and align positions and strategies for influencing policies and regulations globally and regionally/nationally. We engage the CEC regularly in climate discussions that also include policy-related topics. Equinor employees that engage in dialogue on behalf of the company with industry organizations, policy makers, media or other stakeholders are required to use corporate policies and positions as a basis for the dialogue, according to Equinor's Code of Ethics. Furthermore leaders receive training in the subject of climate change how Equinor approaches this. We upload our policy positions and respond to consultations on our website. We aim for openness and transparency in our policy dialogue and aim to ensure that our employees are familiar with Equinor's positions on dedicated policy proposals. There are cases where we have different opinion than the industry organisations we are member of (for example IOGP positions on free allowances for offshore Oil and Gas, API position on US power plant rules). In such cases we are trying to revert the position of the business organization, or, if that is not possible, we inform the business organizations in writing as to the reasons why we cannot support the proposed statement.

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 in accordance with TCFD recommendations

Status
Complete

Attach the document
statoil-annual-report-20f-2017.pdf

Content elements
Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets

Publication
In voluntary sustainability report

Status
Complete

Attach the document
statoil-sustainability-report-2017.pdf

Content elements
Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets

C14. 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.

C14.1

(C14.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Chief Operating Officer, EVP Jannicke Nilsson.	Chief Operating Officer (COO)

SC. Supply chain module

SC0.0

(SC0.0) If you would like to do so, please provide a separate introduction to this module.

SC0.1

(SC0.1) What is your company's annual revenue for the stated reporting period?

	Annual Revenue
Row 1	

SC0.2

(SC0.2) Do you have an ISIN for your company that you would be willing to share with CDP?

Please select

SC1.1

(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.

SC1.2

(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).

SC1.3

(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

Allocation challenges	Please explain what would help you overcome these challenges

SC1.4

(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

Please select

SC2.1

(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?

Please select

SC3.1

(SC3.1) Do you want to enroll in the 2018-2019 CDP Action Exchange initiative?

Please select

SC3.2

(SC3.2) Is your company a participating supplier in CDP's 2017-2018 Action Exchange initiative?

Please select

SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services, if so, what functionality will you be using?

Please select

SC4.2d

(SC4.2d) Have any of the initiatives described in SC4.2c been driven by requesting CDP Supply Chain members?

Please select

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	Public or Non-Public Submission	I am submitting to	Are you ready to submit the additional Supply Chain Questions?
I am submitting my response	Public	Investors Customers	Yes, submit Supply Chain Questions now

Please confirm below

I have read and accept the applicable Terms