

## 0.1

**Introduction**

Please give a general description and introduction to your organization

Statoil is an **international energy company** with operations in 41 countries and more than 35 years of experience from oil and gas production on the Norwegian continental shelf. We are headquartered in Norway with 21,330 employees worldwide, and are listed on the New York and Oslo stock exchanges. We were founded as The Norwegian State Oil company, Statoil, in 1972. In October 2007, Statoil merged with Hydro's oil and gas division, and in 2010 we implemented an IPO of Statoil Fuel & Retail on the Norwegian stock exchange. (see more details at the end)

As of January 1, 2011, we have **seven business areas**: Development & Production Norway (DPN), Development & Production International (DPI), Development & Production North America (DPNA), Marketing, Processing and Renewable Energy (MPR), Technology, Projects & Drilling (TPD), Exploration and Global Strategy & Business Development. Statoil is operator for more than 40 producing oil and gas fields; One of the world's largest net sellers of crude oil; The second largest exporter of gas to Europe The world's largest operator in waters deeper than 100 metres; A world leader in the use of deepwater technology; A world leader in carbon capture and storage;

**Statoil's ambition is to provide energy to meet the growing demand that is needed for economic and social development, while at the same time caring for the environment and actively taking part in international efforts to mitigate climate change.** Global climate change poses significant risks to society and ecosystems. Mitigating these risks requires dramatic reduction in human induced GHG emissions. Recognised organisations such as the Intergovernmental Panel on Climate Change (IPCC) recommend emission reductions in the order of 80-90 per cent from current levels by the middle of the century in order to avoid the most serious effects. Statoil acknowledges that there is broad scientific and political consensus on these targets. We believe there are sufficient evidence and arguments for firm action and support policy makers addressing this issue.

We are committed to accommodating the world's energy needs in a responsible manner, applying technology and creating innovative business solutions. For us, the way we work is as important as the goals we achieve. We believe that competitive returns for our shareholders are best achieved through a **values-based performance** culture, stringent ethical requirements and a code of conduct which promotes personal integrity.

**Statoil Fuel and Retail:** In October 2010, Statoil's energy and retail business became a stand-alone entity, Statoil Fuel & Retail ASA, through an initial public offering and listing on the Oslo Stock Exchange. Statoil continues to own 54% of the shares in Statoil Fuel & Retail and consolidates the results of Statoil Fuel & Retail in its financial statements. The company operates in the Scandinavian

countries, in Baltic states, Russia and Poland. While primarily focused on retail, Statoil Fuel & Retail also provides lubricants and aviation fuel to businesses.

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## 0.2

### Reporting Year

Please state the start and end date of the year for which you are reporting data.

The current reporting year is the latest/most recent 12-month period for which data is reported. Enter the dates of this year first.

We request data for more than one reporting period for some emission accounting questions. Please provide data for the three years prior to the current reporting year if you have not provided this information before, or if this is the first time you have answered a CDP information request. (This does not apply if you have been offered and selected the option of answering the shorter questionnaire). If you are going to provide additional years of data, please give the dates of those reporting periods here. Work backwards from the most recent reporting year.

Please enter dates in following format: day(DD)/month(MM)/year(YYYY) (i.e. 31/01/2001).

Enter Periods that will be disclosed
Sat 01 Jan 2011 - Sat 31 Dec 2011

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## 0.3

### Country list configuration

Please select the countries for which you will be supplying data. This selection will be carried forward to assist you in completing your response

Select country
Brazil
Canada
Denmark
Egypt
Iran, Islamic Republic of
Norway
Estonia
Latvia

Select country
Lithuania
Poland
Russia
Sweden

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0.4

**Currency selection**

Please select the currency in which you would like to submit your response. All financial information contained in the response should be in this currency.

NOK

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0.5

**Please select if you wish to complete a shorter information request**

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0.6

**Modules**

As part of the Investor CDP information request, electric utilities, companies with electric utility activities or assets, companies in the automobile or auto component manufacture sectors and companies in the oil and gas industry should complete supplementary questions in addition to the main questionnaire.

If you are in these sectors (according to the Global Industry Classification Standard (GICS)), the corresponding sector modules will be marked as default options to your information request. If you want to query your classification, please email [respond@cdproject.net](mailto:respond@cdproject.net).

If you have not been presented with a sector module that you consider would be appropriate for your company to answer, please select the module below. If you wish to view the questions first, please see <https://www.cdproject.net/en-US/Programmes/Pages/More-questionnaires.aspx>.

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## Further Information

### **Oil and gas module has been completed.**

Statoil's answer to the CDP questionnaire includes forward-looking statements which are by their nature, subject to significant risks and uncertainties because they relate to events and depend on circumstances that will occur in the future. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot assure you that our future results, level of activity, performance or achievements will meet these expectations. Moreover, neither we nor any other person assumes responsibility for the accuracy and completeness of the forward-looking statements. For a description of the factors that may affect our business, financial performance or results of operations, please have a look at the Risk review included in our Annual Report 2011: <http://www.statoil.com/annualreport2011/en/riskreview/pages/riskreview.aspx>

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## Module: Management [Investor]

### Page: 1. Governance

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#### 1.1

##### **Where is the highest level of direct responsibility for climate change within your company?**

Individual/Sub-set of the Board or other committee appointed by the Board

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#### 1.1a

##### **Please identify the position of the individual or name of the committee with this responsibility**

There has been growing recognition in recent years that sustainability risks can significantly affect the future of the company. As a result, our Board of Directors decided in 2010 to establish a new committee dedicated to HSE (including climate), ethics and CSR. The HSE and ethics committee is chaired by Roy Franklin. Its other members are Marit Arnstad, Bjørn Tore Godal and Lill-Heidi Bakkerud. The Board sub-committee meets four times per year.

The establishment of a separate committee dedicated to HSE, ethics and CSR ensures that the Board of Directors has even greater 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 will, inter alia, monitor and assess the practice, development and implementation of policies, systems and principles within the areas of HSE, climate ethics and CSR.

1.2

**Do you provide incentives for the management of climate change issues, including the attainment of targets?**

Yes

1.2a

**Please complete the table**

<b>Who is entitled to benefit from these incentives?</b>	<b>The type of incentives</b>	<b>Incentivised performance indicator</b>
Chief Executive Officer (CEO)	Monetary reward	Statoil has a climate KPI on the scorecard of the CEO
Corporate executive team	Monetary reward	Some members of the Corporate Executive team has also a Climate KPI on their scorecard
Environment/sustainability managers	Monetary reward	Head of the corporate climate unit is responsible for implementation of the climate strategy and is responsible for the climate KPI that is then reflected on the CEO scorecard.
	Recognition (non-monetary)	Statoil has established an HSE award that is attributed annually. he award was established in order to call attention to and reward good efforts in the field of health, safety and the environment including climate (HSE).

**Page: 2. Strategy**

2.1

**Please select the option that best describes your risk management procedures with regard to climate change risks and opportunities**

Integrated into multi-disciplinary company - wide risk management processes

2.1a

**Please provide further details (see guidance)**

The management of climate change related risks and opportunities follows the same process applicable to managing other risks to achieving Statoil's business objectives.

**Risk assessment at company level:** We have an enterprise-wide risk management approach which means that: (i) we have a focus on risk and reward at all levels in the organisation; (ii) we evaluate significant risk exposure related to major commitments; (iii) we manage and coordinate risk at corporate level. We manage risk on a short- and long term basis, and focus on what is best for us as a group in order to avoid sub-optimisation. Our corporate risk committee (CRC) assesses and discusses measures to manage the overall risks for Statoil. The corporate risk committee is headed by our chief financial officer and its members include representatives of our principal business areas.

Statoil defines risk as a deviation from a specified reference value and the uncertainty associated with it. A positive deviation is defined as an upside risk, while a negative deviation is a downside risk. The reference value is expectation - most likely a forecast, percentile or target. We manage risk in order to ensure safe operations and to reach our corporate goals in compliance with our requirements.

In addition to complying with national laws, our internal policies and guidelines for risk management are based on international standards. We employ the principles "as low as reasonably practicable" (ALARP) and "best available technology" (BAT). The overall management system of the Statoil group and the management systems of our operational entities are in line with the principles described in the ISO 14001 standard for Environmental Management Systems (EMS).

**The scope of the process:** The risk management process with regard to climate change risks and opportunities covers regulatory, customers behaviour, financial, ownership, reputational and physical risks.

The main risk associated with Statoil's operations is a regulatory risk. Today, Statoil's is probably one of the most "CO2 exposed" companies, due to climate legislation both in Norway and in the European Union where most of our installations are currently located.

Regulatory risk is relevant for both our upstream activities and our customers (demand-side risk). Of the life cycle emissions from Statoil's products, only 15%-20% occur in production, while 80%-85% occur when the end user consumes our products. The end user's carbon exposure can be four to five times the up-stream production exposure depending on how regulation is established. End users may face in the future strong incentives to turn demand towards less carbon intensive energy.

Statoil's climate risk exposure also include a reputation risk: the ability for Statoil to grow the business depends on partnerships and relations with other companies, governments, investors, owners and the general public. The license to operate from this large range of stakeholders is strongly influenced by the way Statoil is able to stay globally competitive as an oil and gas company in a future where carbon regulations become stricter. Distrust from any of the major stakeholders could hamper Statoil's business opportunities.

Our risk assessment take into account the fact that the effects of climate change could result in less stable weather patterns, resulting in more severe storms and other weather conditions that could interfere with our operations and damage our facilities.

**Assesment at Asset Level:** Each of the buisness area has a risk register which includes HSE (including climate) risks.

New projects should take into account the commercial impact of national and international legislation to reduce GHG emissions. Where there is no existing legislation, we include assessments of possible future GHG mitigation measures and indicative carbon costs in evaluating the economics of all new projects.

Impact assessments are performed for all relevant projects to assess environmental, social and health impacts, and to define measures to reduce or avoid negative impacts and enhance benefits.

Early identification, understanding and management of HSE, social and integrity risks are essential if we are to achieve sustainable development as we diversify our portfolio and grow internationally. Concerted efforts have resulted in the development and implementation of a **web-based early-phase risk assessment (EPRA)** tool for evaluating new business opportunities. The tool is based on a multi-disciplinary approach to risk assessment, integrating the disciplines of health, safety, security, environment and climate, social responsibility (CSR) and ethics, and anti-corruption. EPRA was improved and expanded in 2011 with respect to risk assessments relating to water management.

**Criteria for determining materiality/priorities:**

The following elements have to be included in the risk register: Reference value; Impact description; Impact on cash flow; Risk factor; Main contributors; Probabilities. Based on the expected impact and the probability a risk is included on Statoil's corporate risk map. No materiality criteria is applied for the prioritization of climate change related issues. Identification of reputation risks is a separate process. Our communication department owns this process.

**The frequency of monitoring and to whom the results are reported:** we are committed to communicating and quantifying the total risk map, including upside and downside potentials, to our decision-makers. In that context, Statoil's corporate risk map is presented twice per year to our CEC and the Board of Directors. Specific climate regulatory risks are also discussed more in detailed with the Bord of Directors' HSE and Ethics sub-committee. In addition, each of the Business Areas shall update its risk register as frequently as necessary and at least in connection with the regular review meeting with the CEO. Finally, our corporate reputation risk map is updated every quarter and presented to the CEC.

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## 2.2

### Is climate change integrated into your business strategy?

Yes

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## 2.2a

### Please describe the process and outcomes (see guidance)

**How the business strategy has been influenced?** Meeting growing energy needs, while at the same time reducing carbon dioxide emissions and environmental impacts, is one of the world's greatest challenges today. As an international energy company, Statoil has an important contribution to make to finding solutions to this energy, climate and environment dilemma. We believe we have the technology, experience and capital required to develop some of the future solutions. As indicated by the International Energy Agency's World Energy Outlook 2011, despite rapid growth in renewable energy sources, meeting the world's growing need for energy will require all sources of energy - including hydrocarbons. In that context, Statoil's greatest contribution will be to continue reducing the carbon intensity of our oil and gas production and developing low-carbon and renewable technologies where we can utilise our capabilities.

Today, we are convinced that delivering a reliable supply of **natural gas** is our greatest contribution to solving the energy and climate dilemma. We believe indeed that natural gas has an important role to play in a lower carbon economy both in the short and long term. As part of our technology strategy, we have decided to focus part of our R&D efforts on three areas that are deemed to be critical to addressing climate challenges: (i) **better resource management**; (ii) the development of **carbon capture and storage**; (iii) renewable energies. We utilise existing core capabilities and current business positions to create profitable positions in renewable energy, prioritising **offshore wind** projects while keeping track of new opportunities.

**What climate change aspects have influenced the strategy?** Statoil's strategy has been influenced by regulatory, reputational and business risks and opportunities related to climate change.

#### **The most important components of the short-term strategy?**

One of the strategic responses to climate risks is to ensure that Statoil's portfolio is CO<sub>2</sub>-robust with respect to possible changes in regulatory regimes and markets. Robustness is ensured both through increasing CO<sub>2</sub> efficiency and through proactive dialogue with key stakeholders. In 2008 the BoD and CEC decided to set the strategic objective to be an Industry Leader in carbon efficiency. This objective is now part of the CEC 2012 balanced scorecard.

A systematic approach to performance in order to be an Industry Leader in CO<sub>2</sub>-efficiency is already part of Statoil's steering system. For example: (i) The Capital Value Process (CVP) requires new investments to identify technology qualification needs towards first decision gate (DG1) as well to develop concepts for CO<sub>2</sub>-reduction towards the second decision gate (DG2). (ii) Statoil has an internal carbon price that is used by each of our project during the investment evaluation phase. (iii) Future prices on oil, gas and CO<sub>2</sub>-emissions are updated when relevant with Statoil best estimates of expected future CO<sub>2</sub>-policies. (iv) The company has an approved policy of no-production flaring, stating that continuous flaring for gas disposal is not acceptable. This is included in our Technical Requirements which is valid across Statoil where we are operators. (v) Statoil's emission performance is measured by an internal climate KPI.

Being an industry leader in HSE means also driving technological development. We have a strong commitment to **environmental and climate R&D aimed at identifying new solutions for reducing carbon emissions and staying at the forefront of developing environmental management tools**. Driving technological innovation also means working with our suppliers and the different sectors involved in the oil and gas value chain to find solutions that can reduce emissions. In particular, we are involved in several technology projects aimed at reducing greenhouse gases from our shipping activity. These projects focus on both new technical solutions and what type of energy carriers can be used in future.

As economic conditions and the world's energy realities become increasingly complex, we also believe that Statoil's management must effectively anticipate and understand market shifts in order to position Statoil for continued growth and development. To improve our executive leadership capabilities in relation to climate and energy, we launched in 2011 the **Climate and Energy leadership programme**. Ten senior executives have been nominated to take part in a one-year programme, which started in October 2011. Ten new senior executives will be nominated every six months. After completing the programme, participants are expected to actively invest in the company's ability to identify and respond to future uncertainties within their respective areas of responsibility.

**The most important components of the long-term strategy?** Statoil revised business strategy for 2020 was presented in June 2011 and one of the three strategic beliefs underlying this strategy is that HSE and carbon efficiency constitutes a competitive advantage today and, even more, in the future. In August 2011 the CEC decided to establish 2020 carbon efficiency targets to add a top-down approach to the carbon competitive efforts. Six production segments have been identified (conventional oil and gas, extra heavy oil - including oil sands, heavy oil, shale gas, LNG, refining and processing) and for each of them an intensity target has been set.

**What have been the most substantial business decisions made during the reporting year that have been influenced by the climate change driven aspects of the strategy :**



**Setting 2020 carbon efficiency targets** (see above) have been the most substantial business decision. **Long-term investments in natural gas** have also been influenced by our climate strategy. For example in November 2011, Statoil and Centrica entered into a long term gas sales agreement for the delivery of 5 billion cubic metres. Furthermore, In July 2011 Statoil and the Norwegian government (Gassnova) have invited suppliers to take part in a **technology qualification programme for full-scale carbon capture at Mongstad** (investment decision planned in 2016).

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2.2b

Please explain why not

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2.3

**Do you engage with policy makers to encourage further action on mitigation and/or adaptation?**

Yes

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2.3a

**Please explain (i) the engagement process and (ii) actions you are advocating**

**The engagement process** is the responsibility of the corporate climate team in coordination with the Governmental and Public Affairs team. We engage directly with governments, with the European Union and international organisations (UNFCCC; World Bank). We also engage through industry association such as the World Business Council for Sustainable Development (WBCSD); the International Emissions Trading Association (IETA), IPIECA, the Oil and gas producers association (OGP) the American Petroleum Association, etc. The purpose of this engagement is to collaborate with government to find the most cost-efficient way to address the climate challenges.

Since September 2011, Statoil's CEO has participated in the UN High Level Panel for Sustainable Energy for All. In that context, Statoil has worked very closely with public and private partners on how to reach three main goals towards 2030: (i) universal energy access; (ii) doubling of the share of renewables in the global energy mix and (iii) doubling of the annual rate of energy efficiency.

**Actions we are advocating:**

- Statoil strongly supports the process towards an UN-based and worldwide agreement on greenhouse gas reductions by 2015 (as agreed at the COP 17 in Durban in November 2011), which will set stringent GHG reduction targets for all major emitters. Given its global character climate change must be addressed at the international level, via appropriate agreements that define targets and necessary measures, and that also specifies common rules for monitoring, reporting and verification.

- Market based and transparent policy measures will deliver emission reductions at lowest costs. The bigger the market, the larger the number of players involved, and the more sectors and greenhouse gases included the better. It is essential to put a cost on emissions, and to have all emitters being exposed to that cost in their decision-making. Also, it is essential that the regulatory framework is robust and consistent, so that it can provide clear signals for longer-term investments.

- Statoil believes that cap-and-trade systems – such as the EU ETS – should be the preferred model of exposing economic actors to climate costs. They offer cost-efficiency to society and flexibility in adaptation and risk mitigation to business. Emission trading markets must be driven by scarcity of allowances, and mechanisms should be in place to rebalance the system to ensure continued scarcity- for instance in the case of an economic setback (in that context, Statoil supports a set-aside of CO2 allowances to recalibrate the EU ETS).

- Statoil also believes in more widespread use of international offsets, such as the clean development mechanism (CDM) included in the Kyoto-protocol. Such mechanisms allow for innovation, exchange of technology and for long-term investments in developing countries, while at the same time offering flexibility and increased cost-efficiency in higher cost countries. As markets for CDM projects mature and the level of investments increases the next logical step is to develop more scaled-up crediting instruments at the sector level and eventually full-fledged emissions trading systems in host countries. Such domestic trading systems can then again be tied into a network of other national and regional trading platforms.

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#### Further Information

Regarding question 2.1

Statoil book: <http://www.statoil.com/en/About/TheStatoilBook/Downloads/The%20Statoil%20book.pdf>

Statoil risks evaluation: <http://www.statoil.com/AnnualReport2011/en/RiskReview/RiskFactors/Pages/RisksRelatedToOurBusiness.aspx>

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### Page: 3. Targets and Initiatives

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#### 3.1

**Did you have an emissions reduction target that was active (ongoing or reached completion) in the reporting year?**

Absolute and intensity targets

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#### 3.1a

**Please provide details of your absolute target**

ID	Scope	% of emissions in scope	% reduction from base year	Base year	Base year emissions (metric tonnes CO2e)	Target year	Comment
K1	Scope 1	100%		2007		2020	As part of the Konkraft commitment, Statoil has agreed to reduce CO2 emissions on the Norwegian continental Shelf about 800 000 tonnes by 2020 in comparison 2007 level.

### 3.1b

Please provide details of your intensity target

ID	Scope	% of emissions in scope	% reduction from base year	Metric	Base year	Normalized base year emissions	Target year	Comment
T1	Scope 1	100%		Other: tonnes CO2 per ktonnes produced oe	2010		2011	Target is set on a yearly basis based on production prognosis and emission reduction plans. The target for 2011 was 82tCO/ktoe.
T2	Scope 1	100%		Other: KgCO2 per boe			2020	2020 intensity target for conventional oil and gas agreed end 2011 and disclosed in Sustainability report 2011. 2020 Target: 11kgCO2/boe
T3	Scope 1	100%		Other: KgCO2 per boe			2020	2020 intensity target for heavy oil agreed end 2011 and disclosed in Sustainability report 2011. 2020 target: 17kgCO2/boe
T4	Scope 1	100%		Other: KgCO2per boe			2020	2020 intensity target for extra heavy oil agreed end 2011 and disclosed in Sustainability report 2011. 2020 target: 50kgCO2/boe
T5	Scope 1	100%		Other: KgCo2 per boe			2020	2020 intensity target for shale gas agreed end 2011 and disclosed in Sustainability report 2011. 2020 target: 6kgCO2/boe
T6	Scope 1	100%		Other: KgCo2 per boe			2020	2020 intensity target for LNG agreed end 2011 and disclosed in Sustainability report 2011. 2020 target: 24kgCO2/boe
T7	Scope	100%		Other: 1st Quartile			2020	2020 targets for refining and processing agreed end

ID	Scope	% of emissions in scope	% reduction from base year	Metric	Base year	Normalized base year emissions	Target year	Comment
	1			Solomon Index				2011 and disclosed in sustainability report 2011 2020 target: 1st quartile Solomon Index

### 3.1c

Please also indicate what change in absolute emissions this intensity target reflects

ID	Direction of change anticipated in absolute Scope 1+2 emissions at target completion?	% change anticipated in absolute Scope 1+2 emissions	Direction of change anticipated in absolute Scope 3 emissions at target completion?	% change anticipated in absolute Scope 3 emissions	Comments
T1	Increase		No change		Our current climate KPI is an intensity target.
T2	No change				In 2020, we expect our emissions from conventional oil and gas to remain the same as in 2011. We expect an increase due to international expansion and maturing field on the Norwegian Continental Shelf that will be mitigated by emissions reduction efforts.
T3	Increase				In 2020, we expect a small increase in comparison to 2011 emissions for heavy oil but target is expected to be met.
T4	Decrease				In 2020 we expect to meet the target for extra heavy oil (including oil sands).
T5	Increase				In 2020, we expect a small increase in comparison to 2011 emissions for shale gas but target is expected to be met.
T6	Decrease				In 2020, we expect a decrease in comparison to 2011 emissions for LNG but target is expected to be met.
T7					In 2020 we expect that all installations should meet our refining and gas processing targets. However situation at the Mongstad refinery will depend on the outcomes of the negotiations with the Norwegian government on CCS.

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**3.1d**

Please provide details on your progress against this target made in the reporting year

ID	% complete (time)	% complete (emissions)	Comment
T1	100	80	The target (current climate KPI) for 2011 was 82tCO/ktOE. Actual result end 2011 is 95tCO2/ktOE.
K1	30	60	By the end of 2011 we had already achieved approximately 500,000 tonnes of carbon dioxide reductions (against the target of 800 000 tonnes by 2020), but, since many of the large projects have been completed (e.g. new power turbines on the Heimdal installation), the remaining 300,000 tonnes will be a more complex challenge.

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**3.1e**

Please explain (i) why not; and (ii) forecast how your emissions will change over the next five years

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**3.2**

Does the use of your goods and/or services directly enable GHG emissions to be avoided by a third party?

Yes

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**3.2a**

Please provide details (see guidance)

Export of Norwegian gas is a key contributor to reducing the use of coal-fired power in Europe. Assuming that 75 % of the gas exported from Norway replaces coal in electricity generation, today's deliveries of 100 billion cubic metres per year could avoid some 230 million tonnes of CO<sub>2</sub> emissions from coal fired power stations.

Use of CDM and carbon finance is also a way for a third party to avoid GHG emissions. A collaborative project between Statoil and Pemex to reduce gas flaring on the Tres Hermanos oilfield in Mexico was registered under the United Nations Framework Convention for Climate Change's Clean Development Mechanism (CDM) in 2010. This was the first gas flaring reduction project to be registered as a CDM by the UN and opens up interesting funding opportunities for similar projects globally. The expected start-up of the plant is April 2012. From that date, Pemex will stop flaring the associated gas in their "Tres Hermanos" oil field, and therefore

reducing their emissions by an average of 83.000 tonCO2/year.

**Statoil Fuel and Retail:** Although the retail business depends on a broad product range, fuel products remains at the core. The fundamental dilemma is centred on how to limit emissions from a transport system that largely depends on fossil fuel. Such fuels may be enhanced with a limited quantity of ethanol in regular gasoline and biodiesel in regular diesel.

In August 2011 the corporate executive committee of Statoil Fuel & Retail approved and launched an Health, safety and environment (HSE) strategy that aims at making HSE "a competitive edge in the way we do business". The task of tailoring a strategy that fit the company's mission and values involved all business areas, business drivers and the Health, safety and environment network. The strategy established a number of short-term goals and targets for performance towards 2015.

In 2011 Statoil Fuel & Retail's regional businesses made a number of minor steps:

-In the Baltics, Statoil Fuel & Retail improved its fuel offering by the use of additives. These have positive environmental effects, albeit without serving as an alternative to fossil fuel.

- In Norway, Statoil Fuel & Retail introduced second-generation ethanol produced from wood and launched Norway's first speed charger for electrical cars situated at a retail station.

- In Sweden, Statoil Fuel & Retail added biogas in the shape of compressed natural gas to six stations - and combined this effort with the launch of another station offering liquefied natural gas aimed at heavy duty engines. This was the second such offering in Sweden of a concept unique to Sweden.

- In Denmark, Statoil Fuel & Retail introduced B7 (diesel with 7% biodiesel) and started offering Bio 95 2G (95-octane gasoline containing 5% second-generation ethanol made from straw).

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### 3.3

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

Yes

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#### 3.3a

**Please identify the total number of projects at each stage of development, and for those in the implementation stages, estimated CO2e savings**

Stage of development	Number of projects	Total estimated annual CO2e savings (only for rows marked *)
Under investigation	12	3000000
To be implemented*	5	610000
Implementation commenced*	0	0
Implemented*	2	500000
Not to be implemented	2	500000

### 3.3b

For those initiatives implemented in the reporting year, please provide details in the table below

Activity type	Description of activity	Estimated annual CO2e savings	Annual monetary savings (unit currency)	Investment required (unit currency)	Payback period
Energy efficiency: processes	Statoil's energy management on the Norwegian continental shelf is based on field-specific energy-efficiency plans. The plans are continuously updated, and consist of more than 150 different operational, maintenance and modification actions. We are committed to contributing to the overall industry goal of achieving improved energy efficiency on the Norwegian continental shelf equivalent to carbon emission reductions of one million tonnes by 2020, compared with 2007. Since Statoil is the largest operator on the Norwegian continental shelf, we have an internal target to contribute 80% of the petroleum industry's pledge for 2020. By the end of 2011, we had already achieved approximately 500,000 tonnes of carbon dioxide reductions, but, since many of the large projects have been completed (e.g. new power turbines on the Heimdal installation), the remaining 300,000 tonnes will be a more complex challenge. Since the early 1990s, we have implemented energy-efficiency measures that have helped us to reduce our carbon dioxide emissions by approximately 40 million tonnes on the Norwegian continental shelf compared with a business-as-usual scenario. All new installations and large modifications of existing installations will base their energy solutions on our vast experience from earlier energy-efficiency measures.	67000			1-3 years
Energy	We are seeking a 25% reduction in the carbon dioxide intensity of our oil sands			180000000	>3 years

Activity type	Description of activity	Estimated annual CO2e savings	Annual monetary savings (unit currency)	Investment required (unit currency)	Payback period
efficiency: processes	operations by 2020, and have a long-term ambition of a total 40% reduction in carbon dioxide intensity by 2025. We are also aiming for a 45% reduction in water intensity over the next 10 years. To accomplish this, Statoil has established a USD 30 million oil sands technology plan. This five-year plan identifies technologies and development strategies that will improve project economics while meeting our carbon dioxide and water intensity targets.				
Transportation: fleet	A number of specific achievements support our sustainable shipping strategy. For example, we are reducing our emissions through initiatives such as being the world's first commercial enterprise to convert a tanker from heavy oil fuel to dual fuel, enabling liquid natural gas to be used for power generation. Compared with heavy oil fuel, the combustion of LNG is expected to reduce nitrogen oxides emissions by 85%, carbon dioxide emissions by 25%, and sulphur oxides and other particles completely. The fouling of ships' hulls is a well-known phenomenon, causing reduced speed, increased fuel consumption and general wear and tear to vessels. To reduce fouling, Statoil employs the Norwegian service company CleanHull, which has an environmentally responsible method of cleaning ship hulls. Hull cleaning reduces emissions and minimises the transfer of invasive species. CleanHull removes hitch-hiking marine organisms picked up in foreign waters and can cut carbon dioxide emissions by around 100,000 tonnes a year if cleaning is performed twice annually. One other action taken to reduce our emissions is the "green voyage procedure" (GVP) for shuttle tankers. GVP targets the optimisation of tanker scheduling. The strategy includes practices such as "virtual arrival", a process for tankers developed by the Oil Companies International Marine Forum (OCIMF) that establishes a framework for agreeing to reduce a vessel's speed on voyages to meet a revised arrival time when there is a known delay at the discharge port. According to Teekay's "Shuttle Tanker Emissions Report 2008", a two-knot decrease from 14 knots to 12 knots results in a 10% reduction in fuel consumption and an almost 6% decrease in greenhouse gas emissions.	100000			1-3 years
Behavioral change	- Promotion of requirement of Best Available Technologies evaluations including GHG management. - Awareness raising through the Energy and Climate Leadership Programme (one-year programme for senior executives on climate regulatory risks) - Awareness raising through the "energy realities" campaign on our intranet				<1 year



**What methods do you use to drive investment in emissions reduction activities?**

Method	Comment
Compliance with regulatory requirements/standards	Compliance with legislation such as EU-ETS, Norwegian CO2 tax, etc. where applicable to our operations
Compliance with regulatory requirements/standards	Minimum requirements for energy efficiency, non- production flaring or evaluation requirements for CO2 reduction projects are included with our corporate technical requirements/ corporate policies. Not respecting those requirement implies to ask for a formal dispensation and mitigation plan need to be in place.
Dedicated budget for low carbon product R&D	R&D expenditure has been approximately NOK 2.1 billion per year (\$360 million) for the last three years. Statoil invest in R&D for carbon reduction technologies such as energy efficiency programme, CCS. offshore wind technologies, second generation biofuels, geothermal.
Internal price of carbon	We consider the potential cost of a project's CO2 emissions in all investments decisions. Our internal price of carbon assume major increase of CO2 price both in Europe and in the rest of the world towards 2040.
Marginal abatement cost curve	We have developed Marginal Abatement Curve for evaluating our emissions reduction projects and for communicating with Statoil's management. These provide a method of evaluating potential emissions reductions activities by comparing different projects
Partnering with governments on technology development	In cooperation with Gassnova (which represents the Norwegian government in CCS matters), Norske Shell and Sasol, Statoil will in 2012 start up the Carbon dioxide Technology Centre Mongstad (TCM). The USD 1 billion test centre, which is now completed, is unique in the global context. Two different technologies will 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. In 2006, the Norwegian government and Statoil also entered into an agreement to build a full-scale carbon capture facility at Mongstad. Early in 2009, Statoil delivered a master plan that set out the best possible basis for the process leading up to full-scale carbon dioxide capture from the combined heat and power plant and other substantial sources at the refinery. Since 2009, the project has been subject to some delays, mainly due to immaturity of the capture technology compared with expectations in 2006, but Statoil remains strongly committed to the realisation of this project.

3.3d

If you do not have any emissions reduction initiatives, please explain why not

**Further Information**

**Comments on question 3.3a : 6 main groups of carbon reduction projects:** Konkraft measures; oil sand technology plan; CCS projects; flaring reduction projects; energy efficiency projects outside of the Norwegian Continental Shelf; electrification

Article in our sustainability report on sustainable shipping:  
<http://www.statoil.com/annualreport2011/en/sustainability/climateandenvironment/pages/sustainableshippingstrategy.aspx>

**Page: 4. Communication**

**4.1**

**Have you published information about your company’s response to climate change and GHG emissions performance for this reporting year in other places than in your CDP response? If so, please attach the publication(s)**

Publication	Page/Section Reference	Identify the attachment
In annual reports (complete)	Key figures (page 4), Our corporate strategy (page 14-16), Operations South (page 29), Research and development (page 81), Risk factors (page 157), Legal and regulatory risks (page 162)	Please see 'statoil_annual_report_11_20f.pdf' for 2011 Annual Report on Form 20-F
In annual reports (complete)	Climate and environment	Please see 'statoil_annual_report_11_climate.pdf' for 2011 Annual Report, chapter on Climate
In annual reports (complete)	Environmental posters	statoil_annual_report_11_environmentalposters.pdf for 2011 Annual Report, Environmental posters
In voluntary communications (complete)	Overall energy market outlook 21-32	Please see 'statoil_energy_perspectives_11.pdf' for Statoil Energy Perspectives 2011
In voluntary communications (complete)	Environmental ambitions (page 24), Sustainable development activities (page 28), Factors affecting our performance (page 40)	Please see 'statoil_oilsands_report_card_11.pdf' for Statoil Oil Sands Report Card 2011
In voluntary communications (complete)	Our company website explains our response to climate change	Please see 'statoilcom_climate_screenshot.jpg' for example. See 4.1 Further information for direct access to web site.
In voluntary communications (complete)	Our “Statoil Innovate” website explains our efforts to develop new renewable energy	Please see 'statoil_innovate_screenshot.jpg' for example. See 4.1 Further information for direct access to web site.

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## Further Information

Our company website explains our response to climate change: <http://www.statoil.com/en/EnvironmentSociety/Environment/Climate/Pages/ClimateDefault.aspx>  
Our website “Innovate” explains our efforts to develop new renewable energy: <http://innovate.statoil.com/TechnologyThemes/Pages/New-energy---Renewables.aspx>

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## Attachments

[https://www.cdproject.net/Sites/2012/32/23132/Investor CDP 2012/Shared Documents/Attachments/InvestorCDP2012/4.Communication/statoil\\_annual\\_report\\_11\\_environmentalposters.pdf](https://www.cdproject.net/Sites/2012/32/23132/Investor%20CDP%202012/Shared%20Documents/Attachments/InvestorCDP2012/4.Communication/statoil_annual_report_11_environmentalposters.pdf)  
[https://www.cdproject.net/Sites/2012/32/23132/Investor CDP 2012/Shared Documents/Attachments/InvestorCDP2012/4.Communication/statoilcom\\_climate\\_screenshot.JPG](https://www.cdproject.net/Sites/2012/32/23132/Investor%20CDP%202012/Shared%20Documents/Attachments/InvestorCDP2012/4.Communication/statoilcom_climate_screenshot.JPG)  
[https://www.cdproject.net/Sites/2012/32/23132/Investor CDP 2012/Shared Documents/Attachments/InvestorCDP2012/4.Communication/statoil\\_energy\\_perspectives\\_11.pdf](https://www.cdproject.net/Sites/2012/32/23132/Investor%20CDP%202012/Shared%20Documents/Attachments/InvestorCDP2012/4.Communication/statoil_energy_perspectives_11.pdf)  
[https://www.cdproject.net/Sites/2012/32/23132/Investor CDP 2012/Shared Documents/Attachments/InvestorCDP2012/4.Communication/statoil\\_annual\\_report\\_11\\_20f.pdf](https://www.cdproject.net/Sites/2012/32/23132/Investor%20CDP%202012/Shared%20Documents/Attachments/InvestorCDP2012/4.Communication/statoil_annual_report_11_20f.pdf)  
[https://www.cdproject.net/Sites/2012/32/23132/Investor CDP 2012/Shared Documents/Attachments/InvestorCDP2012/4.Communication/statoil\\_oilsands\\_report\\_card\\_11.pdf](https://www.cdproject.net/Sites/2012/32/23132/Investor%20CDP%202012/Shared%20Documents/Attachments/InvestorCDP2012/4.Communication/statoil_oilsands_report_card_11.pdf)  
[https://www.cdproject.net/Sites/2012/32/23132/Investor CDP 2012/Shared Documents/Attachments/InvestorCDP2012/4.Communication/statoil\\_innovate\\_screenshot.JPG](https://www.cdproject.net/Sites/2012/32/23132/Investor%20CDP%202012/Shared%20Documents/Attachments/InvestorCDP2012/4.Communication/statoil_innovate_screenshot.JPG)  
[https://www.cdproject.net/Sites/2012/32/23132/Investor CDP 2012/Shared Documents/Attachments/InvestorCDP2012/4.Communication/statoil\\_annual\\_report\\_11\\_climate.pdf](https://www.cdproject.net/Sites/2012/32/23132/Investor%20CDP%202012/Shared%20Documents/Attachments/InvestorCDP2012/4.Communication/statoil_annual_report_11_climate.pdf)

## Module: Risks and Opportunities [Investor]

### Page: 2012-Investor-Risks&Opps-ClimateChangeRisks

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#### 5.1

**Have you identified any climate change risks (current or future) that have potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply**

Risks driven by changes in regulation  
Risks driven by changes in physical climate parameters  
Risks driven by changes in other climate-related developments

5.1a

Please describe your risks driven by changes in regulation

ID	Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
R1	General environmental regulations, including planning	Rising climate change concerns could lead to additional regulatory measures that may result in project delays and higher costs	Other: additional costs due to delays	6-10 years	Direct	More likely than not	High
R2	International agreements	Policies and initiatives at international level to address climate change are likely to affect business conditions and demand for our products in the medium to long term.	Other: Reduced demand for our services/goods and increased operational costs	6-10 years	Direct	Likely	High
R3	Cap and trade schemes	EU ETS - uncertainties related to the number of allowances during Phase 3 (2013-2020) and hence the pricing in the scheme	Increased operational cost	Current	Direct	Virtually certain	Medium-high
R4	Carbon taxes	Some direct carbon taxes exist in various regions where Statoil operates, especially in Norway. Increased of the CO2 tax in Norway constitutes a competitive disadvantage in comparison to our competitors who operate in other part of the world. Statoil believes that cap and trade is a better solution to promote cost-efficient solutions rather than domestic carbon tax.	Increased operational cost	Current	Direct	Virtually certain	High
R6	Product efficiency regulations and standards	Product efficiency regulations are likely to reduce demand for our products.	Reduced demand for goods/services	1-5 years	Direct	Likely	Medium
R7	Uncertainty surrounding new	Investment risks associated with uncertainties surrounding scope and timescales for new climate	Other: Costs associated with delays	1-5 years	Direct	More likely than not	Low-medium

ID	Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
	regulation	regulation in countries in which we operate (Brazil, US, Canada, etc.)	in project				
R8	Lack of regulation	Lack of regulation in countries outside of Norway/the EU could represent a competitive disadvantage for Statoil who is today very much exposed to carbon costs.	Increased operational cost	Current	Direct	More likely than not	Medium
R9	Product efficiency regulations and standards	Low Carbon Fuel Standard and the Fuel Quality Directive for example could have some important market for the fuel markets and impact some of our products	Reduced demand for goods/services	1-5 years	Direct	Likely	Medium

## 5.1b

Please describe (i) the potential financial implications of the risk before taking action; (ii) the methods you are using to manage this risk; and (iii) the costs associated with these actions

### **i) potential financial implications of the risks before taking action: (this applies for all of the risk mentioned above)**

We operate in approximately 40 countries around the world, and any of these countries could modify its tax laws/ climate legislation in ways that would adversely affect us. Reduced demand for our products and increased operational costs are likely to be a consequence of international climate agreements, cap and trade, CO2 taxes, new performance standards, etc. At the same time, Statoil is today very exposed to CO2 costs (EU quotas + CO2 tax in Norway). We therefore support stricter climate policy at a global level that would create a level playing field for our operations.

In the future, in order to meet the world's energy demand, we expect are production to come more and more from unconventional sources. If we are unable to find economically viable and publically acceptable solutions that reduce our CO2 emissions for new or existing projects, we might face delays (R1).

The potential financial implications of carbon taxes, cap and trade is variable depending on the cost of allowances and taxation applied. It is therefore difficult to quantify financial implications of the risks mentioned above.

### **ii) methods we use to manage risks**

- Our internal risk assessment requires that all projects and assets take into account carbon costs in our business decisions even for projects located in countries where no carbon trading scheme or tax is currently envisaged.

- Energy efficiency measures and implementation of our "industry leader strategy in carbon efficiency" is our main way to mitigate our CO2 cost exposure.
- Methods to mitigate regulatory risks include stakeholders engagement (relevant for all risks mentioned above). Stakeholders engagement is also key to mitigate risk of delays (R1): appropriate consultation highlighting the benefits of our projects with key stakeholders and regulators involved in the planning process help mitigate this risk and identify planning related requirements that are appropriate to local and national policies.
- Advocacy for our products, i.e, natural gas is also one of the actions to mitigate the risks of reduced demand for our product.

**iii) costs associated with these actions**

Costs associated with carbon costs calculation are currently mainly related to staff work. Today, all emissions reduction projects completed have a positive NPV (Net Present value).

R&D expenditure has been approximately NOK 2.1 billion per year (\$360 million) for the last three years.

For our oil sands operations for example, Statoil believes research and innovation will result in new technologies and processes that will reduce the energy and water consumed by our Steam-assisted gravity drainage operations (the most common commercial method used to develop in-situ oil sands). We are seeking a 25% reduction in the carbon dioxide intensity of our oil sands operations by 2020, and have a long-term ambition of a total 40% reduction in carbon dioxide intensity by 2025. We are also aiming for a 45% reduction in water intensity over the next 10 years. To accomplish this, Statoil has established a USD 30 million oil sands technology plan. This five-year plan identifies technologies and development strategies that will improve project economics while meeting our carbon dioxide and water intensity targets.

**5.1c**

**Please describe your risks that are driven by change in physical climate parameters**

ID	Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
P1	Change in precipitation extremes and droughts	Development of extreme weather patterns that affect operations and have specific impacts on water availability which could represent an increased challenge for our onshore activities in the US for example	Reduction/disruption in production capacity	>10 years	Direct	More likely than not	Medium-high
P2	Sea level rise	Many of our assets have coastal or offshore locations. Sea level rise (including high storm) presents a risk to the integrity of these assets and to the safety of workers.	Reduction/disruption in production capacity	>10 years	Direct	Unlikely	Low-medium

5.1d

Please describe (i) the potential financial implications of the risk before taking action; (ii) the methods you are using to manage this risk; and (iii) the costs associated with these actions

Replies relevant for P1 and P2

(i) Statoil's portfolio is global and geographically diverse with both onshore and offshore production facilities. The diversity of our portfolio means different risks will affect individual locations, in different ways and to differing degrees. The potential implications of these risks are not quantifiable at this stage but, if not managed, could have negative impact on our efficiency, production volumes and availability to deliver our products. Extreme weather events have the potential to shut down operations and halt production of oil and gas. This could impacts Statoils revenues.

(ii) To manage this risk, Statoil monitors weather patterns to prepare for events that may disrupt operations. Risks are seasonal and are constantly being evaluated.

(iii) The costs associated with managing these risks are not quantifiable. For new projects, significant in climatic parameters may result in changes to the design of a project. Our risk assessment system is structured to enable risks to be identified at an early stage, therefore minimising the cost of mitigation. Other costs are mainly staff costs.

5.1e

Please describe your risks that are driven by changes in other climate-related developments

ID	Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
O1	Reputation	Poor reputation may impact our access to acreage and our attractiveness for talent	Wider social disadvantages	6-10 years	Direct	Unlikely	Medium
O2	Other drivers	Today Statoil is recognized as one of the most efficient oil and gas upstream companies (60% more efficient than the industry average). However our strategy for 2020 implies that we will move towards	Increased operational cost	6-10 years	Direct	More likely than not	Medium-high

ID	Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
		more-intensive crudes. This can have adverse effect on our business if lifecycle CO2 intensity based regulations impose constraints on access to certain markets/exploration of certain resources					

5.1f

**Please describe (i) the potential financial implications of the risk before taking action; (ii) the methods you are using to manage this risk; (iii) the costs associated with these actions**

**O1: Reputation risk**

(i) potential financial implications: The potential financial implications of the risk prior to taking actions are difficult to quantify. Poor reputation could lead to project delays, additional costs and operational risks. Trust from policy makers, partners, from the society around us is key for our future business. The attraction and retention of talents and senior management and skilled personnel is also a critical factor in the successful implementation of our strategy as an international oil and gas group.

(ii) methods to manage risks: methods used to manage that risk include appropriate consultation with stakeholders, sustainability communications such as the Annual Sustainability Report, or the Oil Sand Score Card and submissions through sustainability indices.

(iii) The implementation costs are principally staff time related and communication activities.

**O2: Higher CO2 costs exposure**

(i) financial implications: financial implications will depend of each specific climate legislation but we see already that this risk is present in our operations today for example related to oil sands operations and legislation being developed that could discriminate oil sands.

(ii) to mitigate this risk, Statoil is implementing the following actions:

- improve carbon efficiency in each of the segments in which we operate and work toward the 2020 targets
- continue to invest in R&D and in particular in solutions such as CCS
- Develop lower CO2 sources such as natural gas
- We work closely with government, industry and civil society to build effective climate policies.

(iii) costs are mainly related to technologies development (energy efficiency technologies, CCS technologies, etc.)



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5.1g

Please explain why you do not consider your company to be exposed to risks driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure

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5.1h

Please explain why you do not consider your company to be exposed to risks driven by physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

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5.1i

Please explain why you do not consider your company to be exposed to risks driven by changes in other climate-related developments that have the potential to generate a substantive change in your business operations, revenue or expenditure

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**Page: 2012-Investor-Risks&Opps-ClimateChangeOpp**

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6.1

**Have you identified any climate change opportunities (current or future) that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply**

Opportunities driven by changes in regulation

Opportunities driven by changes in physical climate parameters

Opportunities driven by changes in other climate-related developments

6.1a

Please describe your opportunities that are driven by changes in regulation

ID	Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact
OP1	International agreements	International agreement on climate may present an opportunity for Statoil. It will create a level playing field and will benefit our gas operations	Other: Create level playing field	6-10 years	Direct	More likely than not	Medium-high
OP2	Cap and trade schemes	cap and trade systems such as the EU ETS are the most efficient way to cut CO2 emissions and to develop low carbon technologies such as CCS and offshore wind	Investment opportunities	1-5 years	Direct	Very likely	Medium
OP3	Emission reporting obligations	Statoil CO2 intensity is currently very low in comparison to our peers. Improved benchmarking methodology could constitute an opportunity to communicate about Statoil's carbon performance.	Wider social benefits	Current	Direct	Unlikely	Low-medium
OP5	Other regulatory drivers	Legislation to support Carbon Capture and Storage	Investment opportunities	>10 years	Direct	More likely than not	Medium

6.1b

Please describe (i) the potential financial implications of the opportunity; (ii) the methods you are using to manage this opportunity; (iii) the costs associated with these actions

Climate change legislation is expected to offer some opportunities to Statoil.

The two main opportunities for Statoil will be (i) a level playing field since we are today one of the most CO2 exposed company in the world and (ii) an increase in demand for natural gas.

i) **the potential financial implications** can be significant but it seems difficult to quantify all implications of the opportunities mentioned above.

ii) **method used to manage this opportunity:**

- we are increasing the efficiency of our operations worldwide which will give us a competitive advantage in the future when cap and trades systems are in place
- we are promoting a shift from coal to gas and then the use of natural gas as back-up solution for increasing share of renewables. Finally on a longer term, we

believe natural gas could be used with CCS.

- we continue to research and develop technologies that increase efficiency and reduce emissions in hydrocarbon production.

- we invest in offshore wind projects. We are using our offshore expertise in marine operations and offshore maintenance to sharpen our competitive edge in offshore wind projects. Statoil has taken significant offshore wind positions over the last few years. They include a Norwegian kroner 5 billion (USD 850 million) investment in the Sheringham Shoal offshore wind farm in the UK that is scheduled to start operations end 2012, and securing options in the big Dogger Bank licence in the UK.

iii) **The costs** associated with developing these opportunities include R&D expenses.

#### 6.1c

**Please describe the opportunities that are driven by changes in physical climate parameters**

ID	Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
	Snow and ice	melting of the ice in the Arctic is opening new opportunities for sustainable exploration of hydrocarbures high North.	Increased production capacity	6-10 years	Direct	More likely than not	Medium

#### 6.1d

**Please describe (i) the potential financial implications of the opportunity; (ii) the methods you are using to manage this opportunity; (iii) the costs associated with these actions**

Arctic hydrocarbon resources are already being actively explored for, developed and produced. Greater activity is almost inevitable, especially if we expect the demand for energy to increase.

We aim to do everything possible to ensure that Arctic operations comply with our principle of reducing the negative environmental impact from our activities and products. We focus on technological developments to reduce risk from a variety of actual and potential discharges to sea and emissions to air from all our operations.

(i) Potential implications could be consequent: The Arctic's hydrocarbon resource potential is well documented. The United States Geological Survey (USGS) estimates that 22% of the world's undiscovered, technically recoverable hydrocarbons lie north of the Arctic Circle, or, to be more specific, 30% of the world's undiscovered gas (47.3 trillion cubic metres), 13% of the world's undiscovered oil (90 billion technically recoverable barrels) and 20% of the world's undiscovered

natural gas liquids (44 billion barrels). Approximately 84% of this is believed to be offshore

(ii) methods to manage this opportunity:

- Research and development are critical to finding optimal sustainable solutions in the Arctic. We are conducting several long-term industrial research projects with universities and institutions that focus on developing innovative technologies for safe and sustainable exploration and production of hydrocarbons in the far north. These include the Sustainable Arctic Marine and Coastal Technology (SAMCoT) project and the Arctic Materials project. The eight-year SAMCoT project was established by the Research Council of Norway in 2011. The goal is to develop technology that ensures sustainable and safe exploration, exploitation and transport from and within the Arctic. It is also the basis for developing environmentally adapted coastal infrastructure. The five-year Arctic Materials project started in 2008 with the aim of establishing criteria and solutions for the application of materials for low-temperature service.

iii) costs associated with these actions are R&D costs but also communication activities with main stakeholders.

**6.1e**

**Please describe the opportunities that are driven by changes in other climate-related developments**

ID	Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
OO1	Changing consumer behaviour	Climate change and the growing demand for clean energy are opening up new business opportunities. Statoil is in a position to seize these opportunities by utilising long-standing core capabilities from the oil and gas industry.	Investment opportunities	1-5 years	Direct	Likely	Medium-high

**6.1f**

**Please describe (i) the potential financial implications of the opportunity; (ii) the methods you are using to manage this opportunity; (iii) the costs associated with these actions**

(i) potential financial opportunities include increased of our natural gas sales volumes worldwide and also the development of a profitable business for renewable energies.

(ii) the methods you are using to manage this opportunity:

- *making the case for natural gas:*

In 2011, Statoil took several initiatives to ensure that natural gas is properly addressed by European policy makers in their attempt to define a low carbon society. In October 2009, EU member states agreed on a target for the reduction of greenhouse gas emissions of 80-95% by the middle of the century compared with 1990 levels. The 2050 targets have led to discussion about how to design energy systems in the future and they have intensified the competition between different fuels for shares in Europe's future energy mix. Together with Centrica, Eni, E.On-Ruhrgas, Gazprom Export, GdF-Suez, Qatar Petroleum and Shell, Statoil has taken part in the European Gas Advocacy Forum (EGAF), which produced a joint position paper in spring 2011 on how natural gas can help Europe to reach its target of an 80% emission reduction by 2050 [1]. To promote the role of natural gas in Europe, Statoil also launched "The Gas Machine" campaign online in early 2011.

*- Investing in renewables*

We are using our offshore expertise in marine operations and offshore maintenance to sharpen our competitive edge in offshore wind projects. Statoil has taken significant offshore wind positions over the last few years. They include a Norwegian kroner 5 billion (USD 850 million) investment in the Sheringham Shoal offshore wind farm in the UK that is scheduled to start operations end 2012, and securing options in the big Dogger Bank licence in the UK.

Statoil has also developed Hywind, the world's first floating wind turbine. The Hywind pilot has demonstrated excellent performance and regularity since it was installed in September 2009. The next step will be the development of pilot wind farms. Statoil aspires to play a proactive role in reducing offshore wind costs. In order to do this, technologies and projects based on a clear road map to becoming independently profitable are essential. On this basis, Statoil has chosen to exit its onshore Norwegian wind project portfolio and concentrate exclusively on offshore wind, so that Statoil can utilise its offshore development and operations experience in the best possible way. With the development of larger and lighter units and the realisation of other economies of scale, cost-competitive floating offshore wind may soon be on the horizon. In addition to our strong focus on offshore wind, we are pursuing some research activities in biofuels (from algae, wood or wheat straw) and geothermal energy.

(iii) the costs associated with these actions are:

- investments in gas infrastructures for natural gas
- R&D for renewable energies
- communication

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6.1g

Please explain why you do not consider your company to be exposed to opportunities driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure

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6.1h

Please explain why you do not consider your company to be exposed to opportunities driven by physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

6.1i

Please explain why you do not consider your company to be exposed to opportunities driven by changes in other climate-related developments that have the potential to generate a substantive change in your business operations, revenue or expenditure

## Module: GHG Emissions Accounting, Energy and Fuel Use, and Trading [Investor]

### Page: 7. Emissions Methodology

7.1

Please provide your base year and base year emissions (Scopes 1 and 2)

Base year	Scope 1 Base year emissions (metric tonnes CO2e)	Scope 2 Base year emissions (metric tonnes CO2e)
Sat 01 Jan 2011 - Sat 31 Dec 2011	14436520	462838

7.2

Please give the name of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions

**Please select the published methodologies that you use**

Other

IPIECA's Petroleum Industry Guidelines for reporting GHG emissions, 2003

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

**7.2a**

**If you have selected "Other", please provide details below**

Others:

Assets used their local regulated methodologies:

- EU Emission Trading Scheme for our operations in Norway and Denmark, this represent 90% of our operated emissions.
- US EPA requirements

**7.3**

**Please give the source for the global warming potentials you have used**

Gas	Reference
CO2	IPCC Second Assessment Report (SAR - 100 year)
CH4	IPCC Second Assessment Report (SAR - 100 year)

**7.4**

**Please give the emissions factors you have applied and their origin; alternatively, please attach an Excel spreadsheet with this data**

Fuel/Material/Energy	Emission Factor	Unit	Reference
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Fuel/Material/Energy	Emission Factor	Unit	Reference
Other: several fuel types		metric tonnes CO2 per metric tonne	See excel sheet attached
Diesel/Gas oil	2.97	metric tonnes CO2 per metric tonne	Internal calculations
Natural gas	2.8	metric tonnes CO2 per metric tonne	Klif (Norwegian Climate and Pollution Agency)

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### Further Information

Questions 7.4

Emissions factors under the EU ETS is based on carbon content. So Fuel and flare gas is changing according to carbon content of fuel and flared gas. This represents more than 65% of our total emissions.

The emission factor for diesel/gas oil and natural gas mentioned have been used to calculate scope 3 emissions.

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### Attachments

[https://www.cdproject.net/Sites/2012/32/23132/Investor CDP 2012/Shared Documents/Attachments/InvestorCDP2012/7.EmissionsMethodology/CH4\\_CO2faktorStatoil.xls](https://www.cdproject.net/Sites/2012/32/23132/Investor%20CDP%202012/Shared%20Documents/Attachments/InvestorCDP2012/7.EmissionsMethodology/CH4_CO2faktorStatoil.xls)

**Page: 8. Emissions Data - (1 Jan 2011 - 31 Dec 2011)**

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8.1

**Please select the boundary you are using for your Scope 1 and 2 greenhouse gas inventory**

Operational control

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8.2a



**Please provide your gross global Scope 1 emissions figure in metric tonnes CO2e**

14347351

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8.2b

Please provide your gross global Scope 1 emissions figures in metric tonnes CO2e - Part 1 breakdown

Boundary	Gross global Scope 1 emissions (metric tonnes CO2e)	Comment
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8.2c

Please provide your gross global Scope 1 emissions figures in metric tonnes CO2e - Part 1 Total

Gross global Scope 1 emissions (metric tonnes CO2e) – Part 1 Total	Comment
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8.2d

Please provide your gross global Scope 1 emissions figures in metric tonnes CO2e - Part 2

Boundary	Gross global Scope 1 emissions (metric tonnes CO2e)	Comment
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8.3a

**Please provide your gross global Scope 2 emissions figure in metric tonnes CO2e**

462838

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8.3b

Please provide your gross global Scope 2 emissions figures in metric tonnes CO2e - Part 1 breakdown

Boundary	Gross global Scope 2 emissions (metric tonnes CO2e)	Comment
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8.3c

Please provide your gross global Scope 2 emissions figures in metric tonnes CO2e - Part 1 Total

Gross global Scope 2 emissions (metric tonnes CO2e) - Total Part 1	Comment
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8.3d

Please provide your gross global Scope 2 emissions figures in metric tonnes CO2e - Part 2

Boundary	Gross global Scope 2 emissions (metric tonnes CO2e) - Other operationally controlled entities, activities or facilities	Comment
----------	---	---------

---

8.4

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

8.4a

Please complete the table

Reporting Entity	Source	Scope	Explain why the source is excluded
------------------	--------	-------	------------------------------------

8.4

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

Yes

8.4a

Please complete the table

Source	Scope	Explain why the source is excluded
CH4	Scope 2	CH4 emissions from imported energy is not easily available.

8.5

Please estimate the level of uncertainty of the total gross global Scope 1 and Scope 2 figures that you have supplied and specify the sources of uncertainty in your data gathering, handling, and calculations

Scope 1 emissions: Uncertainty range	Scope 1 emissions: Main sources of uncertainty	Scope 1 emissions: Please expand on the uncertainty in your data	Scope 2 emissions: Uncertainty range	Scope 2 emissions: Main sources of uncertainty	Scope 2 emissions: Please expand on the uncertainty in your data
More than 2% but less than or equal to 5%	Assumptions	Most data within EU- ETS (~90%).	More than 5% but less than or equal to 10%	Assumptions	Numbers are based on official statistics.

## 8.6

**Please indicate the verification/assurance status that applies to your Scope 1 emissions**

Verification or assurance complete

### 8.6a

**Please indicate the proportion of your Scope 1 emissions that are verified/assured**

More than 90% but less than or equal to 100%

### 8.6b

**Please provide further details of the verification/assurance undertaken, and attach the relevant statements**

Level of verification or assurance	Relevant verification standard	Relevant statement attached
Reasonable assurance	EC Directive 2003/87/EC Annex V and 2007/589/EC as amended (EU ETS compliance)	-List of allowances surrendered as part of the EU ETS - see attachment below ((Statoil's installation in yellow))

Level of verification or assurance	Relevant verification standard	Relevant statement attached
Reasonable assurance	ISAE 3000	- Independent assurance report from the auditors - Statoil sustainability report - see attachment below

---

**8.7**

**Please indicate the verification/assurance status that applies to your Scope 2 emissions**

Not verified or assured

---

**8.7a**

Please indicate the proportion of your Scope 2 emissions that are verified/assured

---

**8.7b**

Please provide further details of the verification/assurance undertaken, and attach the relevant statements

Level of verification or assurance	Relevant verification standard	Relevant statement attached

---

**8.8**

**Are carbon dioxide emissions from the combustion of biologically sequestered carbon (i.e. carbon dioxide emissions from burning biomass/biofuels) relevant to your company?**

No

---

8.8a

Please provide the emissions in metric tonnes CO2e

---

**Attachments**

[https://www.cdproject.net/Sites/2012/32/23132/Investor CDP 2012/Shared Documents/Attachments/InvestorCDP2012/8.EmissionsData\(1Jan2011-31Dec2011\)/Copy of compliance\\_EU ETS 2011\\_en.xls](https://www.cdproject.net/Sites/2012/32/23132/Investor%20CDP%202012/Shared%20Documents/Attachments/InvestorCDP2012/8.EmissionsData(1Jan2011-31Dec2011)/Copy%20of%20compliance_EU%20ETS%202011_en.xls)  
[https://www.cdproject.net/Sites/2012/32/23132/Investor CDP 2012/Shared Documents/Attachments/InvestorCDP2012/8.EmissionsData\(1Jan2011-31Dec2011\)/Independent assurance report auditors- Statoil sustainability report.pdf](https://www.cdproject.net/Sites/2012/32/23132/Investor%20CDP%202012/Shared%20Documents/Attachments/InvestorCDP2012/8.EmissionsData(1Jan2011-31Dec2011)/Independent%20assurance%20report%20auditors-%20Statoil%20sustainability%20report.pdf)

**Page: 9. Scope 1 Emissions Breakdown - (1 Jan 2011 - 31 Dec 2011)**

---

9.1

**Do you have Scope 1 emissions sources in more than one country or region (if covered by emissions regulation at a regional level)?**

Yes

---

9.1a

Please complete the table below

Country	Scope 1 metric tonnes CO2e
Canada	282688

Country	Scope 1 metric tonnes CO2e
Brazil	276363
Denmark	525566
Norway	13191696
Egypt	12068
Estonia	713
Latvia	2427
Lithuania	1706
Poland	34105
Russia	898
Sweden	9951
Iran, Islamic Republic of	4560
Other: Unspecified - Rest of the world	4610

## 9.2

Please indicate which other Scope 1 emissions breakdowns you are able to provide (tick all that apply)

By business division

By facility

By GHG type

## 9.2a

Please break down your total gross global Scope 1 emissions by business division

Business Division	Scope 1 metric tonnes CO2e
DPNA	276544
EXP	72206
DPI	274005

Business Division	Scope 1 metric tonnes CO2e
MPR	4351403
DPN	9291664
CSO	562
SFR	80967

9.2b

Please break down your total gross global Scope 1 emissions by facility

Facility	Scope 1 metric tonnes CO2e
Aker Spitsbergen	48119
BIDEFORD DOLPHIN	18258
Brage	196615
COSL Pioneer	9933
Deepsea Atlantic	39403
DEEPSEA BERGEN	12531
DRAUPNER	16209
Grane	220892
GULLFAKS A	471987
GULLFAKS B	23390
GULLFAKS C	236620
HEIDRUN	394343
Heimdal	145479
HULDRA	90208
Island Wellserver	14382
KALUNDBORG	518678
KOLLSNES	93392
KRISTIN	228596
KÅRSTØ	1049019
MELKØYA	897690



Facility	Scope 1 metric tonnes CO2e
Mongstad Drift PA	1656310
Mongstad - Kraftvarmeverket	606209
Njord A	157820
Njord B	1561
NORNE	282587
OCEAN VANGUARD	13724
Oseberg C	199103
Oseberg feltcenter	744972
Oseberg Sør	215328
Oseberg Øst	93578
PETROJARL 1	43830
POLAR PIONEER	9996
SAFE SCANDINAVIA	4337
SCARABEO 5	14519
SLEIPNER	833527
SNORRE A	279780
Songa Trym	10314
STATFJORD A	229879
STATFJORD B	261563
STATFJORD C	194482
STENA DON	40605
Sture	82221
TJELDBERGODDEN	345576
TRANSOCEAN LEADER	18839
TROLL A	10137
Troll B	274739
Troll C	336883
VESLEFRIKK	193821
VISUND	206536
WEST ALPHA	5058
WEST EPSILON	9446
West Phoenix	18367
West Venture	44670

Facility	Scope 1 metric tonnes CO2e
ÅSGARD A	347539
ÅSGARD B	716617
ÅSGARD C	27760
SNORRE B	195179
Stavanger	66
Oslo	151
Harstad	6
Midt Norge	338
Retail	80967
Aker Barents	4529
Kiwi	12068
Gullfaks Sør	6413
Statfjord Øst	1260
Vigdis	7240
Maersk Inspirer	99510
Navion Saga	16569
Tyrihans	28418
CPF	268292
Lodge	626
Drilling & Well	7626
Peregrino FPSO	256409
Peregrino A	7251
Peregrino B	5783
SPD9	1518
SPD7	1564
SPD8	1478
Peregrino South	2967
Peregrino South West	1596
Ilha Grande	2356
Mizzen F-09	3996
Fiddlehead D-83	2148

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**9.2c**

Please break down your total gross global Scope 1 emissions by GHG type

GHG type	Scope 1 metric tonnes CO2e
CO2	13652699
CH4	694653

---

**9.2d**

Please break down your total gross global Scope 1 emissions by activity

Activity	Scope 1 metric tonnes CO2e
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---

**Page: 10. Scope 2 Emissions Breakdown - (1 Jan 2011 - 31 Dec 2011)**

---

**10.1**

Do you have Scope 2 emissions sources in more than one country or region (if covered by emissions regulation at a regional level)?

Yes

---

**10.1a**

Please complete the table below

Country	Scope 2 metric tonnes CO2e
Norway	231092

Country	Scope 2 metric tonnes CO2e
Canada	57650
Denmark	120853
Estonia	9073
Latvia	2507
Lithuania	2024
Poland	31526
Russia	1278
Sweden	5774
Other: Unspecified - Rest of the world	1061

## 10.2

Please indicate which other Scope 2 emissions breakdowns you are able to provide (tick all that apply)

By business division

By facility

## 10.2a

Please break down your total gross global Scope 2 emissions by business division

Business division	Scope 2 metric tonnes CO2e
Development & Production North America (DPNA)	57650
Technology Projects & Drilling (TPD)	72
Development & Production Norway (DPN)	2513
Marketing, Processing & Renewable energy (MPR)	328939
Corporate Staffs & Services (CSO)	725
Statoil Fuel and Retail	72939

---

**10.2b**

Please break down your total gross global Scope 2 emissions by facility

Facility	Scope 2 metric tonnes CO2e
Kalundborg	102421
Kollsnes	9521
Kårstø	4766
Mongstad	210897
Sheringham Shoal	5
Sture	925
Tjeldbergodden	471
Troll A	2513
Arctic Wind	1
Hywind	4
Stavanger	343
Bergen	168
Harstad	19
Rotvoll	69
Stjørdal	39
Vekerø	87
Leismer	57650
Retail	72939

---

**10.2c**

Please break down your total gross global Scope 2 emissions by activity

Activity	Scope 2 metric tonnes CO2e
----------	----------------------------

---

11.1

**Do you consider that the grid average factors used to report Scope 2 emissions in Question 8.3 reflect the contractual arrangements you have with electricity suppliers?**

Yes

---

11.1a

You may report a total contractual Scope 2 figure in response to this question. Please provide your total global contractual Scope 2 GHG emissions figure in metric tonnes CO<sub>2</sub>e

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11.1b

Explain the basis of the alternative figure (see guidance)

---

11.2

**Has your organization retired any certificates, e.g. Renewable Energy Certificates, associated with zero or low carbon electricity within the reporting year or has this been done on your behalf?**

No

---

11.2a

Please provide details including the number and type of certificates

Type of certificate	Number of certificates	Comments

12.1

What percentage of your total operational spend in the reporting year was on energy?

More than 0% but less than or equal to 5%

12.2

Please state how much fuel, electricity, heat, steam, and cooling in MWh your organization has consumed during the reporting year

Energy type	MWh
Fuel	56698454
Electricity	4865921
Heat	205472
Steam	0
Cooling	108

12.3

Please complete the table by breaking down the total "Fuel" figure entered above by fuel type

Fuels	MWh
Butane	112675
Petroleum coke	2739779
Diesel/Gas oil	3517725
Distillate fuel oil No 1	8948
Propane	1463
Natural gas	42928335
Refinery gas	7385508

Fuels	MWh
Motor gasoline	81
Other: Includes CoLGO, LOFS and Not assigned.	3941

**Page: 13. Emissions Performance**

**13.1**

**How do your absolute emissions (Scope 1 and 2 combined) for the reporting year compare to the previous year?**

Increased

**13.1a**

**Please complete the table**

Reason	Emissions value (percentage)	Direction of change	Comment
Other: Start-up of new projects	1.01	Increase	Emissions of CO2 have increased slightly from 2010 (scope 1+2: 14407321 tonnes CO2e) and 2011 (scope 1 and 2: 14 551 580 tonnes CO2e) Emissions are increasing due to increased activities and new projects mainly Leismer and Peregrino and mainly caused by the first year of ordinary operation of the Combined Heat and Power plant at Mongstad. Emissions on the Norwegian Continental Shelf have decreased due to lower production. CO2 emissions from flaring has decreased from 1.3 million tons in 2010 to 1.2 million tons in 2011.

**13.2**

**Please describe your gross combined Scope 1 and 2 emissions for the reporting year in metric tonnes CO2e per unit currency total revenue**



Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for Change
0.00068	metric tonnes CO2e	unit total revenue	1.09	Increase	Net operating income amounted to NOK 211.8 billion in 2011. Main reasons mentioned above Emissions are increasing due to increased activities and new projects mainly Leismer and Peregrino and mainly caused by the first year of ordinary operation of the Combined Heat and Power plant at Mongstad. Emissions on the Norwegian Continental Shelf have decreased due to lower production. CO2 emissions from flaring has decreased from 1.3 million tons in 2010 to 1.2 million tons in 2011.

### 13.3

Please describe your gross combined Scope 1 and 2 emissions for the reporting year in metric tonnes CO2e per full time equivalent (FTE) employee

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for Change
459	metric tonnes CO2e	FTE Employee	1.06	Decrease	31,715 including the employees of Statoil Fuel & Retail

### 13.4

Please provide an additional intensity (normalized) metric that is appropriate to your business operations

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for Change
7.85	metric tonnes CO2e	barrel of oil equivalent (BOE)	1.02	Increase	Equity production was in line with our plans and ended at 1.85 million barrels of oil equivalent per day.

14.1

Do you participate in any emission trading schemes?

Yes

14.1a

Please complete the following table for each of the emission trading schemes in which you participate

Scheme name	Period for which data is supplied	Allowances allocated	Allowances purchased	Verified emissions in metric tonnes CO2e	Details of ownership
European Union ETS	Sat 01 Jan 2011 - Thu 01 Dec 2011	0	8600000	8824452	Facilities we own and operate

14.1b

What is your strategy for complying with the schemes 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 transaction cost is minimised. Statoil 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 continental shelf) or parts (other activities) of its carbon emissions. Quotas are purchased in the market to meet these compliance obligations. The emission trading group ( is responsible for compliance related CO2 trading for all Statoil operated licenses. Statoil has been active in the carbon market since 2005, and was the first company to execute a contract on the first carbon exchange in the world.

In addition to European carbon allowances (EUAs) Statoil is using Certified Emissions Reductions (CERs), generated by CDM projects, for compliance purposes.

Statoil supports the developments of new emission trading scheme in different part of the world as the most cost-efficient way to cut emissions.

14.2

Has your company originated any project-based carbon credits or purchased any within the reporting period?

Yes

14.2a

Please complete the following table

Credit origination or credit purchase	Project type	Project identification	Verified to which standard	Number of credits (metric tonnes of CO2e)	Number of credits (metric tonnes CO2e): Risk adjusted volume	Credits retired	Purpose e.g. compliance
Credit Origination	Other: Carbon Fund	World Bank Carbon Fund - Community Development Carbon Fund	CDM	214438	214438	Not relevant	Not applicable
Credit Origination	Other: Carbon Fund	World Bank Carbon Fund - Community Development carbon Fund for example	Jl	14421	14421	Not relevant	Not applicable
Credit Origination	Other: various	CER orginated through exchanges	CDM	1285000	1285000	Yes	Compliance
Credit Purchase	Other: Carbon Fund		CDM	1017	1017	Yes	Compliance
Credit Purchase	Other: Exchanges	CER purchased through exchanges	CDM	1285000	1285000	Yes	Compliance
Credit Purchase	Transport	HSE compliance	CDM	40700	40700	Yes	Voluntary Offsetting

Further Information

Regarding question 14.1 a:

- No free of charge allowances allocated by the Norwegian authorities,
- The gap between purchased quotas and verified emissions was covered by quota surplus from 2010.

15.1

Please provide data on sources of Scope 3 emissions that are relevant to your organization

Sources of Scope 3 emissions	metric tonnes CO2e	Methodology	If you cannot provide a figure for emissions, please describe them
Use of sold products	250000000	See attachment for methodology. Use of sold products is the main contributor. Other contributors include: - Emissions related to Facility management and Services and other facilities outside Norway. - Emissions related to Exploration and Drilling. - Emissions related to Renewable Energy and other projects. They are important for stakeholders and early phase risk assessment. - As part of the previous activities we can find hydrogen production. - Other kind of emissions from activities that cannot be completely included in Scope 1 or 2 emissions, like the Combined Heat and Power Plant at Mongstad.	

15.2

Please indicate the verification/assurance status that applies to your Scope 3 emissions

Not verified or assured

15.2a

Please indicate the proportion of your Scope 3 emissions that are verified/assured

15.2b

Please provide further details of the verification/assurance undertaken, and attach the relevant statements

Level of verification or assurance	Relevant verification standard	Relevant statement attached
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15.3

Are you able to compare your Scope 3 emissions for the reporting year with those for the previous year for any sources?

Yes

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15.3a

Please complete the table

Sources of Scope 3 emissions	Reason for change	Emissions value (percentage)	Direction of change	Comment
Use of sold products	Other: Slightly lower production in 2011 than in 2010	6.4	Decrease	

---

Attachments

**Module: Oil & Gas**

**Page: Oil & Gas 0**

**OG0.1**

Please enter the dates for the periods for which you will be providing data. We ask for historic data for the year ending in 2006 to the year ending in 2011 and a forecast for the year ending in 2012

Year ending	Date range
2006	Sun 01 Jan 2006 - Sat 31 Dec 2011

**Further Information**

Statoil's answer to the O&G module questionnaire includes forward-looking statements which are by their nature, subject to significant risks and uncertainties because they relate to events and depend on circumstances that will occur in the future. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot assure you that our future results, level of activity, performance or achievements will meet these expectations. Moreover, neither we nor any other person assumes responsibility for the accuracy and completeness of the forward-looking statements. For a description of the factors that may affect our business, financial performance or results of operations, please have a look at the Risk review included in our Annual Report 2011: <http://www.statoil.com/annualreport2011/en/riskreview/pages/riskreview.aspx>

---

**OG1.1**

Please provide values for annual production of each of the hydrocarbon types (in units of BOE) for the years given in the following table. The values required are aggregate values for the reporting organization. The values for 2012 are forward-looking estimates

Product	2006	2007	2008	2009	2010	2011	2012
Other: Crude oil (includes natural gas liquids (NGL), condensate and bitumen. NGL includes both LPG)				381000000	352000000	343000000	
Natural gas				271000000	269000000	255000000	

---

**OG1.2**

Please provide values for proved reserves of each of the hydrocarbon types (in units of BOE) for 2011. The values required are aggregate values for the reporting organization

Product	Proved reserves (BOE), 2011	Date of assessment
Other: Oil and NGL (including proved reserves of bitumen)	2276000000	Sat 31 Dec 2011
Natural gas	3150000000	Sat 31 Dec 2011

---

**Further Information**

Our proved reserves of bitumen in the Americas are included as oil in the table above as they represent less than 4% of our proved reserves, which is regarded as immaterial.

**OG2.1**

Please indicate the consolidation basis (financial control, operational control, equity share, Climate Change Reporting Framework Part 1) used to report the Scope 1 and Scope 2 emissions by segment in the O&G value chain. Further information can be provided in the text box in OG2.2

Segment	Consolidation basis for reporting Scope 1 emissions	Consolidation basis for reporting Scope 2 emissions
Exploration, production & gas processing	Operational Control	Operational Control
Storage, transportation & distribution	Operational Control	Operational Control
Refining	Operational Control	Operational Control
Speciality operations	Operational Control	Operational Control
Retail & marketing	Operational Control	Operational Control

**OG2.2**

Please provide clarification for cases in which different consolidation bases have been used and about the level/focus of disclosure. For example, a reporting organization whose business is solely in storage, transportation and distribution (STD) may use the text box to explain why only the STD row has been completed

**OG2.3**

Please provide masses of gross Scope 1 GHG emissions in units of metric tonnes CO<sub>2</sub>e for the organization's owned/controlled operations by value chain segment. The values required for 2012 are forward-looking estimates

Segment	2006	2007	2008	2009	2010	2011	2012
---------	------	------	------	------	------	------	------



Segment	2006	2007	2008	2009	2010	2011	2012
Exploration, production & gas processing			13039712	11501507	11590049	11573788	
Storage, transportation & distribution			118924	106470	75661	89178	
Refining			1992282	2227647	2525499	2781195	

#### OG2.4

Please provide masses of gross Scope 2 GHG emissions in units of metric tonnes CO<sub>2</sub>e for the organization's owned/controlled operations by value chain segment. The values required for 2012 are forward-looking estimates

Segment	2006	2007	2008	2009	2010	2011	2012
Exploration, production & gas processing			20287	23044	38982	75774	
Storage, transportation & distribution							
Refining			109178	118575	352137	313317	

#### Page: Oil & Gas - Scope 1 emissions by emissions category

#### OG3.1

Please confirm the consolidation bases (financial control, operational control, equity share, Climate Change Reporting Framework Part 1) used to report Scope 1 emissions by emissions category

Segment	Consolidation basis for reporting Scope 1 emissions by emissions category
Exploration, production & gas processing	Operational Control
Storage, transportation & distribution	Operational Control
Speciality operations	Operational Control

Segment	Consolidation basis for reporting Scope 1 emissions by emissions category
Refining	Operational Control
Retail & marketing	Operational Control

### OG3.2

Please provide clarification for cases in which different consolidation bases have been used to report by emissions categories (combustion, flaring, process emissions, vented emissions, fugitive emissions) in the various segments

### OG3.3

Please provide masses of gross Scope 1 GHG emissions released to atmosphere in units of metric tonnes CO<sub>2</sub>e for the whole organization broken down by emissions categories: combustion, flaring, process emissions, vented emissions, fugitive emissions. The values required for 2012 are forward-looking estimates

Category	2006	2007	2008	2009	2010	2011	2012
Combustion	10868585	11077100	11249052	10812901	11024329	11357251	
Flaring	998730	2296501	2270999	1270531	1330193	1215569	
Process emissions	976890	949282	771724	900161	965826	965826	
Vented emissions	0	0	0	0	0	0	
Fugitive emissions	499414	676048	552761	625548	627312	623035	

### Further Information

Small amounts of vented emissions are included in fugitive emissions

**Page: Oil & Gas - Transfers & sequestration of CO2 emissions**

**OG4.1**

**Please indicate the consolidation basis (financial control, operational control, equity share, Climate Change Reporting Framework Part 1) used to report transfers and sequestration of CO2 emissions**

Activity	Consolidation basis
Transfers	
Sequestration of CO2 emissions	Operational Control

**OG4.2**

**Please provide clarification for cases in which different consolidation bases have been used (e.g. for a given activity, capture, injection or storage pathway)**

Capture of CO2 from Sleiner gas and storage into saline Utsira formation under the seabed offshore Sleipner

Capture of CO2 from Snøhvit gas and storage into geological formation under the seabed offshore Snøhvit

**OG4.3**

**Using the units of metric tonnes of CO2, please provide gross masses of CO2 transferred in and out of the reporting organization (as defined by the consolidation basis). Please note that questions of ownership of the CO2 are addressed in OG4.5**

Transfer direction	2006	2007	2008	2009	2010	2011
--------------------	------	------	------	------	------	------

Transfer direction	2006	2007	2008	2009	2010	2011
CO2 transferred in	0	0	0	0	0	0
CO2 transferred out	0	0	0	0	0	0

---

#### OG4.4

**Please provide clarification on whether any oil reservoirs and/or sequestration system (geological or oceanic) have been included within the boundary of the reporting organization. Provide details, including degrees to which reservoirs are shared with other entities**

Capture of CO2 from Sleipner gas and storage of 929184 tonnes in 2011 into saline Utsira formation under the seabed offshore Sleipner. Utsira formation is used by other entities for disposal/storage.

Capture of CO2 from Snøhvit gas and storage of 403153 tonnes CO2 into geological formation under the seabed offshore Snøhvit. Geological formation is not used by other entities for disposal/storage.

---

#### OG4.5

**Please explain who (e.g. the reporting organization) owns the transferred emissions and what potential liabilities are attached. In the case of sequestered emissions, please clarify whether the reporting organization or one or more third parties owns the sequestered emissions and who has potential liability for them**

No transferred emissions. All emissions capture are our own emissions and Statoil is responsible for the storage

---

#### OG4.6

**Please provide masses in metric tonnes of gross CO2 captured for purposes of carbon capture and sequestration (CCS) during the reporting year according to capture pathway. For each pathway, please provide a breakdown of the percentage of the gross captured CO2 that was transferred into the reporting organization and the percentage that was transferred out of the organization (to be captured)**

Capture pathway in CCS	Captured CO2 (metric tonnes CO2)	Percentage transferred in	Percentage transferred out
Gas stream separation from natural gas purification	929184		
Gas stream separation from natural gas purification	403153		

#### OG4.7

Please provide masses in metric tonnes of gross CO2 injected and stored for purposes of CCS during the reporting year according to injection and storage pathway

Injection and storage pathway	Injected CO2 (metric tonnes CO2)	Percentage of injected CO2 intended for long-term (>100 year) storage	Year in which injection began	Cumulative CO2 injected and stored (metric tonnes CO2)
CO2 injected into a geological formation or saline formation for long-term storage	929184		1996	13000000
CO2 injected into a geological formation or saline formation for long-term storage	403153		2008	1500000

#### OG4.8

Please provide details of risk management performed by the reporting organization and/or third party in relation to its CCS activities. This should cover pre-operational evaluation of the storage (e.g. site characterisation), operational monitoring, closure monitoring, remediation for CO2 leakage, and results of third party verification

At Slepiner, the Utsira reservoir is continuously monitored using seismology, and comprehensive models have been developed for calculating how the carbon dioxide moves in the reservoir. The CO2 is contained under an 800-metre thick layer of gas-tight cap rock and cannot seep into the atmosphere.

At Snøhvit, a separate pipeline transports the carbon dioxide from the Hammerfest LNG plant back to the Snøhvit field. There, it is stored in a suitable geological layer of porous sandstone called the Tubåen formation. This structure lies 2,500 metres beneath the seabed and under the layers in Snøhvit containing gas. A

separate monitoring programme has been established to examine how carbon dioxide behaves in the reservoir.

Statoil has been participating in most international research initiatives within the CO2 storage area since we started the Saline Aquifer CO2 storage project (SACS) in 1997. The research activities within CO2 storage include: CO2 storage acceptance; CO2 storage and risk; CO2 storage operations; CO2 storage monitoring; CO2 transport. The activities are closely related to the ongoing Statoil operations and there is extensive international cooperation, where we support and participate in international projects and provide them with real-world data.

For a CCS project to be regarded as a climate change mitigation activity, it is a prerequisite that the geological formations at the selected site have the appropriate long-term containment capability. Many countries have built CCS into their strategies for mitigation measures but the basis for regulating permission and control activities is only to a limited extent in place. We have been actively involved in advising the EU, national governments and international organisations on this matter based on our experience on the Norwegian Continental Shelf.

**Page: Oil & Gas - Sales and emissions intensity of production**

**OG5.1**

Please provide values for annual sales of the hydrocarbon types (in units of BOE) for the years given in the following table. The values required are aggregate values for the reporting organization. The values for 2012 are forward-looking estimates

Product	2006	2007	2008	2009	2010	2011	2012

**OG5.2**

Please provide estimated emissions intensities associated with each hydrocarbon type based on the current production and operations

Year ending	Hydrocarbon type	Emissions intensity: exploration, production & gas processing (metric tonnes CO2e per thousand BOE)	Emissions intensity: storage, transportation & distribution (metric tonnes CO2e per thousand BOE)	Emissions intensity: refining (metric tonnes CO2e per thousand BOE)

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### OG5.3

**Please clarify how each of the emissions intensities has been derived and supply information on the methodology used where this differs from information already given in answer to the methodology questions in the main information request**

As indicated in the main information request, Statoil has set 2020 carbon intensity targets in the different segments in which we operate:

- 11 kgCO<sub>2</sub>/boe for conventional oil and gas
- 17kgCO<sub>2</sub>/boe for heavy oil
- 50kgCO<sub>2</sub>/boe for extra heavy oil (including oil sands)
- 6kgCO<sub>2</sub>/boe for shale gas
- Top quartile of the Solomon index for refining and processing
- 24kgCO<sub>2</sub>/boe for LNG

**Page: Oil & Gas - Strategy for development of renewable and clean energy technologies**

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### OG6.1

**Does your organization have a strategy for the development of renewable and clean energy technologies?**

Yes

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### OG6.1a

**Please provide details**

Climate change and a growing demand for clean energy are opening up new renewable and low-carbon technology business possibilities. Our core capabilities and competencies put us in a position to seize these opportunities in three specific areas – **offshore wind, carbon capture and storage (CCS), geothermal energy and second generation biofuels**. While these are exciting prospects, they come with a series of great challenges. High technology costs and uncertain regulatory frameworks are key issues to be solved in order to establish sustainable business models.

**Offshore wind**

We have the ambition to play a proactive role in bringing down offshore wind costs. In order to do this, technologies and projects with a clear roadmap towards becoming profitable on a stand-alone basis are essential. On this basis, we have chosen to exit our onshore Norwegian wind project portfolio and concentrate exclusively on offshore wind, so that we can leverage our offshore development and operations experience in the best way possible.

We have taken significant offshore wind positions over the last few years. These include a NOK 5 billion investment (\$850 millions) in the Sheringham Shoal offshore wind farm in the UK, and securing options in the major Dogger Bank license in the UK. The Sheringham Shoal wind farm, of the coast of Norfolk in the UK, has 36 of its 88 turbines in place and is scheduled for completion in late summer 2012. Sheringham Shoal's 88 wind turbines are connected via subsea cabling to carry the power generated to the offshore substations, where it will then be transmitted to shore.

On 8 January 2010, Forewind, a consortium consisting of Statoil, Statkraft, RWE and Scottish and Southern Energy, announced that it had been awarded development rights for an offshore wind farm in the Dogger Bank area in the UK sector of the North Sea. Surveys and planning are now being conducted, and the first investment decisions are expected some time after 2014. Dogger Bank could be the world's largest wind power development, with a targeted capacity of 9GW, which is equivalent to nearly 10% of the total electricity needs in the UK. Due to the size of the area, the development will have to take place in phases. Dogger Bank covers nearly 9,000 square kilometres off the Yorkshire coastline, where depths range from 18 to 63 metres.

We have also developed Hywind technology for floating wind energy projects. In 2009, Statoil invested around NOK 400 million in the construction and further development of the pilot, and in research and development related to the wind turbine concept. The Hywind demo has shown excellent performance and regularity since it was installed in September 2009. Our next step will be the development of pilot parks. With the development of larger and lighter units and the realisation of other economies of scale, cost-competitive floating offshore wind may soon be on the horizon.

#### **Carbon Capture and Storage**

CCS represents a key technology for reducing carbon emissions, and we have become a world leader in its development and application. We will build on our carbon storage experience (the Sleipner, In Salah and Snøhvit projects) to position ourselves for a future commercial CO<sub>2</sub> business. We are also maturing two carbon capture projects at present – the large-scale Technology Centre Mongstad testing facility (opened in May 2012) and the full-scale Carbon Capture Mongstad (CCM).

TCM is a joint venture between Gassnova (on behalf of the Norwegian state), Statoil, Shell and Sasol. The owners and their shares: Gassnova 75.12 %; Statoil 20.00 %; Shell 2.44 %; Sasol 2.44 %. TCM's partners have made a clear commitment to technology improvement and invested 5 billion Norwegian kroner for the construction and development of the technology centre.

In late spring 2011 the CCM project announced a technology qualification programme for all companies which have technology that could be used to capture CO<sub>2</sub> from the existing combined heat and power plant at Mongstad. This was an open international process where the goal was to select companies for technology qualification for full-scale CO<sub>2</sub> capture. The following companies have been selected to participate in the technology qualification program: Mitsubishi Heavy Industries, Ltd., ALSTOM Carbon Capture GmbH, Siemens AG, Aker Clean Carbon and Huaneng-CERI Powerspan Joint Venture. The purpose of the technology qualification programme is to qualify at least one technology and demonstrate that it can be scaled up and used at the combined heat and power plant at Mongstad, and that it will meet all HSE requirements. Successful results in the technology qualification programme should allow for a concept selection, including the selection of technology, during the first half of 2014. Participation in the technology qualification programme will provide technology suppliers with an opportunity to demonstrate its technology for a full-scale plant at Mongstad. Multiple vendors can bid on a FEED (Front End Engineering and Design) based on the concept selected, and the final investment decision will be put forth to the Norwegian parliament in 2016.



**Financial contribution of renewable and clean energy technologies, including CCS - sales generated**

Technology area	2008	2009	2010	2011

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**OG6.1c**

**Financial contribution of renewable and clean energy technologies - Investment (capital expenditure + research & development)**

Technology area	2008	2009	2010	2011

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**OG6.1d**

**Financial contribution of renewable and clean energy technologies - Earnings Before Interest, Taxation Depreciation, Amortization (EBITDA)**

Technology area	2008	2009	2010	2011

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**OG6.1e**

**Financial contribution of renewable and clean energy technologies - net assets**

Technology area	2008	2009	2010	2011

OG6.1f

**Financial contribution of renewable and clean energy technologies - please provide a short description of the technologies**

Please select the technology	Please provide short description of technology
Wind - offshore	Offshore wind projects Statoil utilises its offshore competence in marine operations and offshore maintenance to give the company a competitive edge in offshore wind projects. We currently operate one large development, Sheringham Shoal, off the UK coast, and are involved in planning one of the world's largest offshore wind developments, Dogger bank, which is also off the UK coast. In addition, we have designed, built and successfully tested the world's first floating wind turbine, Hywind. As part of our strategy of focusing on offshore wind projects, we have decided to sell our onshore wind portfolio.
CCS	CCS is seen as one of the main methods of combating climate change. Statoil has long been regarded as a pioneer of CCS in oil and gas production, and we currently operate some of the world's largest carbon capture and storage projects. Statoil is also engaged in the development of potential medium and long-term breakthrough technologies for carbon capture. Together with Gassnova (which represents the Norwegian government in matters relating to CCS ), the South African integrated energy and chemical company Sasol, and Shell, we are building a centre for carbon capture technologies at Mongstad, known as the CO2 Technology Centre Mongstad (TCM). The technology centre aims to help suppliers develop more cost-efficient, environmentally friendly and safe technologies for carbon capture to handle emissions from different flue gas sources, such as gas power, coal power and refineries. The centre is expected to have capacity to capture up to 100,000 tonnes of carbon dioxide annually. It represents an important step towards full, industrial-scale carbon capture. Construction work is progressing according to plan after starting in summer 2009, and start-up is scheduled for May 2012. Sleipner Based on our experience from Sleipner, In Salah and Snøhvit and our experience of handling geological risk and developing large projects, Statoil is now seeking CCS carbon capture and storage -related business opportunities. Provided that satisfactory commercial and legal conditions are in place, Statoil's ambition is to develop, own and operate profitable CCS carbon capture and storage projects, focusing on being a storage provider. However, to become an important tool in the fight against emissions of greenhouse gases and climate change, CCS must become commercially viable. Potential storage sites are restricted to sedimentary basins that are spread around the world. These basins are found both onshore and offshore, mostly in the vicinity of land areas. Statoil has established a subsurface team dedicated to mapping and maturing future carbon storage. The ambition is to store our own carbon dioxide (for example from our own production of CO2-rich natural gas streams like Sleipner), and third party carbon dioxide (for example from captured CO2 from coal-fired power plants).
Biofuel	Statoil's strategy for the next generations of biofuels is to build technological expertise and secure access to winning technologies through demonstration projects, involvement in technology development and active monitoring of technology. We have joined some interesting next-generation biofuel development projects in recent years. Biofuels from wheat straw Dong Energy's demonstration plant for the production of bioethanol from wheat straw, which is located in Kalundborg in Denmark, started operation in November 2009. The plant is one of the largest second-generation bioethanol demonstration plants in the world, and the technology is based on hydrothermal pre-treatment combined with an enzymatic process. Our involvement consists of taking part in an EU project together with Inbicon and purchasing and marketing the production from the first year of operation
Geothermal	Geothermal energy is a technology in which energy from the core of the earth can be utilised for electricity and heat production in almost any location. Statoil is focusing on enhanced geothermal development, and next generation technologies may provide a game-changing energy

**Please  
select the  
technology**

**Please provide short description of technology**

option for electricity production. Our aim is to build upon our oil and gas core expertise, such as geology, drilling and reservoir management, to realise the potential of geothermal power.

**Module: Sign Off**

**Page: Sign Off**

**Please enter the name of the individual that has signed off (approved) the response and their job title**

Natacha Blisson  
Consultant Environment and Climate  
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