Module: Introduction

Page: Introduction

0.1
Introduction
Please give a general description and introduction to your organization

Teekay Petrojarl is operating in the offshore oil production, storage and transportation sector, as well as in the conventional tanker business. Teekay Petrojarl is the largest operator of Floating Production, Storage and Offloading (FPSO) vessels in the North Sea. Teekay Petrojarl owns and operates five FPSOs (two on Norwegian and two on UK continental shelves, in addition to one on the Siri Field off the south-eastern coast of Brazil). The operating fleet also includes two shuttle tankers (Petronordic and Petroatlantic), one storage tanker (Apollo Spirit) and a 40 percent ownership in the FPSO Ikdam, operating offshore Tunisia. Our head office is in Trondheim, Norway and we have operations offices in Macaé, Brazil and Aberdeen, Scotland. A total of 650 persons are employed, working on- and offshore. Teekay Petrojarl is committed to responsible health, safety, environment and quality practices, and has a long, proven track record of safely operating FPSO vessels in one of the harshest environments in the world. Teekay Petrojarl is part of Teekay Corporation. Aspects relating to Teekay Corporation are reported separately in Teekay Corporation's 2010 Carbon Disclosure Project submission.

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
Fri 01 Jan 2010 - Fri 31 Dec 2010

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
International Waters

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.

USD($)

0.5
Please select if you wish to complete a shorter information request

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.
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.

Module: Management [Investor]

Page: 1. Governance

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

1.1a
Please identify the position of the individual or name of the committee with this responsibility

President

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

Who is entitled to benefit from these incentives?	The type of incentives	Incentivised performance indicator
All employees	Monetary reward	
All employees	Recognition (non-monetary)	

Further Information

All full-time shore staff and senior vessel officers are entitled to bonus pay based on a combination of individual, team and company performance. Such performance assessment is partially dependent on achievement of various objectives, including objectives stated in annual HSE programmes where goals related to air emissions are set. Within Teekay Petrojarl an annual Climate Competition is held, where staff are challenged to bring up ideas on how to reduce emissions to air. The winner(s) receive a monetary prize.

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)

Risks and opportunities are addressed in all relevant areas of our operations. We systematically identify and prioritize potential risks and opportunities. When prioritizing and implementing measures, we seek to achieve a well founded and sound balance between issues like health and safety of our personnel, protection of the environment, reputation of our company, owners and our customers, and financial results and other business aspects. The risk management in Teekay Petrojarl is documented. Managers are obliged to manage and communicate risks and opportunities systematically. Our employees actively report risks and opportunities in daily operations. At the enterprise / project level the Value Assurance Board supports and advises decision makers (project owners) through early phase evaluation to identify and

assess the risk and opportunity picture. The assessment includes, e.g., influence on HSE performance and risk picture, influence on future operational flexibility, influence on customer relation, reputation or other business risks, and environmental effects. Teekay Petrojarl has a number of risk assessment processes that are used by our operating units to identify and assess risks associated with their key processes. We apply standard industry accepted methodology as we assess probability for an unwanted event to occur, in combination with the event's severity, as risk is defined (quantitatively). Environmental risks are evaluated specifically as we evaluate our vessels' environmental aspects within various areas, including activities leading to air emission. Matrices have been developed as risks and environmental aspects have been weighted. Responsible positions for high risk related activities are identified as part of the work to control the risks occurring from such activities. Teekay Petrojarl has developed a management system which is certified according to ISO 14001. As part of our steering system the Environmental Advisor prepares an annual Environmental Management Review where environmental risks are covered. Evaluation of our environmental aspects is part of the environmental management system.

2.2
Is climate change integrated into your business strategy?

Yes

2.2a
Please describe the process and outcomes (see guidance)

Teekay Petrojarl will continue to evaluate the risks to our business from climate change and climate policy, while investigating and pursuing new opportunities. Our response to climate change is in compliance with our policies, i.e. compliance with regulatory requirements, use of our experience to improve environmental performance, maintain an environmentally friendly workplace, minimise discharges, emissions and waste and their environmental effects. To mitigate carbon related risks, we continue to improve our greenhouse gas inventory, which enables us to better identify opportunities for emissions reductions. To engage staff we have increased our internal and external communication of environmental issues, and produce an annual Sustainability Report. Given our expertise in offshore shuttle tankers and FPSOs, Teekay Petrojarl has a competitive advantage in creating these new business opportunities.

The board reviews the company’s progress and status regarding climate change through HSE updates in board meetings, through minutes of meetings from annual Environmental Management Reviews, through annual accounts, and through the annual Teekay Petrojarl sustainability report.

2.3
Do you engage with policy makers to encourage further action on mitigation and/or adaptation?

No

Page: 3. Targets and Initiatives

3.1
Did you have an emissions reduction target that was active (ongoing or reached completion) in the reporting year?

No

3.1e
Please explain (i) why not; and (ii) forecast how your emissions will change over the next five years

GHG emission reduction plans have been discussed, and some of our FPSOs had planned initiatives (HSE program) to reduce their GHG emissions in 2010. TKPJ Senior Leadership Team have anchored the goal to get a better understanding of what our emissions are and how we can reduce them in the company strategy. Monitoring of emissions for all operations are established and visualized to create a better understanding both on- and offshore of what effects our day to day operational decisions have on the emission volumes. During the coming years we expect direct emissions to be reduced as per vessel due to more environmentally friendly fuel and enhancements related to engines. (Scope 1 emissions.) Regarding Scope 2 emissions we do not expect radical changes from today.

3.2
Does the use of your goods and/or services directly enable GHG emissions to be avoided by a third party?

No

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

3.3a
Please provide details in the table below

Activity type	Description of activity	Annual monetary savings (unit currency)	Investment required (unit currency)	Payback period
Behavioral change	Establishment of flaring policies for all vessels. To minimize flaring.			

3.3b
What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Compliance with regulatory requirements/standards	

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 voluntary communications (underway) – previous year attached		TKPJ_2009_Sustainability_Report.pdf

Further Information

We publish details of our emissions in our annual GRI certified Teekay Petrojarl sustainability report. The report for 2010 will be issued in June 2011. The 2009 Teekay Petrojarl sustainability report is attached.

Attachments

https://www.cdproject.net/Sites/2011/16/18416/Investor CDP 2011/Shared Documents/Attachments/InvestorCDP2011/4.Communication/TKPJ_2009_Sustainability_Report.pdf

Module: Risks and Opportunities [Investor]

Page: 5. Climate Change Risks

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

5.1a
Please describe your risks driven by changes in regulation

ID	Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
	Cap and trade						

	schemes						

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

Due to concern over the risk of climate change, a number of countries have adopted, or are considering the adoption of, regulatory frameworks to reduce greenhouse gas emissions. These regulatory measures include, among others, adoption of cap and trade regimes, carbon taxes, increased efficiency standards, and incentives or mandates for renewable energy. Compliance with changes in laws, regulations and obligations relating to climate change could increase our costs related to operating and maintaining our vessels and require us to install new emission controls, acquire allowances or pay taxes related to our greenhouse gas emissions, or administer and manage a greenhouse gas emissions program. Revenue generation and strategic growth opportunities may also be adversely affected. The International Maritime Organization (IMO) continues to work towards the adoption of greenhouse gas emissions regulation for the marine shipping industry. Regulations covering both the design of new vessels and the operation of all vessels are the focus of current regulatory proposals. A new vessel Energy Efficiency Design Index (EEDI) is in the final stages of preparation. This regulation will mandate a minimum level of energy efficiency from new vessels, and is intended to become more stringent over time. The regulation is anticipated to be adopted in 2010, and may enter into force one to two years later. The regulation will apply to all vessels trading worldwide. The IMO is also continuing with efforts to create a market-based mechanism that will provide a financial incentive to reduce fuel consumption and thus greenhouse gas emissions. This regulation may take the form of an emissions tax, a cap-and-trade scheme, a performance standard, or some combination of those concepts. The regulation is anticipated to be adopted before the end of 2011, but may enter into force at a later date. The IMO intends this regulation to be flag neutral (that is, applying to all vessels worldwide). However, some developing countries argue that any mandatory GHG reduction regulations should apply only to developed countries, adopting the “common but differentiated responsibilities” (CBDR) principle under the United Framework Convention on Climate Change (UNFCCC). Lastly, the European Commission has stated that it will unilaterally propose GHG legislation to take effect in 2013 if the IMO is unable to deliver global regulations by the end of 2011. The regulation would apply to vessels trading in EU waters or calling EU ports. In the United States, the EPA issued an “endangerment finding” regarding greenhouse gases under the Clean Air Act. While this finding in itself does not impose any requirements on our industry, it authorizes the EPA to regulate directly greenhouse gas emissions through a rule-making process. In addition, climate change initiatives are being considered in the United States Congress and by individual states. Any passage of new climate control legislation or other regulatory initiatives by the IMO, European Union, the United States or other countries or states where we operate that restrict emissions of greenhouse gases could have a significant financial and operational impact on our business that we cannot predict with certainty at this time.

The EEDI may result in increased costs in the construction of new vessels if shipbuilders are required to change designs to meet new requirements. Any market-based mechanism applied by the IMO will likely apply a cost on emissions, and thus the costs of fuel consumption for our vessels. This would raise the operating costs of our vessels, and marine transportation costs in general. This could lead to decreased profits or lower demand for marine transport. However, since Teekay Petrojarl’s fleet trades on time-charter agreements wherein the charterer pays the cost of bunkers, the impact of added fuel charges may have less impact on Teekay Petrojarl than on some of our competitors trading primarily on the spot market.

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

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

Further Information

The EEDI may result in increased costs in the construction of new vessels. Since the level of improvement to be achieved under the EEDI has not yet been decided, it is difficult to estimate the added costs of new vessel construction. New vessel designs may require changes such as lower friction hull forms and propellers/rudders, reductions in total installed power, and energy savings devices such as waste heat recovery. The financial impact of any market based mechanism enacted by the IMO depends on the type of mechanism and the level of financial inventive. A study commissioned by Denmark estimated that an emissions charge would have minor to no impact on the prices of commodities transported by sea. The study estimated that introduction of an emission charge would raise commodity prices by 1% or less. Therefore, the overall impact of an emissions charge on the demand for sea transport, and for Teekay’s transportation services, may be small.

Page: 6. Climate Change Opportunities

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

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

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

Marine shipping emits less CO2 per tonne-mile on average than air, truck or rail transport. GHG regulation could therefore encourage a modal shift towards marine transport. This opportunity may become apparent as the IMO enacts GHG regulations for the marine industry in the next few years. Lastly, GHG regulation may encourage the development of carbon capture and storage (CCS) projects. Teekay Corporation has worked with I.M. Skaugen SE to develop logistics solution for CCS projects. This opportunity will likely be realized first in the North Sea area where CCS operations already exist.
The development of more GHG regulatory regimes worldwide could shift transportation demand towards marine sources, which could benefit Teekay Petrojarl. The development of offshore CCS projects serviced by marine transportation of CO2 would be a unique opportunity for Teekay as well.
Teekay Corporation has worked jointly with I.M. Skaugen SE to develop the complete logistics solution for the Carbon Capture and Storage demonstration project being lead by the UK affiliate of German power utility RWE npower. I.M. Skaugen and Teekay participated in the project as part of an industrial group formed to encompass the full range of expertise needed to demonstrate carbon capture, transport and eventual undersea storage. In 2008, Teekay received approval from the American Bureau of Shipping (ABS) for a Floating LNG (FLNG) concept. Teekay sees this as a significant future growth area. TKPJ has inhouse personnel in Tech. Dept. working with FLNG. Process engineers are continuously evaluating optimization in cooperation with the oil companies. Investment estimates are not provided here.
All of the described opportunities could result in increased charter rates, increased number of vessels and assets, and / or new business opportunities (for instance CO2 transporting Shuttle Tankers, a growth in FLNG (Floating LNG liquefaction) and Compressed Natural Gas (CNG) transport). An estimate of the value of these opportunities is not provided here.

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

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

Climate change may result in an increase in severe weather events. Being the largest operator of Floating Production, Storage and Offloading (FPSO) vessels in the North Sea, Teekay Petrojarl has a long, proven track record of safely operating FPSO vessels in one of the harshest environments in the world. This is seen as an opportunity, especially in geographical regions having less harsh environment conditions than the North Sea today.
The opportunity is related to a potential growth in the demand for harsh environment Floating, Production , Storage and Offloading vessels (FPSOs).
Teekay Petrojarl has not taken any specific action in relation to the described opportunity.
The described opportunity could result in increasing demand for our services, potentially affecting rates as well as the number of vessels and assets. An estimate of the value of these opportunities is not provided here.

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)
Fri 01 Jan 2010 - Fri 31 Dec 2010	734424	

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

7.2a
If you have selected "Other", please provide details below

7.3
Please give the source for the global warming potentials you have used

Gas	Reference
Other: CO2-equivalents (as used by the Norwegian Oil Producers Association (OLF))	Other: CO2 + 21*CH4 + 3*nmVOC [tons]

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
Other: Field specific emission factors or industry standard factors (OLF) used.			

Page: 8. Emissions Data - (1 Jan 2010 - 31 Dec 2010)

8.1
Please select the boundary you are using for your Scope 1 and 2 greenhouse gas inventory

Operational control

8.2a
Please provide your gross global Scope 1 emissions figure in metric tonnes CO2e

685736

8.3a
Please provide your gross global Scope 2 emissions figure in metric tonnes CO2e

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?

8.5
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	Uncertainty Range	Main sources of uncertainty	Please expand on the uncertainty in your data
Scope 1	More than 10% but less than or equal to 20%	Metering/ Measurement Constraints Sampling Published Emissions Factors Data Management	-Inaccurate volume and flow measurements offshore. -Human error. Staff onboard and ashore routinely record and submit environmental data. While data is routinely checked to ensure reliability and accuracy, data errors can still occur. These errors are likely to be random, and should not result in any over or under reporting of actual emissions. -Emissions are estimated using emissions factors. Reported emissions therefore likely diverge from actual emissions (overestimate or underestimate of actual emissions).

8.6
Please indicate the verification/assurance status that applies to your Scope 1 emissions

Not verified or assured

8.7
Please indicate the verification/assurance status that applies to your Scope 2 emissions

No emissions data provided

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

Further Information

Our scope 1 GHG emissions are reported partly based on our customers' (licence holder on the fields where we produce oil) calculations. Some of these companies have performed a third party verification of their numbers.

Page: 9. Scope 1 Emissions Breakdown - (1 Jan 2010 - 31 Dec 2010)

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
Other: Norway	119568
Other: United Kingdom	509429
Other: Brazil	56739

9.2
Please indicate which other Scope 1 emissions breakdowns you are able to provide (tick all that apply)

By business division
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
Floating, Production , Storage and Offloading vessels (FPSOs)	651040
Tankers	34696

9.2c
Please break down your total gross global Scope 1 emissions by GHG type

GHG type	Scope 1 metric tonnes CO2e
CO2	653704
CH4	23766

Page: 10. Scope 2 Emissions Breakdown - (1 Jan 2010 - 31 Dec 2010)

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)?

10.2
Please indicate which other Scope 2 emissions breakdowns you are able to provide (tick all that apply)

Page: 11. Emissions Scope 2 Contractual

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?

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?

Page: 12. Energy

12.1
What percentage of your total operational spend in the reporting year was on energy?

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	
Electricity	
Heat	
Steam	
Cooling	

12.3
Please complete the table by breaking down the total "Fuel" figure entered above by fuel type

Fuels	MWh

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?

Decreased

13.1a

Please complete the table

Reason	Emissions value (percentage)	Direction of change	Comment
Emissions reduction activities	3.4	Decrease	

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	Explanation
	metric tonnes CO2e	unit total revenue			

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	Explanation
	metric tonnes CO2e	FTE Employee			

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	Explanation
251	metric tonnes CO2e		34.8	Increase	Operations in mature fields with increasing amounts of produced water. (I.e. more water and less hydrocarbons per volume liquid produced.)

Further Information

13.4 - Intensity figure: 251 metric tonnes CO2e per oil equivalent exported (kg CO2/m³)

Page: 14. Emissions Trading

14.1
Do you participate in any emission trading schemes?

No, and we do not currently anticipate doing so in the next two years

14.2
Has your company originated any project-based carbon credits or purchased any within the reporting period?

No

Page: 15. Scope 3 Emissions

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

15.2
Please indicate the verification/assurance status that applies to your Scope 3 emissions

No emissions data provided

15.3
How do your absolute Scope 3 emissions for the reporting year compare to the previous year?

We don't have any emissions data

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 2005 to the year ending in 2010 and a forecast for the year ending in 2011

Year ending	Date range

Page: Oil & Gas - Production & reserves by hydrocarbon type

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 2011 are forward-looking estimates

Product	2005	2006	2007	2008	2009	2010	2011

OG1.2
Please provide values for proved reserves of each of the hydrocarbon types (in units of BOE) for 2010. The values required are aggregate values for the reporting organization

Product	Proved reserves (BOE), 2010	Date of assessment

Page: Oil & Gas - Emissions by segment in the O&G value chain

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

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 CO2e for the organization's owned/controlled operations by value chain segment. The values required for 2011 are forward-looking estimates

Segment	2005	2006	2007	2008	2009	2010	2011

OG2.4
Please provide masses of gross Scope 2 GHG emissions in units of metric tonnes CO2e for the organization's owned/controlled operations by value chain segment. The values required for 2011 are forward-looking estimates

Segment	2005	2006	2007	2008	2009	2010	2011

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

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 CO2e for the whole organization broken down by emissions categories: combustion, flaring, process emissions, vented emissions, fugitive emissions. The values required for 2011 are forward-looking estimates

Category	2005	2006	2007	2008	2009	2010	2011
Combustion							
Flaring							
Process emissions							
Vented emissions							
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

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)

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	2005	2006	2007	2008	2009	2010

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

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

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

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)

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

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 2011 are forward-looking estimates

Product	2005	2006	2007	2008	2009	2010	2011

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)

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

Page: Oil & Gas - Strategy for development of non-fossil fuel products

OG6.1
Does your organization have a strategy for the development of renewable and clean energy technologies?

Module: Sign Off

Page: Sign Off

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