Investor CDP 2014 Information Request
Noble Energy, Inc.

Module: Introduction

Page: Introduction

CC0.1

Introduction

Please give a general description and introduction to your organization.

Noble Energy, Inc. (“Noble Energy” or “Company”) is a leading independent energy company engaged in worldwide oil and natural gas exploration and production. Founded by Lloyd Noble in 1932, Noble Energy, a Delaware corporation, has been publicly traded on the New York Stock Exchange (NYSE) since 1980 under the ticker symbol NBL. Noble Energy has five core operating areas: the Denver-Julesburg (DJ) Basin (onshore U.S.), the Marcellus Shale (onshore U.S.), the deepwater Gulf of Mexico (offshore U.S.), offshore West Africa, and offshore Eastern Mediterranean. Proved reserves are geographically balanced amongst the international and domestic operations, with 1,406 million barrels of oil equivalent (BOE) proved at the end of 2013. In 2013, sales volumes from continuing operations totaled 273 thousand BOE per day. Visit Noble Energy online at www.nobleenergyinc.com.

CC0.2

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
Tue 01 Jan 2013 - Tue 31 Dec 2013

CC0.3

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
United States of America
Israel
Equatorial Guinea
Cyprus
Nicaragua

CC0.4

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($)

CC0.6

Modules

As part of the request for information on behalf of investors, electric utilities, companies with electric utility activities or assets, companies in the automobile or auto component manufacture sectors, companies in the oil and gas industry, companies in the information technology and telecommunications sectors and companies in the food, beverage and tobacco sectors 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 not appear below but will automatically appear in the navigation bar when you save this page. If you want to query your classification, please email respond@cdp.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.cdp.net/en-US/Programmes/Pages/More-questionnaires.aspx.

Further Information

Module: Management

Page: CC1. Governance

CC1.1

Where is the highest level of direct responsibility for climate change within your organization?

Senior Manager/Officer

CC1.1a

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

i) Vice President (VP) of Environmental, Health, Safety, and Regulatory (EHSR)

ii) The VP of EHSR at Noble Energy has the highest level of direct oversight for climate change within the organization. This individual reports to the President and Chief Operating Officer and gives periodic updates to the Board of Directors. This process ensures responsibility and awareness for carbon management goes all the way up to the Chief Executive Officer (CEO) and Board of Directors. The Environmental Engineering Manager, who reports up to the VP EHSR, oversees the Environmental, Health and Safety (EHS) Council, which is made up of dedicated representatives from various areas of operations. The council meets periodically to share experiences, issues and concerns and serve as advisors to foster a safe, healthy and environmentally responsible workplace.

CC1.2

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

No

Further Information

Page: CC2. Strategy

CC2.1

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

CC2.1a

Please provide further details on your risk management procedures with regard to climate change risks and opportunities

Frequency of monitoring	To whom are results reported	Geographical areas considered	How far into the future are risks considered?	Comment
Annually	Individual/Sub-set of the Board or committee appointed by the Board	Global	3 to 6 years	Noble Energy is actively monitoring climate change risks within the issues of impact of legislation and regulation, impact of international accords and indirect consequences of regulation or business trends.

CC2.1b

Please describe how your risk and opportunity identification processes are applied at both company and asset level

The oil and natural gas business is subject to many significant risks, including operational, strategic, financial and compliance/regulatory risks. Noble Energy strives to maintain a proactive enterprise risk management (ERM) process to plan, organize, and control activities in a manner intended to minimize the effects of risk on capital, cash flows and earnings. ERM expands the Company's process to include risks associated with accidental losses, as well as financial, strategic, operational, regulatory, political, and others including risks related to climate change and greenhouse gas (GHG) emissions. Noble Energy's approach to GHG risk identification also includes continual improvement of methods to calculate GHGs to identify areas of opportunity for GHG emission risk reduction.

Noble Energy's ERM process is designed to operate on an annual cycle, integrated with long-range plans, and supportive of capital structure planning. Elements include, among others, cash flow at risk analysis, credit risk management, a commodity hedging program to reduce the impacts of commodity price volatility, an insurance program to protect against disruptions in our cash flows, a robust global compliance program, and government and community relations initiatives. The Company benchmarks its program against peers and other global organizations.

At the asset level, if well sites are close to other developments and/or populations, risks specific to that location are identified and mitigation options are assessed. Examples include noise and dust risk identification and mitigation. Noble Energy's Integrated Development Plans (IDPs) help identify risks and mitigation opportunities that are specific to an asset or location.

CC2.1c

How do you prioritize the risks and opportunities identified?

Noble Energy could face substantive business risks (financial, reputational, etc.) in not complying with all applicable laws and regulations, including those related to GHGs. Therefore, the first priority is related to regulatory compliance, such as Subpart W of the mandatory GHG Reporting Program (GHGRP). The Company

also prioritizes corporate social responsibility risks and opportunities in a voluntary manner.

CC2.2

Is climate change integrated into your business strategy?

Yes

CC2.2a

Please describe the process of how climate change is integrated into your business strategy and any outcomes of this process

i) Internal processes for collection/reporting information: Noble Energy has an EHS Committee that is committed to driving environmental awareness and reports to the Board of Directors on a quarterly basis. The EHS Committee was established in January 2011 and is chaired by the CEO. The committee assists the Board in determining whether appropriate EHS policies and management systems are in place. Data is collected at the field level by field personnel or environmental engineers. Relevant information is then communicated to management.

ii) Aspects of climate change that influence the strategy: Noble Energy's business strategy is influenced by applicable climate change-related regulations and its commitment to environmental stewardship and social responsibility. As part of Noble Energy's risk management process, the Company monitors proposed and approved climate change regulations, such as the GHGRP and the Hydraulic Fracturing Green Completion Rule. Regulatory changes influence Noble Energy's operations strategy in a manner that ensures compliance with existing rules and with a view towards future regulations. Reducing GHG emissions is at the forefront of Noble Energy's priority list. Noble Energy's approach to GHG management is to continually improve its methods to accurately calculate and reduce GHGs through business practices and emission reduction projects.

iii) Short-term strategy: As part of the commitment to responsible operations and social responsibility, reducing GHG emissions is one of Noble Energy's priorities. The Company's GHG emissions reduction strategy includes maintaining an accurate emissions database, implementing operational enhancements, proactively maintaining equipment and reducing truck traffic. As an example, in Colorado, Noble Energy is using EcoNode facilities that consolidate up to 64 horizontal wells on one pad. This allows for pipelines to be built that transport water and oil and natural gas, reducing the drilling footprint, emissions, water consumption and road use.

iv) Long-term strategy: Noble Energy's long-term strategy is focused on identifying opportunities to increase operational efficiency. The Company has shifted from individual vertical well sites to multi-well pads and horizontal drilling. This planning approach decreases emissions per production volume and reduces truck mileage and related emissions.

v) Strategic advantage: In terms of opportunities, the regulation of GHGs and introduction of formal technology incentives, such as enhanced oil recovery, carbon sequestration and low carbon fuel standards, could benefit the Company in a variety of ways. The burning of natural gas produces lower levels of emissions compared to other readily available fossil fuels such as oil and coal. Therefore, the use of natural gas may increase should the use of other fossil fuels decrease due to GHG emissions regulation that could provide Noble Energy with a competitive advantage.

vi) Substantial business decisions made: In 2013, Noble Energy came together with two of Colorado's largest energy producers and the Environmental Defense Fund (EDF) to support new state air regulations. The rules passed represent input from a wide variety of stakeholders and establish the most progressive air quality regulations governing hydrocarbon emissions from the oil and natural gas industry. Specifically, these rules signify the first-ever direct regulation of methane emissions in the U.S. through leak detection and repair practices. The Company sees its involvement in this process as a model that can be duplicated in the long-term to tackle tough environmental challenges while allowing for development of a key sector of the economy.

This decision directly ties to Noble Energy's long-term strategy of reducing GHG emissions through innovative practices and projects. The Company believes their participation in this rule-making process will help mitigate future climate change-related regulatory risk as well as increase brand reputation through enhanced relationships with stakeholders.

CC2.3

Do you engage in activities that could either directly or indirectly influence public policy on climate change through any of the following? (tick all that apply)

Direct engagement with policy makers
Other

CC2.3a

On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution
Other: Reduction of methane emissions	Support	Noble Energy engaged directly with numerous Colorado lawmakers to show their support of a bill put forward by the Colorado Department of Public Health and Environment's Air Pollution Control Division in support of tighter air regulations. This was a collaborative effort between the Environmental Defense Fund and Noble Energy, Encana and Anadarko as part of the Air Quality Control Division's stakeholder process. Much of the engagement took place in 2013, and the bill was passed on February 19th, 2014.	Colorado became the first state in the U.S. to limit methane emissions from oil and natural gas operations. The rule requires that oil and natural gas companies find and fix methane leaks through the use of infrared cameras, as well as install technology that captures 95 percent of emissions of volatile organic compounds (VOCs) and methane. The rules are expected to cut emissions of VOCs in Colorado by about 93,500 tons per year. The rules are also expected to reduce leaks of methane and ethane by about 65,000 tons per year.

CC2.3g

Please provide details of the other engagement activities that you undertake

With support and funding from Noble Energy and other oil and natural gas companies operating in the area, Coloradans for Responsible Energy Development (CRED) was created to help educate the general public (through advertisements, publications and other media) about the energy, economic and environmental benefits of safe and responsible oil and natural gas development. Even though the oil and natural gas industry has utilized hydraulic fracturing for over 60 years, most Coloradans admit to not knowing or understanding what it involves, so education is the main driver of this organization.

CC2.3h

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

Noble Energy has a process for tracking current and proposed climate change legislation and regulation at the state, regional, federal, and international levels. The Company uses several internal and external resources to assess legislative changes and their potential impact to business. As a leading independent energy company, Noble Energy is fully engaged in public discussions on pending U.S. energy policy legislation. The Company approaches governmental engagement as an opportunity to solve problems for the public good.

Further Information

Page: CC3. Targets and Initiatives

CC3.1

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

No

CC3.1e

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

Noble Energy is going through a period of expansion and divestiture of producing assets, making it difficult to forecast emissions over the next five years because properties are being sold in discrete packages. Because of this, the Company does not currently have an emissions reduction target; however, it believes emissions will likely increase due to projected growth.

CC3.2

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

Yes

CC3.2a

Please provide details of how the use of your goods and/or services directly enable GHG emissions to be avoided by a third party

i) As a producer of natural gas, Noble Energy increases the ability for end users to substitute higher GHG fossil fuels with cleaner-burning fuels. In addition to being cleaner sources of energy, compressed natural gas (CNG) and liquefied natural gas (LNG) are affordable, domestic alternatives to imported oil. CNG and LNG can be used as fuels for road vehicles, in drilling rigs and other oil field applications, and for marine and railway transport. Noble Energy committed $5 million over five years to Weld County school districts to support the conversion and purchase of new CNG school buses. This project helps the school districts replace aging buses, reduces emissions and expands the market for CNG in the region. In 2013, seven buses were running in Colorado.

ii) The CNG school buses emit approximately 25% less GHG than diesel. Each CNG school bus reduces GHG emissions by approximately 5 metric tons per year. With seven school buses on the roads in 2013, the reduction total was around 35 metric tons.

iii) {Methodology, assumptions, emissions factors and GWPs for the estimated amount above.}

Methodology
The Greenhouse Gas Protocol - Fuel Based Methodology
Fuel Consumption * Emissions Factor

Emissions Factors (U.S. EPA)
Diesel = 10.21 kg CO2/gallon
CNG =0.0545 kg CO2/scf

Assumptions
1 Diesel Gallon Equivalent = 143.94 scf

Each bus uses approximately 2,000 to 3,000 gallons of diesel per year (for the calculations, 2000 gallons per year was assumed).

iv) Noble Energy is not currently considering Certified Emission Reductions (CERs) or Emission Reduction Units (ERUs).

CC3.3

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

Yes

CC3.3a

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

Stage of development	Number of projects	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	0	
To be implemented*	0	
Implementation commenced*	0	
Implemented*	6	127174
Not to be implemented	0	

CC3.3b

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

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative, years	Comment
Fugitive emissions reductions	Proactively identifying maintenance opportunities can help reduce air emissions and costs, while increasing the quantity of natural gas available for sale. Noble Energy has a team of individuals that monitor work sites with infrared cameras to detect natural gas leaks (Scope 1 emissions) that cannot be seen with the naked eye. With dedicated staff assigned to the program, the Company surveyed over 1,300 sites in 2013.	44625	371875	2180000	4-10 years		
Transportation: fleet	We have voluntarily continued to convert trucks in our fleet to run on compressed natural gas (CNG). By the end of 2013, Noble Energy converted 85 trucks in the DJ Basin to run on CNG, representing more than 20 percent of the total fleet. The company's goal is to convert all the trucks in its fleet to CNG as fueling station accessibility allows. This initiative results in Scope 1 emissions reductions, and the lifetime of the trucks is seven to ten years.	100	100000			7-10 years	
Process emissions reductions	In Colorado, Noble Energy is using EcoNode facilities that consolidate up to 64 horizontal wells on one pad. This allows for pipelines to be built that transport water and oil and natural gas, reducing the drilling footprint, emissions, water consumption and road use. This design eliminates 19.5 million truck miles a year, eliminating 62.6 thousand tons of CO2 emissions (Scope 1). The overall goal of this voluntary program is to both increase production yields while reducing operating costs and minimizing our environmental impacts. The project is expected to be permanent and last the lifetime of the well (30-50 years). Noble Energy has not yet determined savings and total costs of this project.	62600				30-50 years	
Process emissions reductions	Noble Energy participates in a voluntary U.S. Vapor Recovery Unit (VRU) program. Vapor recovery units are commonly used to capture fumes for further use, while reducing flaring and volatile organic compound (VOC) emissions. The Company has invested millions of dollars to install more than 100 VRUs. Noble Energy continues to optimize its vapor recovery program to capture, rather than	19849	165408	5200000	>25 years	30-50 years	

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative, years	Comment
	combust, oil tank vapors and, with new designs in forward development areas, will exceed the regulatory requirement to reduce VOCs by 90 percent from tank batteries in Colorado. The lifetime of this project is expected to be as long as Noble Energy has operations in this area.						
Process emissions reductions	The Company is currently operating four dual-fuel (diesel and LNG) rigs across its U.S. operations. Two are located in the Marcellus operating area and two in the DJ Basin operating area. Additionally, Noble Energy is operating one dual-fuel set of hydraulic fracturing equipment. This initiative reduces Noble Energy's Scope 1 emissions and is scheduled to last the lifetime of operations in these areas.					30-50 years	

CC3.3c

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

Method	Comment
Compliance with regulatory requirements/standards	By complying with regulatory requirements, costly fines are avoided and operations are altered to be more efficient, thereby increasing production and revenue. Also, emissions reduction projects help Noble Energy stay ahead of future regulations.
Employee engagement	Noble Energy has an environmental engineering group dedicated to implementing emission reduction activities and exploring new opportunities. The group works to reduce emissions at the corporate and field level to maximize the potential of the reduction activities. On Noble Energy's internal website, employees can submit ideas for emission reduction activities that are reviewed by the environmental engineering group.
Partnering with governments on technology development	As part of its GHG emissions reduction strategy, Noble Energy continues to support the expanded use of CNG and LNG, and partners with the government when appropriate. CNG fueling stations are essential infrastructure to enhance the ability of natural gas cars, trucks and vehicle fleets to grow throughout Colorado. In 2012, four natural gas fueling stations were opened by Mansfield Energy Corp. and ZeitEnergy, partially funded through a Congestion Mitigation and Air Quality Improvement (CMAQ) grant with matched funds from Noble Energy and other partners. In 2013, the Weld County school districts received a $600,000 grant from the Department of Local Affairs (DOLA) to fund a CNG station. Noble Energy has agreed to pay the remaining incremental cost of the station, or about $75,000. Additionally, the company has committed $5 million over five years to Weld County school districts to support the conversion and purchase of new CNG-fueled school buses. This project not only helps local school districts replace aging buses, it also helps the region expand the market for CNG. The lower cost of CNG saves the districts an average of $3,500 per bus each year. At year-end 2013, there were seven buses up and running. Throughout this commitment, the Company will work with local and federal agencies to secure matching funds to convert as many buses as possible.

Further Information

Page: CC4. Communication

CC4.1

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

Publication	Page/Section reference	Attach the document
In mainstream financial reports (complete)	57	https://www.cdp.net/sites/2014/95/13395/Investor CDP 2014/Shared Documents/Attachments/CC4.1/NobleEnergy_AR_2013.pdf
In mainstream financial reports (underway) – previous year attached	32-33	https://www.cdp.net/sites/2014/95/13395/Investor CDP 2014/Shared Documents/Attachments/CC4.1/NBL051_2012SR.pdf

Further Information

Module: Risks and Opportunities

Page: CC5. Climate Change Risks

CC5.1

Have you identified any climate change risks that have the 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

CC5.1a

Please describe your risks driven by changes in regulation

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Air pollution limits	Commercial risk to Noble Energy lies in the uncertainty of government-imposed climate legislation. Under the authority of the Clean Air Act, the EPA is proposing new regulations and amendments to existing regulations that may impact Noble Energy's operations. On April 12th, 2013, the EPA proposed amendments to the storage tank provisions of NSPS OOOO and various other technical corrections to the August 16, 2012 final rule. The EPA finalized these amendments by September 23rd, 2013. Failure to comply may result in the issuance of notices of non-compliance and possible penalties. On a state regulatory level, Colorado recently passed the first methane law in the U.S., which	Increased operational cost	1 to 3 years	Direct	Virtually certain	Medium	The cost of meeting regulatory requirements may have an adverse impact on Noble Energy's financial condition, operations and cash flows. Financial implications for non-compliance with Reg 7 include a $15,000 per day non-compliance penalty for leaking pressure relief devices (PRVs) or smoking flares.	The Company actively monitors current and proposed climate change legislation and expects that some combination of performance standards, taxes, tradable emissions credits, and production limitations will become a reality in most areas where it operates in the U.S. To monitor and mitigate these risks, Noble Energy has created an Environmental Engineering group that maintains an annual GHG inventory and drives efficiency and emission reduction projects. Additionally, this team has developed software for tracking and calculating GHG emissions as part of compliance with regulations.	The costs of managing these risks include monitoring regulatory requirements and developments, and the costs of equipment and/or operational changes needed to comply.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	amends Regulation 7 (Reg 7) to include methane and ethane. This could create a significant amount of risk as it is the first regulation of its kind, and, due to its phased implementation approach, the full cost of compliance will not be known for some time.								
Carbon taxes	Currently there is draft legislation in the U.S. Congress that would impose a carbon tax. The uncertainty of government imposed climate taxes that may affect Noble Energy, its suppliers, and its customers include the added cost of meeting these requirements, which may have an adverse impact on Noble Energy's financial condition, operations and cash flow.	Increased operational cost	Unknown	Direct	Unlikely	Low	The cost of meeting regulatory requirements may have an adverse impact on Noble Energy's financial condition, operations and cash flows, and could reduce the demand for its products.	Noble Energy actively monitors current and proposed climate change legislation and expects that some combination of performance standards, taxes, tradable emissions credits, and production limitations will become a reality in most areas where it operates in the U.S. To monitor and mitigate these risks, Noble Energy has created an Environmental Engineering group that maintains an annual GHG inventory and drives efficiency and emission reduction projects. Additionally, this team has developed software for tracking and calculating GHG emissions as part of compliance with regulations.	The costs of managing these risks include monitoring regulatory requirements and developments, and the costs of equipment and/or operational changes needed to comply.
Cap and trade schemes	The uncertainty of government-imposed climate legislation, including cap and trade schemes, poses a commercial risk to the	Increased operational cost	Unknown	Direct	Unlikely	Medium-high	The cost of meeting regulatory requirements may have an adverse impact on Noble Energy's financial condition, operations and	Noble Energy actively monitors current and proposed climate change legislation and expects that some combination of performance	The costs of managing these risks include monitoring regulatory requirements and developments, and the costs of equipment and/or

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	exploration and production of fossil fuels. A regulation such as this may have an adverse impact on Noble Energy's financial condition, operations and cash flows, and could reduce the demand for Noble Energy's products. Several draft bills imposing a cap and trade system have been unsuccessfully introduced, but the idea continues to be discussed.						cash flows, and could reduce the demand for its products.	standards, taxes, tradable emissions credits, and production limitations will become a reality in most areas where it operates in the U.S. To monitor and mitigate these risks, Noble Energy has created an Environmental Engineering group that maintains an annual GHG inventory and drives efficiency and emission reduction projects. Additionally, this team has developed software for tracking and calculating GHG emissions as part of compliance with regulations.	operational changes needed to comply.
Emission reporting obligations	The uncertainty associated with government-imposed emission reporting obligations poses a commercial risk to the exploration and production of fossil fuels. An example includes the GHGRP, with whom Noble Energy has been working with to achieve compliance.	Increased operational cost	Up to 1 year	Direct	Virtually certain	Medium	The cost of meeting regulatory requirements may have an adverse impact on Noble Energy's financial condition, operations and cash flows, and could reduce the demand for its products. There are also financial implications for non-compliance. For example, companies who do not report to the GHGRP could be fined up to $37,500 per day of non-compliance.	The Company actively monitors current and proposed climate change legislation and expects that some combination of performance standards, taxes, tradable emissions credits, and production limitations will become a reality in most areas where it operates in the U.S. To monitor and mitigate these risks, Noble Energy has created an Environmental Engineering group that maintains an annual GHG inventory and drives efficiency and emission reduction projects. Additionally, this team has developed software for tracking and	Noble Energy has a specific budget allocated for the management of annual GHG emissions. The budget is approximately $450,000 to measure, monitor, calculate and report annual GHG emissions. The cost of meeting GHG requirements may have some impact on Noble Energy's financial condition, results of operations and cash flows. In 2013, Noble Energy has continued to report its GHG emissions in accordance with the GHGRP.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								calculating GHG emissions as part of compliance with regulations.	
Uncertainty surrounding new regulation	The Company faces a number of risks around regulatory uncertainty. One example is the White House Methane Initiative, part of the White House Climate Action Plan, which has pledged to move forward through a number of different mechanisms to attempt to lower limits of methane for various industries. Should this be adopted, it would affect all Noble Energy U.S. operations. Another example of regulatory uncertainty is the Bureau of Land Management's (BLM) new commitment to propose rulemaking in 2014 to minimize royalty loss from venting and flaring on federal and tribal leases. Noble Energy must work to prepare for possible future regulations and to comply with any new rules passed.	Increased operational cost	Up to 1 year	Direct	Virtually certain	Medium	The cost of meeting regulatory requirements may have an adverse impact on Noble Energy's financial condition, operations and cash flows, and could reduce the demand for its products. There are also financial implications for non-compliance.	Commercial risks associated with the exploration and production of fossil fuels lie in the uncertainty of climate change legislation and regulations that may affect Noble Energy, its suppliers and its customers.	The costs of managing these risks include monitoring regulatory requirements and developments, and the costs of equipment and/or operational changes needed to comply.

CC5.1b

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

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Tropical cyclones (hurricanes and typhoons)	Physical risks are primarily related to extreme weather	Reduction/disruption in production capacity	Unknown	Direct	Likely	Medium-high	Extreme weather conditions increase the Company's	Noble Energy has developed an Incident Management System (IMS)	Costs of the systems for managing this risk include the capital needed

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	events, which some research suggests may increase in intensity with rising global temperatures. The extent to which climate change may lead to increased storm or weather hazards affecting the Company's operations, specifically offshore operations, is difficult to identify at this time.						operating costs, and damage may not be fully insured. Potential increased meta-ocean design criteria to operate under harsher storm conditions could require more robust design of equipment. Additionally, any severe weather increase in areas of the Company's operations could potentially impact its ability to conduct normal activities.	to facilitate the Company's response to various natural disasters including hurricanes, tornadoes and other emergency situations. The Company conducted a baseline assessment to determine what procedures were in place and what enhancements were needed. Over the next three years, the Company plans to transition its emergency response planning to an All Hazard approach. This process will create a comprehensive preparedness, response and recovery architecture, using the National Fire Protection Administration (NFPA) 1600 – Standard on Disaster/ Emergency Management and Business Continuity Programs. Through this process, the Company will revise existing plans to conform to a common response model based on the premises of the Incident Command System (ICS). As part of the ICS model, Noble Energy will develop new plans to address hazards not presently addressed; train personnel in ICS; secure resources to mitigate risks	to develop and install the system and employee time.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								and enhance preparedness capability; establish contracts for support during emergency response and recovery activities; test plans, personnel and equipment through exercises; and capture and implement corrective actions identified through the testing process. Although the ICS has been in place for quite some time, in 2013, Noble Energy began administering practice drills to better prepare for a potential incident.	
Change in precipitation extremes and droughts	Physical risks, including floods, may be related to extreme weather events, which some research suggests may increase in intensity with rising global temperatures.	Inability to do business	Unknown	Direct	Unknown	Medium-high	Extreme weather conditions increase the Company's operating costs, and damage may not be fully insured. Potential increased meta-ocean design criteria to operate under harsher storm conditions could require more robust design of equipment. Additionally, any severe weather increase in areas of the Company's operations could potentially impact its ability to conduct normal activities.	Noble Energy has developed an Incident Management System (IMS) to facilitate the Company's response to various natural disasters including hurricanes, tornadoes and other emergency situations. The Company conducted a baseline assessment to determine what procedures were in place and what enhancements were needed. Over the next three years, the Company plans to transition its emergency response planning to an All Hazard approach. This process will create a comprehensive preparedness, response and recovery architecture,	Costs of the systems for managing this risk include the capital needed to develop and install the system and employee time. In late 2013, total net production loss on average was approximately 2,000 barrels of oil equivalent per day due to September flooding in Colorado, which, at a cost of $80 per barrel, equates to $160,000 per day. Additionally, Noble Energy contributed $500,000 to the Red Cross to alleviate flood impacts in the community.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								using the National Fire Protection Administration (NFPA) 1600 – Standard on Disaster/ Emergency Management and Business Continuity Programs. Through this process, the Company will revise existing plans to conform to a common response model based on the premises of the Incident Command System (ICS). As part of the ICS model, Noble Energy will develop new plans to address hazards not presently addressed; train personnel in ICS; secure resources to mitigate risks and enhance preparedness capability; establish contracts for support during emergency response and recovery activities; test plans, personnel and equipment through exercises; and capture and implement corrective actions identified through the testing process. Although the ICS has been in place for quite some time, in 2013, Noble Energy began administering practice drills to better prepare for a potential incident.	

CC5.1c

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

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated Financial Implications	Management method	Cost of management
Reputation	Shifting consumer attitude on hydrocarbon production could present broad reputational risks to the industry. There were climate change related shareholder resolutions filed in 2013 that affected the oil and natural gas industry. At the state level, in 2013, four communities in Colorado approved anti-hydraulic fracturing ballot measures.	Inability to do business	Up to 1 year	Direct	Virtually certain	Medium-high	Noble Energy's reputational risks associated with climate change could affect shareholder investments, the degree to which cannot be estimated at this time.	These risks are mitigated by educating and engaging all stakeholders.	Noble Energy cannot estimate costs of managing these risks at this time.

Further Information

Page: CC6. Climate Change Opportunities

CC6.1

Have you identified any climate change opportunities 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

CC6.1a

Please describe your opportunities that are driven by changes in regulation

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Cap and trade schemes	The burning of natural gas produces lower levels of air emissions than other readily available fossil fuels, such as oil and coal, and represents approximately 60% of the Company's energy portfolio. If Noble Energy's customers are subject to a cap and	Reduced operational costs	Up to 1 year	Direct	Virtually certain	Medium-high	Through these opportunities, the use of natural gas may increase should the use of other fossil fuels decrease. Since natural gas is a cleaner-burning alternative to other readily available fossil fuels, such as oil and coal, Noble Energy believes there are many opportunities for growth	Noble Energy is well-positioned for an increase in demand of natural gas. Should renewable resources, such as wind or solar power, become more prevalent, natural gas-fired electric plants may provide an alternative backup to maintain consistent energy supply. For example,	The cost of managing these opportunities would not be significant. The cost associated with opportunities related to emission reduction activities may equate to the cost of GHG monitoring and reporting and project design documents, verification and administrative costs.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	trade scheme, it could increase the demand for natural gas. In addition, if cap and trade was implemented in the transportation sector, natural gas may prove to be a more attractive fuel. This may also increase the market demand for natural gas. Noble Energy might also be able to directly benefit from selling in a cap and trade market.						within the natural gas market. In addition, financial gains could result from cap and trade through capitalizing on emission reduction activities and increasing operational efficiencies.	Noble Energy is developing resources for Israel to switch from coal-fired to natural gas-fired electricity, creating a growing demand for its products. Increased natural gas discoveries by Noble Energy are allowing for GHG reduction through conversion of power plants from other fuels to natural gas. Natural gas vehicles are cleaner than traditional gasoline or diesel vehicles, resulting in 70-90 percent less carbon monoxide, 75-95 percent less nitrogen oxide, and 20-30 percent less carbon dioxide emissions. A critical barrier to converting vehicles to natural gas is the lack of necessary infrastructure. Noble Energy is actively working with our industry peers, trade associations, local governments and the public to advocate for infrastructure and vehicle conversion. By the end of 2013, Noble Energy converted 85 trucks in the DJ Basin to run on CNG, representing more than 20 percent of its total fleet. The Company's goal is to convert all the trucks in its fleet to CNG as fueling station accessibility	

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								allows. The Company is currently operating four dual-fuel (diesel and LNG) rigs across its U.S. operations. Additionally, Noble Energy is operating one dual-fuel set of hydraulic fracturing equipment.	

CC6.1b

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

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Change in mean (average) temperature	With increasing global temperatures, line freeze events and production equipment maintenance issues will decrease. This will reduce operational costs for Noble Energy. Also, warmer temperatures increase the amount of air conditioning needed that is potentially powered by energy from natural gas.	Reduced operational costs	Unknown	Direct	Unknown	Medium	The potential for operational cost savings is associated with the reduction in maintenance events due to fewer line freezes.	It is currently challenging to manage this type of opportunity.	The cost of this opportunity at the present time is unknown.
Change in mean (average) temperature	With increasing global temperature, line freeze events and production equipment maintenance issues will decrease, causing a decrease in equipment downtime. Less downtime equates to increased production capacity for Noble Energy.	Increased production capacity	Unknown	Direct	Unknown	Medium	In some instances, equipment downtime can mean a cessation in production. Less downtime would enable increased production and increased revenue. Less equipment downtime, such as downtime for vapor recovery units (VRUs), would also increase the amount of gas being recovered.	It is difficult to manage this sort of opportunity at this time. The continued promotion of natural gas as a reliable, cleaner energy source will increase the opportunity.	Noble Energy is unsure of the costs of this opportunity at the present time.

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
							This results in more gas being sold, as opposed to being routed to a backup flare when VRUs are down for maintenance purposes.		
Change in mean (average) temperature	Increasing global temperature has the potential to increase the use of air conditioning. Air conditioning powered by natural gas may increase the demand for natural gas, one of Noble Energy's main products.	Increased demand for existing products/services	Unknown	Direct	Unknown	Medium	Increased demand for natural gas will increase revenue from the amount of natural gas supplied for the purposes of air conditioning. With the increasing trend of replacing coal with natural gas as an energy generator, future energy demand will benefit the natural gas industry.	It is difficult to manage this sort of opportunity at this time. The continued promotion of natural gas as a reliable, cleaner energy source will increase the opportunity.	Noble Energy is unsure of the costs of this opportunity at the present time.

CC6.1c

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

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Reputation	Shifting consumer attitudes and increased education on the lower amount of GHG emissions associated with natural gas production and use as an energy source could present some broad reputational opportunities to Noble Energy.	Increased demand for existing products/services	Unknown	Indirect (Supply chain)	More likely than not	Medium-high	Natural gas will be an economically feasible bridge fuel until renewable sources can be deployed over the next several decades. If consumer attitudes shift to realize the benefits of natural gas, Noble Energy may financially benefit from the increased demand of natural gas during this transition period.	Noble Energy monitors demand for natural gas and continues to research production opportunities. The Company also looks for opportunities to educate consumers and suppliers about the lower emissions associated with natural gas.	Costs include employee time and resources in monitoring, researching, and educating activities.
Changing consumer behaviour	Shifting consumer attitudes and increased education on hydrocarbon production and use as	Increased demand for existing products/services	Unknown	Indirect (Supply chain)	More likely than not	Medium-high	Natural gas will be an economically feasible bridge fuel until renewable sources can be deployed	Noble Energy monitors demand for natural gas and continues to research production opportunities.	Costs include employee time and resources in monitoring, researching, and educating activities.

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	an energy source, and GHG emissions could present some broad reputation opportunities to the industry. For example, Noble Energy is currently educating consumers about the benefits of emissions reduction realized by changing fleets to CNG.						over the next several decades. If consumer attitudes shift and realize the benefits of natural gas, Noble Energy may financially benefit from the increased demand of natural gas during this transition period.	The Company also looks for opportunities to educate consumers and suppliers about the lower emissions associated with natural gas.	

Further Information

Module: GHG Emissions Accounting, Energy and Fuel Use, and Trading

Page: CC7. Emissions Methodology

CC7.1

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)
Sun 01 Jan 2012 - Mon 31 Dec 2012	2078600	61630

CC7.2

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

CC7.2a

If you have selected "Other" in CC7.2 please provide details of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions

Title 40 Part 98 - Mandatory Greenhouse Gas Reporting - Subpart W

CC7.3

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)
N2O	IPCC Second Assessment Report (SAR - 100 year)

CC7.4

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

Fuel/Material/Energy	Emission Factor	Unit	Reference

Fuel/Material/Energy	Emission Factor	Unit	Reference
Natural gas	1.39	Other: Scf/hour/component low continuous bleed pnuematic device	Subpart W
Natural gas	37.3	Other: Scf/hour/component high continuous bleed pneumatic device	Subpart W
Natural gas	13.3	Other: Scf/hour/component pneumatic pumps	Subpart W

Further Information

Page: CC8. Emissions Data - (1 Jan 2013 - 31 Dec 2013)

CC8.1

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

Operational control

CC8.2

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

2912516

CC8.3

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

31653

CC8.4

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

No

CC8.5

Please estimate the level of uncertainty of the total gross global Scope 1 and 2 emissions 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 20% but less than or equal to 30%	Data Gaps Assumptions Metering/ Measurement Constraints	The Gas Research Institute/U.S. EPA "Methane Emissions from the Natural Gas Industry" study [GRI/EPA 1996], which is the seminal natural gas industry GHG emission estimation project and the basis for most industry standard emission factors, produced an industry wide methane emission inventory uncertainty of about 33% at a 90% confidence interval. Similarly, the EPA has +30% upper bound/-25% lower bound uncertainty estimates (95% confidence interval) for methane and non-energy CO2 emissions from natural gas systems [EPA 2007]. For petroleum systems, the EPA methane emission estimate uncertainty has a -24% lower bound and +148% upper bound [EPA 2007]. These uncertainties are for the entire GHG emissions inventories; uncertainties for individual estimates are generally higher.	More than 20% but less than or equal to 30%	Data Gaps Assumptions Data Management	Electricity consumption data relied on area average rates. In some areas, electricity data were not completely available.

CC8.6

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

No third party verification or assurance

CC8.7

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

No third party verification or assurance

CC8.8

Please identify if any data points other than emissions figures have been verified as part of the third party verification work undertaken

Additional data points verified	Comment
No additional data verified	

CC8.9
Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?

No

Further Information

Page: CC9. Scope 1 Emissions Breakdown - (1 Jan 2013 - 31 Dec 2013)

CC9.1
Do you have Scope 1 emissions sources in more than one country?

Yes

CC9.1a
Please break down your total gross global Scope 1 emissions by country/region

Country/Region	Scope 1 metric tonnes CO2e
United States of America	1322494
Israel	95411
Equatorial Guinea	1478098
Cyprus	11055
Nicaragua	5458

CC9.2
Please indicate which other Scope 1 emissions breakdowns you are able to provide (tick all that apply)

By activity

CC9.2d
Please break down your total gross global Scope 1 emissions by activity

Activity	Scope 1 emissions (metric tonnes CO2e)
Combustion	994633
Flaring	1152088
Fugitive	321519
Mobile	59905
Venting	384371

Further Information

Page: CC10. Scope 2 Emissions Breakdown - (1 Jan 2013 - 31 Dec 2013)

CC10.1
Do you have Scope 2 emissions sources in more than one country?

Yes

CC10.1a
Please break down your total gross global Scope 2 emissions and energy consumption by country/region

Country/Region	Scope 2 metric tonnes CO2e	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low carbon electricity, heat, steam or cooling accounted for CC8.3 (MWh)
United States of America	29862	37400	0
Israel	1464	1640	0

Country/Region	Scope 2 metric tonnes CO2e	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low carbon electricity, heat, steam or cooling accounted for CC8.3 (MWh)
Equatorial Guinea	327	370	0
Cyprus	0	0	0
Nicaragua	0	0	0

CC10.2

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

By business division

CC10.2a

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

Business division	Scope 2 emissions (metric tonnes CO2e)
Corporate Office	16181
Field Offices/Operations	15472

Further Information

Page: CC11. Energy

CC11.1

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

More than 5% but less than or equal to 10%

CC11.2

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

Energy type	MWh
Fuel	4344276
Electricity	55568
Heat	0
Steam	0
Cooling	0

CC11.3

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

Fuels	MWh
Other: Diesel	1043932
Other: Gasoline	26657
Natural gas	3263258
Other: Jet fuel	10429

CC11.4

Please provide details of the electricity, heat, steam or cooling amounts that were accounted at a low carbon emission factor in the Scope 2 figure reported in CC8.3

Basis for applying a low carbon emission factor	MWh associated with low carbon electricity, heat, steam or cooling	Comment
No purchases or generation of low carbon electricity, heat, steam or cooling accounted with a low carbon emissions factor	0	As an occupant of leased facilities, Noble Energy does not directly purchase electricity or control the associated Scope 2 emissions.

Further Information

Page: CC12. Emissions Performance

CC12.1

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

Increased

CC12.1a

Please identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined) and for each of them specify how your emissions compare to the previous year

Reason	Emissions value (percentage)	Direction of change	Comment
Emissions reduction activities	2.0	Decrease	Due to continued and increased use of Vapor Recovery Units, decrease in emissions reduction activities occurred.
Divestment	4.7	Decrease	Noble Energy had mid-year divestments of assets in Kansas, New Mexico, Texas and Louisiana.
Acquisitions			
Mergers			
Change in output	43.7	Increase	This increase is attributed to Noble Energy's increase of oil and natural gas production.
Change in methodology			
Change in boundary	2.0	Increase	In 2013, Noble Energy began drilling in Nevada, offshore Cyprus and offshore Nicaragua.
Change in physical operating conditions			
Unidentified			
Other			

CC12.2

Please describe your gross global 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
.000587	metric tonnes CO2e	unit total revenue	16	Increase	Increases in emissions were proportionally higher than the increase in revenue. This is likely due to the amount of flaring in Equatorial Guinea, which increased emissions with little impact on revenue.

CC12.3

Please describe your gross global 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
1165	metric tonnes CO2e	FTE employee	19	Increase	Increases in emissions were proportionally higher than the increase of full-time employees in 2013. This is likely due to the amount of flaring in Equatorial Guinea.

CC12.4

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
.025	metric tonnes CO2e	barrel of oil equivalent (BOE)	8.7	Increase	The increase in the intensity figure is primarily due to increased flaring in Equatorial Guinea.

Further Information

Page: CC13. Emissions Trading

CC13.1

Do you participate in any emissions trading schemes?

No, and we do not currently anticipate doing so in the next 2 years

CC13.2

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

No

Further Information

Page: CC14. Scope 3 Emissions

CC14.1

Please account for your organization's Scope 3 emissions, disclosing and explaining any exclusions

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using primary data	Explanation
Purchased goods and services	Relevant, not yet calculated				
Capital goods	Relevant, not yet calculated				
Fuel-and-energy-related activities (not included in Scope 1 or 2)	Relevant, not yet calculated				
Upstream transportation and distribution	Relevant, not yet calculated				
Waste generated in operations	Relevant, not yet calculated				
Business travel	Relevant, calculated	7632.5	EPA Climate Leaders Greenhouse Gas Inventory Protocol	100%	Business travel data is obtained from Noble Energy's external travel agency.
Employee commuting	Relevant, calculated	13.4	EPA Climate Leaders Greenhouse Gas Inventory Protocol	45%	Employee commuting survey results were correlated from responses of approximately 45% of eligible employees.
Upstream leased assets	Relevant, not yet calculated				
Downstream transportation and distribution	Relevant, not yet calculated				
Processing of sold products	Relevant, not yet calculated				
Use of sold products	Relevant, not yet calculated				
End of life treatment of sold products	Not relevant, explanation provided				Product life cycle ends prior to when products are sold.
Downstream leased assets	Not relevant, explanation provided				Noble Energy does not have any downstream leased assets at the current time.
Franchises	Not relevant, explanation provided				Noble Energy does have any franchises at the current time.
Investments	Not evaluated				
Other (upstream)	Not relevant, explanation provided				There are no activities upstream of Noble Energy and any work done on its operated site is included in the Scope 1 emissions inventory. Therefore, any emissions from hydraulic fracturing, drilling, or workover operations conducted by contractors are included in the Noble Energy Scope 1 inventory.
Other (downstream)	Relevant, not yet calculated				

CC14.2

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

No third party verification or assurance

CC14.3

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

Yes

CC14.3a

Please identify the reasons for any change in your Scope 3 emissions and for each of them specify how your emissions compare to the previous year

Sources of Scope 3 emissions	Reason for change	Emissions value (percentage)	Direction of change	Comment
Business travel	Change in output	9.8	Increase	

CC14.4

Do you engage with any of the elements of your value chain on GHG emissions and climate change strategies? (Tick all that apply)

Yes, our suppliers

CC14.4a

Please give details of methods of engagement, your strategy for prioritizing engagements and measures of success

Where possible, Noble Energy works with its supply chain to promote CNG and LNG. For example, in 2012, Noble Energy partnered with one of its water haulers in the DJ Basin, Renewable Fiber, to finance 10 LNG trucks to haul freshwater. This effort continued in 2013. These trucks help the company reduce costs and lower emissions. Natural gas vehicles are cleaner than traditional gasoline or diesel vehicles, resulting in 70-90 percent less carbon monoxide, 75-95 percent less nitrogen oxide, and 20-30 percent less carbon dioxide emissions. Additionally, natural gas is significantly less expensive: on average, natural gas is over one-third less expensive than gasoline and between 25-42 percent less expensive than diesel.

Noble Energy gives priority to suppliers with lower GHG emitting technologies. In 2013, the Company included information in its Request for Proposals (RFPs) requiring a response to the applicant's commitment to natural gas and weighted this response when evaluating potential new suppliers. Due to the Renewable Fiber partnership, 25 percent of all water in the DJ Basin is hauled by natural gas vehicles, a number the Company is proud of and will work to maintain and/or improve upon.

CC14.4b

To give a sense of scale of this engagement, please give the number of suppliers with whom you are engaging and the proportion of your total spend that they represent

Number of suppliers	% of total spend	Comment

CC14.4c

If you have data on your suppliers' GHG emissions and climate change strategies, please explain how you make use of that data

How you make use of the data	Please give details

Further Information

Module: Sign Off

Page: CC15. Sign Off

CC15.1

Please provide the following information for the person that has signed off (approved) your CDP climate change response

Name	Job title	Corresponding job category
Steven Broadaway	Environmental Engineer	Environment/Sustainability manager

Further Information

Module: Oil & Gas

Page: OG0. Reference information

OG0.1

Please give the gas types included in "All nonconventional gas"

Hydrocarbon group	Gas types in this group
All nonconventional gas	Coalbed methane Shale gas Tight gas

OG0.2

Please give the oil types included in "All conventional oil"

Hydrocarbon group	Oil types in this group
All conventional oil	Light & medium oils Natural gas liquids inc condensate

OG0.3

Please give the oil types included in "All nonconventional oil"

Hydrocarbon group	Oil types in this group
All nonconventional oil	Shale oil

Further Information

Page: OG1. Production & reserves by hydrocarbon type - (1 Jan 2013 - 31 Dec 2013)

OG1.1

Is your organization involved with oil & gas production or reserves?

Yes

OG1.2

Please provide values for annual production by hydrocarbon type (in units of BOE) for the reporting year in the following table. The values required are aggregate values for the reporting organization. The values required for 2014 are forward-looking estimates

Product	Production (BOE) - Reporting year	Production (BOE) - 2014 estimate
Light & medium oils	38130400	40000000
Conventional natural gas	39550800	41000000
All nonconventional gas	32037100	33000000

OG1.3

Please provide values for reserves by hydrocarbon type (in units of BOE) for the reporting year. Please indicate if the figures are for reserves that are proved, probable or both proved and probable. The values required are aggregate values for the reporting organization

Product	Country/region	Reserves (BOE)	Date of assessment	Proved/Probable/Proved+Probable
Other: Oil, condensate, NGLs	United States of America	332000000	Tue 31 Dec 2013	Proved
Other: Oil, condensate, NGLs	Equatorial Guinea	94000000	Tue 31 Dec 2013	Proved
Other: Oil, condensate, NGLs	Israel	3000000	Tue 31 Dec 2013	Proved
Other: Oil, condensate, NGLs		7000000	Tue 31 Dec 2013	Proved
Conventional natural gas	United States of America	443000000	Tue 31 Dec 2013	Proved
Conventional natural gas	Equatorial Guinea	115000000	Tue 31 Dec 2013	Proved
Conventional natural gas	Israel	413000000	Tue 31 Dec 2013	Proved
Conventional natural gas		330000	Tue 31 Dec 2013	Proved

OG1.4

Please explain which listing requirements or other methodologies you have used to provide reserves data in OG1.3. If your organization cannot provide data due to legal restrictions on reporting reserves figures in certain countries, please explain this

Noble Energy's policies regarding internal controls over the recording of reserves estimates require reserves to be in compliance with the Securities and Exchange Commission (SEC) definitions and guidance and prepared in accordance with Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information promulgated by the Society of Petroleum Engineers.

The SEC's reserves rules expanded the technologies that a company can use to establish reserves. The SEC now allows use of techniques that have been

proved effective by actual production from projects in the same reservoir or an analogous reservoir or by other evidence using reliable technology that establishes reasonable certainty. Reliable technology is a grouping of one or more technologies (including computational methods) that has been field tested and has been demonstrated to provide reasonably certain results with consistency and repeatability in the formation being evaluated or in an analogous formation. Noble Energy used a combination of production and pressure performance, wireline wellbore measurements, simulation studies, offset analogies, seismic data and interpretation, wireline formation tests, geophysical logs and core data to calculate reserves estimates, including the material additions to the 2013 reserves estimates. Internally, the Audit Committee of the Company's Board of Directors reviews significant reserves changes on an annual basis. Externally, each field representing more than 1 percent of total proved reserves, as well as a selection of smaller fields, which combined represent over 80 percent of Noble Energy's proved reserves, are audited by Netherland, Sewell & Associates, Inc. (NSAI), a third-party petroleum consulting firm, on an annual basis.

OG1.5

Please provide the average breakeven cost of current production used in estimation of proven reserves

Hydrocarbon/project	Breakeven cost/BOE	Comment

OG1.6

Do you conduct any scenario analysis based on a low-carbon scenario consistent with reducing GHG emissions by 80% by 2050 to achieve the 2°C goal in your assessment of the economic viability of proved undeveloped and undeveloped reserves?

No

OG1.6b

Please explain why you have not conducted any scenario analysis based on a low-carbon scenario

Further Information

Page: OG2. Emissions by segment in the O&G value chain - (1 Jan 2013 - 31 Dec 2013)

OG2.1

Please indicate the consolidation basis (financial control, operational control, equity share) 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

OG2.2

Please provide clarification for cases in which different consolidation bases have been used and 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

Noble Energy is only involved in the exploration, production and gas processing segment of the petroleum industry. This is due to economical, equipment and expertise reasons.

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 2014 are forward-looking estimates

Segment	Gross Scope 1 emissions (metric tonnes CO2e) - Reporting year	Gross Scope 1 emissions (metric tonnes CO2e) - 2014 estimate
Exploration, production & gas processing	2912516	3200000

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 2014 are forward-looking estimates

Segment	Gross Scope 2 emissions (metric tonnes CO2e) – Reporting year	Gross Scope 2 emissions (metric tonnes CO2e) – 2014 estimate
Exploration, production & gas processing	31653	33000

Further Information

Page: OG3. Scope 1 emissions by emissions category - (1 Jan 2013 - 31 Dec 2013)

OG3.1

Please confirm the consolidation basis (financial control, operational control, equity share) 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

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

There are no cases where different consolidation bases have been used.

OG3.3

Please provide masses of gross Scope 1 GHG emissions released into the 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 2014 are forward-looking estimates

Category	Gross Scope 1 emissions (metric tonnes CO2e) – Reporting year	Gross Scope 1 emissions (metric tonnes CO2e) – 2014 estimate
Combustion	994633	1100000
Flaring	1152088	1300000
Process emissions	0	0
Vented emissions	384371	420000
Fugitive emissions	321519	350000

Further Information

Page: OG4. Transfers & sequestration of CO2 emissions - (1 Jan 2013 - 31 Dec 2013)

OG4.1

Is your organization involved in the transfer or sequestration of CO2?

No

Further Information

Page: OG5. Sales and emissions intensity of production by hydrocarbon type - (1 Jan 2013 - 31 Dec 2013)

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 2014 are forward-looking estimates

Product	Sales (BOE) - Reporting year	Sales (BOE) - 2014 estimate
Other: Oil/condensate	34700000	38000000
Other: Natural gas	54800000	60000000
Other: NGL	5840000	6000000

OG5.2

Please provide estimated emissions (Scope 1 + Scope 2) intensities for the a) exploration, production and gas processing, b) storage, transportation and distribution, and c) refining associated with different hydrocarbon types 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)

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)
2013	Natural gas liquids inc condensate	25	0	0
2013	Light & medium oils	25	0	0

OG5.3

Is your organization involved in the extraction of bitumen from oil sands?

No

OG5.4

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

Total emissions for both hydrocarbon types associated with exploration and production are combined and then divided by total oil and gas production volumes.

Further Information

Page: OG6. Development strategy - (1 Jan 2013 - 31 Dec 2013)

OG6.1

For each relevant capital allocation area, please provide financial information for the reporting year

Capital allocation area	Sales generated	Earnings Before Interest, Taxation, Depreciation, Amortization (EBITDA)	Net assets	Capital expenditure	Comment

OG6.2

Please describe your future capital expenditure plans for different capital allocation areas

Capital allocation area	Capital Expenditure	Total return expected from capital expenditure investments	Comment

OG6.3

Please describe your current expenses in research and development (R&D) and future R&D expenditure plans for different capital allocation areas

Capital allocation area	R&D expenses – Reporting year	R&D expenses – Future plans	Comment

Further Information

Page: OG7. Methane from the natural gas value chain - approach & quantification

OG7.1

Please indicate the consolidation basis (financial control, operational control, equity share) used to prepare data to answer the questions in OG7 and OG8

Segment	Consolidation basis
Production	Operational Control
Processing	Operational Control

OG7.1a

Please provide clarification for cases in which different consolidation bases have been used

Noble Energy is only involved in the exploration, production, and gas processing segment of the petroleum industry. This is due to economical, equipment, and expertise reasons.

OG7.2

Does your organization have written operating procedures and/or policies covering the reduction of methane leakage and venting?

Yes

OG7.2a

Please attach the relevant document(s) in the further information field or describe how the written procedures/policies cover these emissions sources

Noble Energy has the IR camera program in their DJ Basin operations with over 8,000 wells. Once leaks are detected, they are repaired by personnel on site. If a repair is extensive, the appropriate vendor is contacted to address the leakage.

OG7.3

Has your organization set quantitative or qualitative goals for reducing methane leakage and venting?

Yes

OG7.3a

Please describe any quantitative or qualitative goals for reducing methane leakage and venting

All new EcoNodes will have Vapor Recovery Towers incorporated into their design, and all existing EcoNodes will have vapor recovery towers retrofitted to them.

OG7.4

Has your organization published a policy position on the regulation of methane emissions?

No

OG7.5

Does your organization inventory and quantify the methane emissions associated with your operations?

Yes

OG7.5a

Please indicate the proportion of methane emissions inventory estimated using the following methodologies (+/- 5%)

Methodology	Proportion of total methane emissions estimated with methodology	What area of your operations does this answer relate to?
Direct detection and measurement	>0% to <5%	All
Engineering calculations	>75%	All
Source-specific emission factors (IPCC Tier 3)	>75%	All
IPCC Tier 1 and/or Tier 2 emission factors	>0% to <5%	All

OG7.5b

Do your operations include the production, gathering and processing stages?

Yes

OG7.5c

Please use the following table to report the proportion of your organization's natural gas production that is emitted into the atmosphere during production (differentiating if possible between production from hydraulically-fractured wells and non-hydraulically-fractured wells), gathering and processing

Stage	Estimate gas leaked or vented expressed as % of gas produced

Further Information

Page: OG8. Methane from the natural gas value chain - control measures

OG8.1

Are reduced emission completions relevant to your operations?

Yes

OG8.1a

For natural gas wells that are hydraulically-fractured, please complete the table

What proportion of completions and work-overs in the reporting year used reduced emission completion technology for these wells?	If gas is not utilized via reduced emission completion technology, please explain if it is flared or vented	What area of your operations does this answer relate to?
0%	Flared	All

OG8.2

Is liquids unloading (de-watering) of natural gas wells relevant to your operations?

Yes

OG8.2a

For gas wells with liquids accumulation requiring venting into the atmosphere or some form of artificial liquids unloading, please complete the table

What proportion has technologies in place that reduce methane venting from the liquids unloading process?	If you wish, please add context to this figure	What area of your operations does this answer relate to?
1%	Noble Energy is currently experimenting with this process, so no substantive changes have been made yet with regards to reducing methane venting from the liquids unloading process.	Other: In Colorado, Noble Energy is currently experimenting with portable compression that could inject well venting gas back into the sales line.

OG8.3

Does your organization have a program for identifying and replacing or retrofitting high-bleed rate pneumatic controllers powered by natural gas (i.e. controllers that vent more than 6 standard cubic feet per hour)?

Yes

OG8.3a

Please complete the table on high-bleed rate pneumatic controllers

What proportion of the organization's high-bleed controllers have been replaced with low-emission alternatives?	If you wish, please add context to this figure	What area of your operations does this answer relate to?
98%	98% of controllers are low-emission alternative.	USA only

OG8.4

Are natural gas compressors relevant to your operations?

Yes

OG8.4a

Please complete the table on natural gas compressors

What proportion of compressors, including those at the wellhead and in gathering and processing, are either reciprocating compressors or centrifugal compressors operating wet seals?	What proportion of these compressors is vented to the atmosphere?	What area of your operations does this answer relate to?
100%	100	USA only

OG8.4b

Please explain measures you are taking to reduce emissions from these sources

Noble Energy is implementing EPA regulations on VOC leaks from onshore production sources (NSPS Subpart 0000). Implementation of this rule affects compressor gas leak rates, including GHG emissions.

OG8.5

Is associated gas relevant to your organization?

Yes

OG8.5a

What is your organization's overall approach for dealing with associated gas in terms of its relative use of venting, flaring and capture (e.g. for sale, re-injection or use as a fuel)? Organizations may differentiate their approach between circumstances where there is/is not a market

Natural gas is typically sold if there is infrastructure to transfer gas to a market. In some cases, associated natural gas will be flared while infrastructure is being installed, then it will be sold to market once the infrastructure is complete. In Equatorial Guinea, there is no infrastructure to sell natural gas, so it is used for fuel, flared or re-injected back into the ground.

OG8.5b

Outline the measures undertaken to reduce venting for example from tank and casing-head gas

Flaring is typically used when there is casing-head gas.

Further Information

CDP