

Module: Introduction**Page: Introduction**

CC0.1**Introduction**

Please give a general description and introduction to your organization.

Anadarko Petroleum Corporation is pleased to respond to the Investor CDP 2017 Information Request thereby continuing its tradition of reporting to and supporting the CDP since 2005. CDP has previously recognized Anadarko for its high-quality and comprehensive disclosures in the Carbon Disclosure Leadership Index (CDLI), and Anadarko strives for continued recognition for its transparency and performance.

Anadarko's mission is to deliver a competitive and sustainable rate of return to shareholders by developing, acquiring and exploring for oil and natural gas resources vital to the world's health and welfare. We are committed to enhancing and publicly sharing our environmental performance and efforts to mitigate environmental risks, including efforts to reduce emissions through innovative and cost-effective strategies and continuing to work with academia and environmental organizations to enhance scientific understanding of the life-cycle greenhouse gas (GHG) emissions of oil and natural gas production.

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

Fri 01 Jan 2016 - Sat 31 Dec 2016

CC0.3

Country list configuration

Please select the countries for which you will be supplying data. If you are responding to the Electric Utilities module, this selection will be carried forward to assist you in completing your response.

Select country

United States of America

Mozambique

United Kingdom

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, companies in the electric utility sector, companies in the automobile and auto component manufacturing sector, companies in the oil and gas sector, companies in the information and communications technology sector (ICT) and companies in the food, beverage and tobacco sector (FBT) should complete supplementary questions in addition to the core questionnaire.

If you are in these sector groupings, the corresponding sector modules will not appear among the options of question CC0.6 but will automatically appear in the ORS 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 in CC0.6.

Further Information

Module: Management

Page: CC1. Governance

CC1.1

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

Board or individual/sub-set of the Board or other committee appointed by the Board

CC1.1a

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

Anadarko's Greenhouse Gas and Air Quality Committee has direct oversight over matters pertaining to GHG management and climate change at Anadarko. This Committee, consisting of a cross-functional mix of managers, directors, internal legal counsel, and VPs, includes an Executive VP sponsor who is also a member of Anadarko's Executive Committee. The Greenhouse Gas and Air Quality Committee meets to actively assess, organize and implement actions pertaining to carbon risks and opportunities, and the decisions of this Committee are reported annually to the Board of Directors' Governance and Risk Committee. View information on Anadarko.com here: <http://www.anadarko.com/Responsibility/Good-Governance/CR-Leadership-Groups/>

CC1.2

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

Yes

CC1.2a

Please provide further details on the incentives provided for the management of climate change issues

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
Corporate executive team	Recognition (non-monetary)	Other: Behaviour change related indicator	
Business unit managers	Recognition (non-monetary)	Other: Compliance	
Environment/Sustainability managers	Recognition (non-monetary)	Efficiency project	
All employees	Monetary reward	Emissions reduction project Energy reduction project Efficiency project Other: Behaviour change related indicator	Safety and Environment Excellence Program

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
Six-monthly or more frequently	Board or individual/sub-set of the Board or committee appointed by the Board	Anadarko has an internal process for identifying and evaluating climate change-related actions at the state, regional, federal, and global levels.	1 to 3 years	Proactive engagement in various voluntary programs and initiatives is considered, particularly in light of carbon-related opportunities. Results regarding regulatory risks and opportunities associated with climate change are reported to the Board and the Enterprise Risk Management Committee. Depending on the magnitude of the risks or opportunities being assessed and acted upon, results may also be reported directly to Operations VPs.

CC2.1b

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

At the corporate level, Anadarko has an internal process for identifying and evaluating climate change related actions and risks at the state, regional, federal, and global levels. Anadarko's involvement in multiple climate change related workgroups affiliated with major industry groups including the American Petroleum Institute (API), the American Exploration and Production Council (AXPC), the GPA Midstream Association (GPA), among others, is a crucial first step in monitoring, tracking, and evaluating emerging issues and potential risks. Risks and opportunities are evaluated by focused internal teams via issues analysis, strategic internal engagement, and financial modeling to understand potential business impacts. Action plans are developed to either mitigate risks or capitalize on opportunities, which are prioritized depending on the level of risk and opportunity.

Depending on the issue evaluated and the action plan developed, Anadarko may take actions at the asset level. Some risk mitigation may involve shifts in how operations are performed; in these cases individual asset levels will assess how best to work with the action plan and evaluate associated risks on a case-by-case basis as some risks will affect some assets more or less than others. Asset-level-based assessments are conducted in coordination with both corporate and regional Health Safety and Environment (HSE) teams to ensure consistency and efficiency across Anadarko. In most cases, the corporate HSE team will develop procedures and tools that may be deployed to applicable assets by the regional HSE teams, as need to manage carbon risks and opportunities.

CC2.1c

How do you prioritize the risks and opportunities identified?

Regulatory and legislative compliance
Market opportunities
Operational ease of implementation
Operational advantages gain

CC2.1d

Please explain why you do not have a process in place for assessing and managing risks and opportunities from climate change, and whether you plan to introduce such a process in future

Main reason for not having a process	Do you plan to introduce a process?	Comment
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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. Anadarko's business philosophy includes operating efficiently, safely, and in an environmentally and socially sustainable manner. Inherent in this belief is the efficiency of natural gas production, increased capture of its product (methane), and the overall reduction of GHG emissions. Anadarko regularly participates in opportunities to improve measurement of and to reduce fugitive and vented methane (CH4) emissions from its oil and natural gas operations. Along with operational improvements, Anadarko continues to improve data collection for state and federal reporting through database improvements. A major component of Anadarko's business strategy is the production of low-carbon natural gas, which is communicated from top levels of executive management through all facets of our organization, including but not limited to management in HSE, operations, and marketing of natural gas.

ii. A major driver to incorporating climate change-related actions into the business is the production of natural gas as a market commodity and alternative to carbon-intensive coal. Inherent in this driver is increasing external awareness of the benefits of natural gas as having a significantly lower carbon footprint, particularly for unconventional resources and regulations of GHG emissions continue to drive operational shifts and best practices. Anadarko considers proactive carbon management as an integral part of its business and is committed to working collaboratively with the public, landowners, government and regulatory agencies to safely and responsibly develop energy resources. Anadarko plays an important role in providing clean-burning natural gas to support Colorado's "Clean Air Clean Jobs Act" and subsequent supporting regulations. Efforts to reduce diesel fuel in its drilling and completions activities occurred with the piloting of LNG, CNG, and electric-drive drilling rigs and dual-fuel fracturing crews. Additionally, the company has made significant investments in pipeline infrastructure throughout its primary operating areas to transport oil, natural gas, associated liquids and water, thereby eliminating thousands of trucks from the road and their associated emissions.

iii. Compliance with environmental regulations is integrated into Anadarko's business. GHG emission regulations impacting the oil and natural gas industry are prompting the company to develop short-term strategies to: i) promptly manage these risks, ii) mitigate impacts to operations, and iii) comply with all state and federal requirements. These short-term strategies include enhancements to how the company manages data and both operational and equipment modifications to reduce and better track GHG emission sources. In 2016, Anadarko continued to work with industry, NGOs and trades to support the development of methane detectors that can be economically deployed at upstream operations, aimed at improving air quality and enhancing public trust. In 2016, Anadarko has also commenced participation in an effort to better quantify GHG emissions in the gathering and boosting sector.

iv. Anadarko's involvement in these activities presents competitive advantages primarily in terms natural gas production brought to sales and adapting to new emission-reducing technologies. Thus, Anadarko is strategically and operationally positioned to comply with new laws and regulations are promulgated. These activities also create a stronger relationship with the regulatory agencies as they are developing and implementing programs. Such efforts also provide accurate, science-based, peer-reviewed, and publicly available numbers that can benefit Anadarko for communicating to buyers, competitors, and stakeholders the high standard with which it operates and its concerted efforts to reduce methane emissions. Anadarko's strategies related to data management will provide a level of detail and data sophistication that will enable the company to comply with regulations and to achieve value and benefit operationally in a variety of ways, which may not be matched by our competitors.

v. EPA continues to modify its GHG Reporting Program (GHGRP) requiring the oil and natural gas industry to calculate and report GHG emissions from specific sources. Anadarko's operations management at the highest level continues to support the enhancement of our comprehensive corporate program to evaluate the requirements and put together a consistent approach for compliance. This initiative reaches into many facets of Anadarko, including HSE, operations, supply chain management, and accounting. This rule has significant implications on how equipment is procured, established, and managed within our organization.

CC2.2b

Please explain why climate change is not integrated into your business strategy

CC2.2c

Does your company use an internal price on carbon?

No, and we currently don't anticipate doing so in the next 2 years

CC2.2d

Please provide details and examples of how your company uses an internal price on carbon

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
- Trade associations
- Funding research organizations
- 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
Mandatory carbon reporting	Support	Anadarko participates in direct discussion with EPA on its Greenhouse Gas Reporting Program for the Oil and Natural Gas Sector and Anadarko works with trade organizations who communicate directly with EPA.	Anadarko works with regulators to develop appropriate solutions at the Federal and state levels. For example, Anadarko supported air quality regulations in Colorado to detect and address methane leaks, thereby improving air quality and enhancing public trust. Additionally, Anadarko participates in discussions with regulators to ensure national GHG inventories' calculations are in alignment with the EPA's GHG reporting program.
Regulation of methane	Support with major	Anadarko has and is participated with academia and EDF to evaluate and assess the life-cycle methane emissions from	Anadarko supports methane studies that bring good science to inform public policy. The rules were approved in early 2014. This

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution
emissions	exceptions	natural gas operations. Anadarko worked with industry, regulators and the EDF to draft proposed air quality regulations in Colorado to detect, report and address methane leaks, thereby improving air quality and enhancing public trust.	is an example of how the company has collaborated to develop constructive and protective regulations that reduce emissions in an economically sound manner.

CC2.3b

Are you on the Board of any trade associations or provide funding beyond membership?

Yes

CC2.3c

Please enter the details of those trade associations that are likely to take a position on climate change legislation

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?
API	Consistent	Has various subcommittees and working groups engaged on federal and state matters.	Participating on the API GHG Working Group and Methane Task Force
AXPC	Consistent	Has a committee tracking and work on climate policy.	Participating on Climate Policy Task Group and Air Committee
TXOGA	Consistent	Tracks and participates in state level air regulatory and legislative issues.	Participating on Air Committee
Colorado Petroleum Association	Consistent	Tracks and participates in state level air regulatory and legislative issues.	Participating on Air Committee
IPIECA	Consistent	Monitors climate science and policy discussions, engaging with international governmental bodies and other stakeholders; provides best practice guidance on GHG emissions monitoring, reporting and management.	Participating on Climate Change Working Group

CC2.3d

Do you publicly disclose a list of all the research organizations that you fund?

No

CC2.3e

Please provide details of the other engagement activities that you undertake

Anadarko supports various trade associations' efforts to continue to enhance the GHG emission inventory.

Anadarko worked with industry, regulators and the EDF to draft proposed air quality regulations in Colorado to detect, report and address methane leaks, thereby improving air quality and enhancing public trust. The rules were approved in early 2014. This is an example of how the company has collaborated to develop sound regulations that reduce emissions in an economically sound manner.

Anadarko continues to engage with academia, EDF, and other operators to discuss ideas and strategies to measure, evaluate and reduce methane emissions (i.e., EDF/UT Production Methane Study and EDF/CSU Gathering and Processing Methane Study). Some of these efforts are described above and were finalized in a complete report in August 2015.

During this 2016 reporting year, Anadarko has commenced participation in an effort to better quantify GHG emissions in the gathering and boosting sector.

CC2.3f

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

Anadarko has a corporate air team that is dedicated to continually improving upon the company's air and GHG systems and processes. This team works closely with the HSE teams. Every day this overall air group works closely with operations to ensure Anadarko is meeting its objectives and goals around GHG and air emissions. This includes ensuring compliance with state and federal regulations, minimizing risk for the company, enhancing product (methane) capture, and minimizing releases. In addition to the corporate air team's efforts, operations works to find cost-effective solutions that reduce or eliminate air and GHG emissions as a part of their job. This group reports regularly to the company's Greenhouse Gas and Air Quality Committee on the status of the programs and efforts to reduce GHG and air emissions.

CC2.3g

Please explain why you do not engage with policy makers

Further Information

Page: CC3. Targets and Initiatives

CC3.1

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

No

CC3.1a

Please provide details of your absolute target

ID	Scope	% of emissions in scope	% reduction from base year	Base year	Base year emissions covered by target (metric tonnes CO2e)	Target year	Is this a science-based target?	Comment
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CC3.1b

Please provide details of your intensity target

ID	Scope	% of emissions in scope	% reduction from base year	Metric	Base year	Normalized base year emissions covered by target	Target year	Is this a science-based target?	Comment
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CC3.1c

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

ID	Direction of change anticipated in absolute Scope 1+2 emissions at target completion?	% change anticipated in absolute Scope 1+2 emissions	Direction of change anticipated in absolute Scope 3 emissions at target completion?	% change anticipated in absolute Scope 3 emissions	Comment
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CC3.1d

Please provide details of your renewable energy consumption and/or production target

ID	Energy types covered by target	Base year	Base year energy for energy type covered (MWh)	% renewable energy in base year	Target year	% renewable energy in target year	Comment
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CC3.1e

For all of your targets, please provide details on the progress made in the reporting year

ID	% complete (time)	% complete (emissions or renewable energy)	Comment

CC3.1f

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

(i) Anadarko is continuing to evaluate the development of an intensity target for the company that is appropriate and meaningful for an oil and natural gas operator.

(ii) Anadarko anticipates its U.S. emission intensity compared against production to continue to decrease over the next five years due to CO2e emission decline in current projects and new projects.

CC3.2

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

Yes

CC3.2a

Please provide details of your products and/or services that you classify as low carbon products or that enable a third party to avoid GHG emissions

Level of aggregation	Description of product/Group of products	Are you reporting low carbon product/s or avoided emissions?	Taxonomy, project or methodology used to classify product/s as low carbon or to calculate avoided emissions	% revenue from low carbon product/s in the reporting year	% R&D in low carbon product/s in the reporting year	Comment
Product	Natural gas is a lower carbon product that power plants can use to avoid GHG emissions.	Low carbon product	Other: API Compendium of GHG Emissions Estimation Methodologies for the Oil and Natural Gas Industry (2004) For a 1000 MW power plant, the annual CO2 emissions associated with burning coal, #4 fuel oil, and natural gas are as follows: Coal: 2,971,066 metric tons #4 Fuel Oil: 2,397,178 metric tons Natural gas: 1,763,510 metric tons Therefore switching to natural gas from coal results in an annual 41% decrease in emissions (1,207,556 metric tons CO2), and switching to natural gas from #4 fuel oil results in an annual 26% decrease in emissions (633,668 metric tons CO2).	24%	More than 10% but less than or equal to 20%	The production and sale of natural gas is about 43% of the company revenue. It is difficult to separate out the R&D investments, since the R&D is often benefitting both oil and natural gas production.

CC3.3

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

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		
To be implemented*	1	172000
Implementation commenced*		
Implemented*	1	265468
Not to be implemented		

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)	Scope	Voluntary/Mandatory	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	Comment
Product design	Design and installation of bulk separator facilities with air-driven pneumatics	264468	Scope 1 Scope 2 (location-based) Scope 3	Voluntary	16000000	100000000	4-10 years	6-10 years	New facility design eliminates or reduces emissions from atmospheric storage vessels, controlled storage vessels and associated flaring, pneumatic controllers, liquid unloading, and reduced diesel-truck usage. Estimated annual CO2e savings are totaled for Scope 1 emissions only. Scope 2 and Scope 3 totals have not been calculated.

CC3.3c

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

Method	Comment
Compliance with regulatory requirements/standards	Investment for compliance requirements is always a driver for emission reductions.
Dedicated budget for energy efficiency	In certain fields, Anadarko has a dedicated budget for low emission technologies.
Employee engagement	Anadarko's engineers are challenged to continue to design and implement technologies and strategies to reduce emissions.
Internal incentives/recognition programs	Anadarko has an HSE recognition program called SEEP, where employees present new technologies and strategies. There is a financial recognition for the winners of the SEEP awards
Compliance with regulatory requirements/standards	Engineering and HSE departments have developed process guidelines "Design for the Future" for determining appropriate facility designs based on existing, impending and prescient air quality regulatory actions.

CC3.3d

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

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	Status	Page/Section reference	Attach the document	Comment
No				

Further Information

Module: Risks and Opportunities

Page: CC5. Climate Change Risks

CC5.1

Have you identified any inherent 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 inherent risks that are 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
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Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
International agreements	Anadarko has international operations in developing non-Annex I countries party to the Kyoto Protocol and Paris Accord. These countries may choose at any time to implement internal or international agreements that present inherent risk to operations in these countries.	Inability to do business	1 to 3 years	Direct	More likely than not	Medium-high	May require capital equipment upgrades or replacement or potential loss of revenue from inability to operate.	Regulatory risk is managed by internal teams via Anadarko's internal risk management process. This process includes assessing the business implications of various regulatory risks and modeling financial implications using detailed cost estimates of various components of compliance. This risk is built into the development process for new assets in international communities as well.	The actual costs of compliance depend on the regulation or law in question and timing.
Air pollution limits	GHG emission limits can present risk to Anadarko's operations if they require Anadarko to purchase new equipment to further decrease emissions and/or implement new	Increased capital cost	3 to 6 years	Direct	About as likely as not	Medium	Federal policies may require capital equipment upgrades or replacement for new and existing sources. Existing source regulations will require emission	Regulatory risk is managed as described in the International Agreements risk. Emission reduction under the federal Clean Air Act permitting and federal regulatory	Costs associated with the final oil and natural gas NSPS regulation, proposed revisions to the NSPS, release of an existing

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	processes. Examples include the potential of existing source regulation, revisions to the EPA NSPS regulation for oil and natural gas facilities, and potential actions by the BLM and states can impact existing Anadarko facilities.						controls, facility retrofits for all US onshore operations. For example, Anadarko evaluates cost implications of installing low-bleed pneumatic devices, flaring and vapor recovery systems and the associated costs for labor and compliance data management systems.	programs and emerging state regulations, are also being managed and mitigated by Anadarko's regional HSE air teams with support from Legal and the Corporate air team.	source regulation, and state regulations are being assessed.
Carbon taxes	Depending if a carbon tax is imposed at the upstream production level, in regards to carbon content of the oil and natural gas Anadarko produces, it can present significant risk.	Increased operational cost	1 to 3 years	Direct	Unlikely	Medium-high	Anadarko would likely pay higher costs for its oil production than for its natural gas production, due to the larger carbon content of oil.	Managed by internal teams via Anadarko's internal risk management process. This process includes assessing the business implications of various regulatory risks and modeling financial implications using detailed cost estimates of various components paying	Actual costs of a carbon tax imposed on an oil and natural gas producer depend on the regulation or law in question. Costs associated with this risk are unknown at this time until further details are discerned in finalized policies

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								a carbon tax.	with a specific carbon price.
Cap and trade schemes	Cap and trade schemes continue to present potential risk to Anadarko's operations if they require Anadarko to purchase new equipment to further decrease emissions and/or implement new processes.	Increased operational cost	1 to 3 years	Direct	Unlikely	Medium-high	Costs may be associated with the purchase of allowances for compliance or investment in emission reduction projects in developing countries.	Regulatory risk is managed similar to the carbon tax risk.	Actual costs of compliance depend on the regulation or law in question as well as the timing of compliance. Costs associated with this risk are unknown at this time until further details are discerned in finalized policies that impact Anadarko.
Emission reporting obligations	Continued revisions to EPA's GHGRP presents a risk in managing and reporting GHG emissions. These requirements present a cost to operations for collecting data and developing required systems for compliance. Anadarko	Increased operational cost	3 to 6 years	Direct	About as likely as not	Medium	The EPA reporting rule and Colorado regulations require capital equipment for monitoring and data collection.	Regulatory risk is managed similar to the International Agreements Risk. The risk associated with the GHGRP and Colorado are further managed by a dedicated compliance implementation team working to analyze and streamline compliance	The costs of compliance are decreasing over time.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	continues to improve its equipment inventory and data system, at significant cost to operations. Anadarko is also working to meet state reporting obligations. Overlapping regulatory requirements continue to expose the company to regulatory risk.							activities across the country.	

CC5.1b

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

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Uncertainty of physical risks	Uncertainty regarding GHG emissions state and	Increased operational cost	Unknown	Direct	Likely	Unknown	Uncertainty in the physical risks associated	Regulatory risk is managed by internal teams via	Actual costs of hurricanes, cyclones or any

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>federal regulations and legislative activity presents risk in regards to the preparatory risk management and policy analysis required to prepare for such laws and rules. The regulatory process (and stringency and impact of these regulations to industry) provide for a challenging environment to mitigate new and pending potential risks. The U.S. Department of Interior is evaluating emission reductions. Uncertainty, increased complexity, overlapping and inconsistent regulations continue to pose a risk.</p>						<p>with climate patterns is potentially manifested in production delays and shut-ins due to weather-related events. This would cause a loss of production and revenue.</p>	<p>Anadarko's internal risk-management process. The risks associated with extreme weather events at onshore and offshore locations has long been a part of Anadarko's operating procedures and continues to be actively assessed and modeled. These procedures are executed when possible weather events become more likely from storm tracking information from NOAA and other sources. If weather events occur in operational areas, resources are immediately deployed to ensure the safety of all employees and contractors involved at the site and production may need to be halted.</p>	<p>natural event are event specific, dependent on the resources necessary for preparation, the impact to production, and any potential damage to infrastructure.</p>

CC5.1c

Please describe your inherent 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	Anadarko is currently experiencing increased interest in natural gas production best practices pertaining to emissions reductions. The public domain lack robust and plentiful data regarding methane vented during natural gas production, and many newly published studies and media reports cite outdated, uncertain, estimated, and unrepresentative data sources. This data influences the national GHG emissions inventory published by EPA annually as well as a plethora of academic studies that quote this data. When applied, this	Wider social disadvantages	1 to 3 years	Direct	Likely	Medium	Financial implications include increased regulatory pressure and burden due to poor data and subsequent reputational concerns. In addition, there may be increased costs associated with managing reputational risk through various stakeholder engagement and education initiatives.	Anadarko is managing reputational risk in coordinated efforts among investor relations, public and government affairs, stakeholder relations and HSE to provide improved science-based and peer-reviewed data to the public. Anadarko's Advocate and Ambassador program provides employees with the tools to communicate, engage and share knowledge with their fellow citizens on the safe and responsible development of oil and natural	Anadarko funds the Advocate and Ambassador program. The program is a values-based and fact-based guide empowering the company's employees to openly communicate with stakeholders about the oil and natural gas industry. Additionally, Anadarko and other industry partners are funding Coloradans for Responsible Energy Development (CRED), which is a long-term educational effort aimed at better informing Colorado's communities on

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>poorly compiled and non-peer reviewed data may unfavorably portray Anadarko, and the oil and natural gas industry as a whole to the public and stakeholders.</p>							<p>gas. Other efforts may include participation in studies partnering with NGOs, government, academic communities, and other industry groups to better inform the public. Anadarko partnered with other industry operators and EDF to fund a study conducted by Colorado State University to measure methane emissions from natural gas gathering and processing activities.</p>	<p>oil and natural gas development. Anadarko funded and participated in the EDF/UT Production Methane Study, which is a multi-stakeholder study, published by the University of Texas in the Proceedings or the National Academy of Sciences, reporting on methane emissions from natural gas production sites. Anadarko is also funding and participating in the EDF/CSU Gathering and Processing Methane Study. The final report was published in August 2015.</p>

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

CC5.1e

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

CC5.1f

Please explain why you do not consider your company to be exposed to inherent 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

Page: CC6. Climate Change Opportunities

CC6.1

Have you identified any inherent 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 other climate-related developments

CC6.1a

Please describe your inherent 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
Emission reporting obligations	In reporting GHG emissions data under EPA's GHGRP, the government has access to improved data surrounding oil and natural gas production. Anadarko hopes that this availability of improved data from industry will improve knowledge and public perception of GHG emissions from the oil and natural gas industry.	Wider social benefits	1 to 3 years	Direct	Very likely	Low-medium	The accessibility and usability of this site may decrease costs associated with public disclosure. Having this data publicly accessible will also contribute to reducing the social cost of investors and stakeholders concerned with carbon footprint.	Anadarko is currently reviewing the ways it discloses emissions data to the public in light of required reporting to EPA under the GHGRP and intends to subsequently streamline this process, ensuring consistent use of calculation methods.	The financial opportunity for required emission reporting is currently undefined as Anadarko continues to assess ways of optimizing the use of EPA-reported data

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Voluntary agreements	Voluntary agreements provide opportunities for Anadarko to report and publicly share actions associated with climate change. These actions are positive for Anadarko in that they enable the company to show factual and current operational data regarding GHG emissions. Participation in voluntary agreements also highlights Anadarko's commitment to transparency.	Wider social benefits	1 to 3 years	Direct	More likely than not	Low-medium	Financial implications associated with voluntary agreements may include increased shareholder investment as investors become comfortable with the positive and environmentally proactive actions taken by Anadarko.	Anadarko participated with academia and EDF to conduct methane emission evaluations. Anadarko participates in these voluntary agreements and studies as avenues for publicly sharing and reporting its GHG emissions as well as emission reductions.	There are minimal costs of involvement in voluntary agreements. Some nominal costs are associated with those programs requiring membership. Over the past several years, the EDF/UT Production Methane Study cost a total of \$357,500 for participation and \$200,000 for participation in the EDF/CSU Midstream Methane Study.
Other regulatory drivers	Federal regulation of coal-fired power plants has and may	Increased demand for existing products/services	Up to 1 year	Direct	Unknown	Medium-high	Financial implications are increased sale of product.	Anadarko is engaged in reviewing and preparing for the federal	There is minimal cost of tracking and evaluating federal

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	continue to result in conversions of coal-fired units to natural gas fired units. This will be a positive outcome for Anadarko as one of the nation's largest natural gas producers.							GHG emission regulations of electric generating units. The company's engagement in Clean Air Clean Jobs Act in Colorado is an example of its management of this opportunity.	regulation of electric generating units.

CC6.1b

Please describe your inherent 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

CC6.1c

Please describe your inherent 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	Current debate surrounds the GHG emission implications of natural gas production. Anadarko has an opportunity to engage this discussion with robust and verifiable data that can better inform this debate and also lend credibility to and bolster Anadarko's reputation as a transparent and responsible operator.	Wider social benefits	Up to 1 year	Direct	Very likely	Medium	Anadarko has engaged directly by providing measured and verified data to inform both regulatory bodies and the public about GHG emissions from natural gas production, rather than relying on estimates. This proactive approach to managing the discussion and transparency of operational practices represents an opportunity to bolster Anadarko's reputation, which may translate to improved social license to operate and subsequent reduced	Anadarko worked with industry, academia, EDF, and several other operators to fund the "EDF/UT Production Methane Study", a groundbreaking peer-reviewed study conducted by the University of Texas to measure methane emissions from natural gas production. Anadarko has expanded these efforts to fund the EDF/CSU Gathering and Processing Methane Study, which was also peer reviewed. Additionally, Anadarko is actively participating in efforts through API to provide improved data to EPA.	Anadarko has contributed funds directly to the University of Texas to support the "EDF/UT Production Methane Study" to quantify methane emissions from natural gas production. As previously noted, the "EDF/UT Production Methane Study" cost a total of \$357,500 for participation and \$200,000 for participation in the EDF/CSU Gathering and Processing Methane Study (to date). Additionally, Anadarko pays membership fees to industry organizations to participate in conversations with regulators

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
							operational costs by earning business faster and more efficiently.		about how to improve the data regarding GHG emissions from the oil and natural gas sector. Anadarko is also funding the EDF/CSU Gathering and Processing Methane Study and are considering other requests to support improved methane emission data enhancement efforts.
Other drivers	As a provider of low-carbon natural gas, Anadarko is positioned to provide a lower carbon footprint to consumers, thereby creating competitive advantage and increased	Increased demand for existing products/services	Unknown	Direct	Likely	Medium-high	Anadarko expects that demand for natural gas will increase in a carbon-constrained economy. Therefore, natural gas consumption will increase and provide additional	Anadarko is currently monitoring demand for natural gas and continues to invest in research and production of natural gas. Anadarko's business strategy focuses on positioning itself as a major	Currently, there are no specific costs associated with actions around increased research into and production of natural gas. Activities under way now are considered business as usual.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	revenues.						revenue to Anadarko.	supplier of natural gas well into the future.	

CC6.1d

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

CC6.1e

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

Anadarko has not identified any opportunities driven by physical climate parameters. There is a lack of data on how physical climate impacts may positively impact the oil and natural gas production and processing industry, resulting in little consideration of related opportunities at this time. Moderate seasonal weather patterns and events represent business as usual for Anadarko's operations and other operators in the sector and do not provide enhanced business opportunities. It should be noted that reliable power generated by oil and natural gas has enabled humans to better respond to severe weather events. This includes mobility, heat, cooling, portable power generation, heavy equipment and the powering of communications equipment to name a few.

CC6.1f

Please explain why you do not consider your company to be exposed to inherent 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

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)

Scope	Base year	Base year emissions (metric tonnes CO2e)
Scope 1	Sun 01 Jan 2012 - Mon 31 Dec 2012	5281071
Scope 2 (location-based)	Sun 01 Jan 2012 - Mon 31 Dec 2012	716248
Scope 2 (market-based)	Wed 22 Mar 2017 - Wed 22 Mar 2017	

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

US EPA Mandatory Greenhouse Gas Reporting Rule
Energy Information Administration 1605B
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

Scope 2 emissions were calculated using emission factors from the USEPA eGRID 9th edition Version 1.0 Year 2012 GHG Annual Output Emission Rates and electricity usage.

CC7.3

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

Gas	Reference
CO2	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	IPCC Fourth Assessment Report (AR4 - 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
Natural gas	53.06	Other: kg of CO2 per million BTU	US EPA,40 CFR 98 Subpart C equations

Further Information

Page: **CC8. Emissions Data - (1 Jan 2016 - 31 Dec 2016)**

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

10222613

CC8.3

Please describe your approach to reporting Scope 2 emissions

Scope 2, location-based	Scope 2, market-based	Comment
We are reporting a Scope 2, location-based figure	We have no operations where we are able to access electricity supplier emissions factors or residual emissions factors and are unable to report a Scope 2, market-based figure	Scope 2 emissions are based on utility records managed and provided by third party electric utility companies. This data is not verified.

CC8.3a

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

Scope 2, location-based	Scope 2, market-based (if applicable)	Comment
957627		Market-based emission are not applicable.

CC8.4

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

Yes

CC8.4a

Please provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure

Source	Relevance of Scope 1 emissions from this source	Relevance of location-based Scope 2 emissions from this source	Relevance of market-based Scope 2 emissions from this source (if applicable)	Explain why the source is excluded
Onshore facilities below GHGRP thresholds	Emissions are relevant but not yet calculated	Emissions are relevant but not yet calculated	Emissions are not relevant	Anadarko has elected to streamline its GHG calculation and reporting with EPA GHGRP requirements. Reporting in compliance with the EPA GHGRP is resource intensive and additional voluntary reporting is challenging.
International Exploratory Drilling and Completions	Emissions are relevant but not yet calculated	Emissions are relevant but not yet calculated	Emissions are not relevant	Anadarko has initiated efforts to collect data in order to calculate GHG emissions for international facilities, international exploratory operations, and small domestic facilities not applicable to report to EPA in the future.
International Offices in Brazil, Ivory Coast, Colombia, and New Zealand	Emissions are relevant but not yet calculated	Emissions are relevant but not yet calculated	Emissions are not relevant	Anadarko continues efforts to collect data in order to calculate GHG emissions for international facilities, international exploratory operations, and small domestic facilities not applicable to report to EPA in the future.

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	Uncertainty range	Main sources of uncertainty	Please expand on the uncertainty in your data
Scope 1	More than 5% but less than or equal to 10%	Data Gaps	Uncertainty decreased from 2015 to 2016. Anadarko reports GHG emissions consistently with EPA regulation and requirements. In 2015, several onshore facilities were not included in 2015 GHG reporting efforts because they fell below EPA's reporting threshold or were not included within the physical boundaries of reporting defined by EPA. For 2016 data, EPA expanded GHG reporting boundaries to

Scope	Uncertainty range	Main sources of uncertainty	Please expand on the uncertainty in your data
			include all facilities and pipelines in the gathering and boosting sector. Anadarko's 2016 reported emissions align with this expanded regulatory boundary. In 2016, while Anadarko's reported direct emissions increased due to the fact that Anadarko owns numerous, smaller midstream assets that were previously below EPA's reporting threshold, the uncertainty range decreased.
Scope 2 (location-based)	More than 20% but less than or equal to 30%	Data Management	Scope 2 emissions are based on utility records managed and provided by third party electric utility companies. This data is not verified.
Scope 2 (market-based)			Not applicable

CC8.6

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

No third party verification or assurance

CC8.6a

Please provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/section reference	Relevant standard	Proportion of reported Scope 1 emissions verified (%)
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CC8.6b

Please provide further details of the regulatory regime to which you are complying that specifies the use of Continuous Emission Monitoring Systems (CEMS)

Regulation	% of emissions covered by the system	Compliance period	Evidence of submission
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CC8.7

Please indicate the verification/assurance status that applies to at least one of your reported Scope 2 emissions figures

No third party verification or assurance

CC8.7a

Please provide further details of the verification/assurance undertaken for your location-based and/or market-based Scope 2 emissions, and attach the relevant statements

Location-based or market-based figure?	Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 2 emissions verified (%)
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CC8.8

Please identify if any data points have been verified as part of the third party verification work undertaken, other than the verification of emissions figures reported in CC8.6, CC8.7 and CC14.2

Additional data points verified	Comment
Year on year change in emissions (Scope 1)	While there is not a third party verification, each year EPA reviews the submitted data and contacts Anadarko to review any questions regarding the submittal, significant changes and/or missing information. Anadarko typically confirms the data or amends any incorrect calculations as needed. Anadarko submits the response back to EPA. It is important to note that the answers and/or the revised data is not automatically approved but rather goes through another verification process. EPA either indicates the dataset is complete and no further action is needed or sends it back to Anadarko until their request is satisfied. Anadarko considers this to be an assurance to data correctness when EPA reviews our data and ensures it matches with GHG regulation standards and calculation methodology.
Change in Scope 2 emissions against a base year (not target related)	While there is no third party verification or assurance, Anadarko does trend the data year to year to ensure there are no outliers. If an outlier is identified, Anadarko researches the outlier extensively for correctness in order to confirm Scope 2 emissions correctness.

CC8.9

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

No

CC8.9a

Please provide the emissions from biologically sequestered carbon relevant to your organization in metric tonnes CO2

Further Information

Page: CC9. Scope 1 Emissions Breakdown - (1 Jan 2016 - 31 Dec 2016)

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	10220347
Mozambique	2266

CC9.2

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

By activity

CC9.2a

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

Business division	Scope 1 emissions (metric tonnes CO2e)
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CC9.2b

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

Facility	Scope 1 emissions (metric tonnes CO2e)	Latitude	Longitude
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CC9.2c

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

GHG type	Scope 1 emissions (metric tonnes CO2e)
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CC9.2d

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

Activity	Scope 1 emissions (metric tonnes CO2e)
Subpart C - Combustion	1882104
Subpart W - Onshore and Offshore petroleum and natural gas production, Onshore natural gas processing plants and Onshore gathering and boosting	8340509

Further Information

Page: [CC10. Scope 2 Emissions Breakdown - \(1 Jan 2016 - 31 Dec 2016\)](#)

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, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
United States of America	957497		1579234	0
Mozambique	0.48		1803	0
United Kingdom	130		237	0

CC10.2

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

By activity

CC10.2a

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

Business division	Scope 2, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes CO2e)

CC10.2b

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

Facility	Scope 2, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes CO2e)
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CC10.2c

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

Activity	Scope 2, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes CO2e)
Electricity Generation	957627	

Further Information

Page: CC11. Energy

CC11.1

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

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

CC11.2

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

Energy type	MWh
Heat	
Steam	
Cooling	

CC11.3

Please state how much fuel in MWh your organization has consumed (for energy purposes) during the reporting year

19588209

CC11.3a

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

Fuels	MWh
Distillate fuel oil No 2	698402
Natural gas	17309253

CC11.4

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

Basis for applying a low carbon emission factor	MWh consumed associated with low carbon electricity, heat, steam or cooling	Emissions factor (in units of metric tonnes CO2e per MWh)	Comment
			No purchases or generation of low carbon electricity, heat, steam or cooling accounted with a low carbon emissions factor

CC11.5

Please report how much electricity you produce in MWh, and how much electricity you consume in MWh

Total electricity consumed (MWh)	Consumed electricity that is purchased (MWh)	Total electricity produced (MWh)	Total renewable electricity produced (MWh)	Consumed renewable electricity that is produced by company (MWh)	Comment
1580554	1580554				

Further Information

The breakout of fuel in MWh that our organization has consumed (for energy purposes) during the reporting year is: Fuel (for operating onsite equipment) = 18,007,655 MWh and Fuel (for electricity purchase and consumption) = 1,580,554 MWh

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	Please explain and include calculation
Emissions reduction activities			
Divestment			
Acquisitions			
Mergers			
Change in output			
Change in methodology			
Change in boundary	52	Increase	Anadarko's total updated scope 1 and scope 2 emissions are 7,373,515 tCO2e in 2015. In 2016, the total reported scope 1 and scope 2 emissions increased to 11,180,241 tCO2e. Anadarko reports GHG emissions consistently with EPA regulation and requirements. For 2016 data, EPA expanded GHG reporting boundaries to include all facilities and pipelines in the gathering and boosting sector. Anadarko's 2016 reported emissions align with this expanded regulatory boundary. In 2016 our reported direct emissions increased due to the fact that Anadarko owns numerous, smaller midstream assets that were previously below EPA's reporting threshold. Scope 2 emissions alone changed by 0.03% indicating a consistency in utility needs.
Change in physical operating conditions			
Unidentified			
Other			

CC12.1b

Is your emissions performance calculations in CC12.1 and CC12.1a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Location-based

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 (Gross global combined Scope 1 and 2 emissions)	Metric denominator: Unit total revenue	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
1.32	metric tonnes CO2e	8447	Location-based	70	Increase	EPA's expanded boundary for GHG reporting and Anadarko's decreased revenues contributed to an intensity increase. Note: Unit total revenue per \$1000 USD.

CC12.3

Please provide any additional intensity (normalized) metrics that are appropriate to your business operations

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator	Metric denominator: Unit total	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
2553	metric tonnes CO2e	full time equivalent (FTE) employee	4380	Location-based	101	Increase	EPA's expanded boundary for GHG reporting and Anadarko's 2016 employment reduction in the first quarter of 2016 resulted in an increased intensity value.

Further Information

Page: **CC13. Emissions Trading**

CC13.1

Do you participate in any emissions trading schemes?

Yes

CC13.1a

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

Scheme name	Period for which data is supplied	Allowances allocated	Allowances purchased	Verified emissions in metric tonnes CO2e	Details of ownership
European Union ETS	Fri 01 Jan 2016 - Sat 31 Dec 2016	70		0	Other: Allocations carried over from 2015's purchases. Operation of Anadarko's aviation fleet within the EU. Emissions were not verified for 2016

CC13.1b

What is your strategy for complying with the schemes in which you participate or anticipate participating?

Anadarko participates in the EU ETS for its aviation fleet. Anadarko's continued strategy is to comply with the EU ETS as required.

CC13.2

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

No

CC13.2a

Please provide details on the project-based carbon credits originated or purchased by your organization in the reporting period

Credit origination or credit purchase	Project type	Project identification	Verified to which standard	Number of credits (metric tonnes CO2e)	Number of credits (metric tonnes CO2e): Risk adjusted volume	Credits canceled	Purpose, e.g. compliance

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 data obtained from suppliers or value chain partners	Explanation
Purchased goods and services	Relevant, calculated	3000	The emissions were calculated using the US EPA Climate Leaders Greenhouse Gas Inventory Protocol.	100.00%	Anadarko uses many contractors for various activities related to its operations, particularly for drilling, completing, work over, and testing of wells. The fuel burned during these contracted activities are Scope 3 GHG emissions. Emissions estimated due to reduction in activities from 2015 to 2016.
Capital goods	Not relevant, explanation provided		The emissions could be calculated taking the total vehicle purchased in 2016 and applying a emission factor to the manufacture of those vehicles.	0.00%	The company did not gather vehicle purchases for 2016.
Fuel-and-energy-related activities (not included in Scope 1 or 2)	Relevant, not yet calculated				N/A
Upstream transportation and distribution	Relevant, not yet calculated				
Waste generated in operations	Relevant, not yet calculated				
Business travel	Relevant, calculated	6271	The emissions were calculated using the US EPA Climate Leaders Greenhouse Gas Inventory Protocol.	0.00%	Anadarko gathered travel information from our travel management company which includes both domestic and international flights. The emissions were calculated using the US EPA Climate Leaders Greenhouse Gas Inventory Protocol.
Employee commuting	Relevant, not yet calculated				
Upstream leased assets	Not relevant, explanation				Not applicable - all leased assets are reported under scope 1 or scope 2 emissions.

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
	provided				
Downstream transportation and distribution	Not relevant, explanation provided				Not applicable
Processing of sold products	Relevant, not yet calculated				The processing of produced crude oil and natural gas at refineries and natural gas processing facilities results in GHG emissions to the atmosphere.
Use of sold products	Relevant, calculated	6245802	The emissions were calculated using the US EPA Mandatory Greenhouse Gas Reporting Program for Subpart NN.	0.00%	The processing of produced crude oil and natural gas at refineries and natural gas processing facilities results in GHG emissions to the atmosphere.
End of life treatment of sold products	Not relevant, explanation provided				Not applicable
Downstream leased assets	Not relevant, explanation provided				Not applicable
Franchises	Not relevant, explanation provided				Not applicable
Investments	Not relevant, explanation provided				Not applicable
Other (upstream)					
Other (downstream)					

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

No third party verification or assurance

CC14.2a

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

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 3 emissions verified (%)

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	Unidentified	61	Decrease	Decreased business travel due to staff reduction and cost saving exercises
Use of sold products	Change in output	18	Decrease	Subpart NN emissions decreased due to a reduction in production from 2015 to 2016

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

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

Type of engagement	Number of suppliers	% of total spend (direct and indirect)	Impact of engagement
Compliance			Anadarko regularly works with suppliers to procure low-GHG emitting equipment and technology to reduce emissions and ensure compliance with all applicable regulations. This engagement takes place via industry

Type of engagement	Number of suppliers	% of total spend (direct and indirect)	Impact of engagement
			groups, workshops and trainings, and face-to-face interaction. Prioritization of engagement depends on the location for which equipment is being procured, regulations that may be applicable there, and cost. Success is measured by showing reductions in GHG emissions and maintaining compliance with all applicable regulations.

CC14.4c

Please explain why you do not engage with any elements of your value chain on GHG emissions and climate change strategies, and any plans you have to develop an engagement strategy in the future

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
Robert K. Reeves	Executive Vice President, Law and Chief Administrative Officer	Other C-Suite Officer

Further Information

Module: Oil & Gas

Page: OG0. Reference information

OG0.1

Please identify the significant petroleum industry components of your business within your reporting boundary (select all that apply)

Further Information

Page: OG1. Production, reserves and sales by hydrocarbon type - (1 Jan 2016 - 31 Dec 2016)

OG1.1

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

OG1.2

Please provide values for annual gross and net 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

Product	Gross production (BOE)	Net production (BOE)	Production consolidation boundary	Comment
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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
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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

OG1.5

Please provide values for annual sales of hydrocarbon types (in units of BOE) for the reporting year in the following table. The values required are aggregate values for the reporting organization

Product	Sales (BOE)	Comment
---------	-------------	---------

OG1.6

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

Hydrocarbon/project	Breakeven cost/BOE	Comment
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OG1.7

In your economic assessment of hydrocarbon reserves, resources or assets, do you conduct scenario analysis and/or portfolio stress testing consistent with a low-carbon energy transition?

OG1.7a

Please describe your scenario analysis and/or portfolio stress testing, the inputs used and the implications for your capital expenditure plans and investment decisions

OG1.7b

Please explain why you have not conducted any scenario analysis and/or portfolio stress testing consistent with a low-carbon energy transition

Further Information

Page: OG2. Emissions by segment in the O&G value chain - (1 Jan 2016 - 31 Dec 2016)

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

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

OG2.3

Please provide masses of gross Scope 1 carbon dioxide and methane emissions in units of metric tonnes CO₂ and CH₄, respectively, for the organization's owned/controlled operations broken down by value chain segment

Segment	Gross Scope 1 carbon dioxide emissions (metric tonnes CO ₂)	Gross Scope 1 methane emissions (metric tonnes CH ₄)
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OG2.4

Please provide masses of gross Scope 2 GHG emissions in units of metric tonnes CO₂e for the organization's owned/controlled operations broken down by value chain segment

Segment	Gross Scope 2 emissions (metric tonnes CO ₂ e)	Comment
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Further Information

Page: [OG3. Scope 1 emissions by emissions category - \(1 Jan 2016 - 31 Dec 2016\)](#)

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
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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 carbon dioxide and methane emissions released into the atmosphere in units of metric tonnes CO2 and CH4, respectively, for the whole organization broken down by emissions category

Emissions category	Gross Scope 1 carbon dioxide emissions (metric tonnes CO2)	Gross Scope 1 methane emissions (metric tonnes CH4)
Combustion		
Flaring		
Process emissions		
Vented emissions		
Fugitive emissions		

OG3.4

Please describe your organization's efforts to reduce flaring, including any flaring reduction targets set and/or its involvement in voluntary flaring reduction programs, if flaring is relevant to your operations

Further Information

Page: OG4. Transfers & sequestration of CO2 emissions - (1 Jan 2016 - 31 Dec 2016)

OG4.1

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

OG4.2

Please indicate the consolidation basis (financial control, operational control, equity share) used to report transfers and sequestration of CO2 emissions

Activity	Consolidation basis

OG4.3

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

OG4.4

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 OG4.6

Transfer direction	CO2 transferred – Reporting year

OG4.5

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

OG4.6

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

OG4.7

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 stored)

Capture pathway in CCS	Captured CO2 (metric tonnes CO2)	Percentage transferred in	Percentage transferred out
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OG4.8

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)
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OG4.9

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 characterization), operational monitoring, closure monitoring, remediation for CO2 leakage, and results of third party verification

Further Information

Page: OG5. Emissions intensity - (1 Jan 2016 - 31 Dec 2016)

OG5.1

Please provide estimated emissions intensities (Scope 1 + Scope 2) associated with current production and operations

Year ending	Segment	Hydrocarbon/product	Emissions intensity (metric tonnes CO2e per thousand BOE)	% change from previous year	Direction of change from previous year	Reason for change
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OG5.2

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

Further Information

Page: OG6. Development strategy - (1 Jan 2016 - 31 Dec 2016)

OG6.1

For each relevant strategic development area, please provide financial information for the reporting year

Strategic development area	Describe how this relates to your business strategy	Sales generated	EBITDA	Net assets	CAPEX	OPEX	Comment
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OG6.2

Please describe your future capital expenditure plans for different strategic development areas

Strategic development area	CAPEX	Total return expected from CAPEX investments	Comment
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OG6.3

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

Strategic development area	R&D expenses – Reporting year	R&D expenses – Future plans	Comment
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Further Information

Page: OG7. Methane from the natural gas value chain

OG7.1

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

Segment	Consolidation basis
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OG7.2

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

OG7.3

Does your organization conduct leak detection and repair (LDAR), or use other methods to find and fix fugitive methane emissions?

OG7.3a

Please describe the protocol through which methane leak detection and repair, or other leak detection methods, are conducted, including predominant frequency of inspections, estimates of assets covered, and methodologies employed

OG7.3b

Please explain why not and whether you plan on conducting leak detection and repair, or other methods to find and fix fugitive methane emissions

OG7.4

Please indicate the proportion of your organization's 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		
Engineering calculations		
Source-specific emission factors (IPCC Tier 3)		
IPCC Tier 1 and/or Tier 2 emission factors		

OG7.5

Please use the following table to report your methane emissions rate

Year ending	Segment	Estimate total methane emitted expressed as % of natural gas production or throughput at given segment	Estimate total methane emitted expressed as % of total hydrocarbon production or throughput at given segment

OG7.6

Does your organization participate in voluntary methane emissions reduction programs?

OG7.6a

Please describe your organization's participation in voluntary methane emissions reduction programs

OG7.7

Did you have a methane-specific emissions reduction target that was active (ongoing or reached completion) in the reporting year and/or were methane emissions incorporated into targets reported in CC3?

OG7.7a

If you have a methane-specific emissions reduction target that is not detailed as a separate target in CC3, please provide those details here, addressing all of the metrics requested in table CC3.1a or CC3.1b (for an absolute or intensity target, respectively)

OG7.7b

If methane emissions were incorporated into targets reported in CC3 (but not detailed as a separate target), please indicate which target ID(s) incorporate methane emissions, and specify the portion of those targets that is comprised of methane

OG7.7c

Please explain: (i) why you do not have a methane-specific emissions reduction target or do not incorporate methane into your targets reported in CC3; and (ii) forecast how your methane emissions will change over the next five years

Further Information

CDP 2017 Climate Change 2017 Information Request