



**CORE VALUES**

Our core values are the foundation of Chesapeake and essential to our success. They are the lens through which we evaluate every decision we make. We demonstrate commitment to our core values in words and actions, building a stronger, more prosperous Chesapeake for all of our stakeholders.



**Integrity and Trust**

- Be truthful and ethical
- Acknowledge errors and be accountable for results
- Do what we say we will do



**Respect**

- Protect our employees, stakeholders and the environment
- Appreciate different behavioral styles and seek out different opinions
- Promote inclusion and the diversity of thoughts and ideas



**Transparency and Open Communication**

- Be clear in our business strategies
- Work with a One Chesapeake mindset and share best practices



**Commercial Focus**

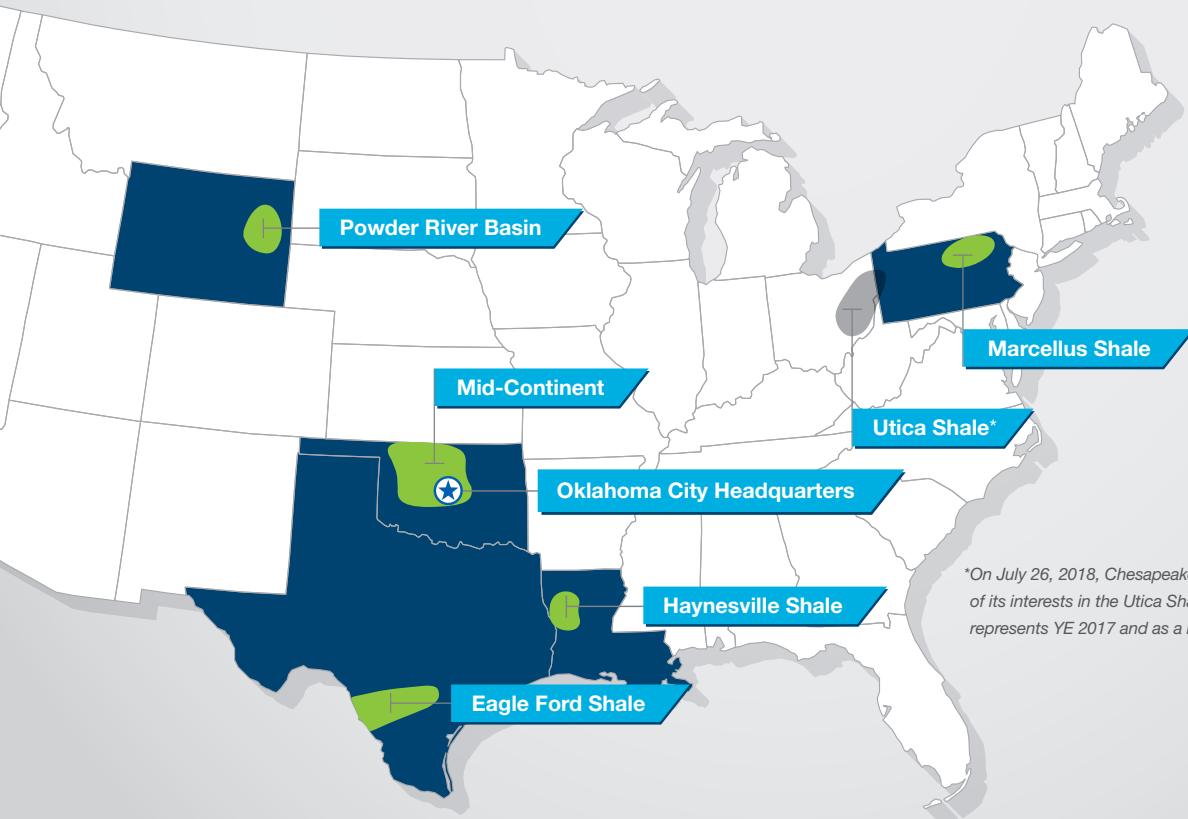
- Be investment advisors
- Be stewards of corporate resources and the environment
- Take prudent risks, employing innovative ideas and technology



**Change Leadership**

- Elevate innovative solutions
- Pursue continuous development and improvement
- Seek to deliver more than what is expected
- Reward risk taking and learn from failures

**OPERATIONS MAP**



*\*On July 26, 2018, Chesapeake announced an agreement to sell all of its interests in the Utica Shale. The data included in this report represents YE 2017 and as a result, includes our Utica Shale asset.*

# The Future of Energy

The global energy system is experiencing transformational change, driven by both a need for accessible, affordable energy and an increasing concern about climate change. The future of energy will include a growing percentage of renewable fuel sources, particularly as global energy demands increase. However, the oil and natural gas industry will continue to be the most significant provider of energy; a fuel source best equipped to meet global demand and improve quality of life around the world.

*“Meeting the aims of the Paris Agreement implies a transformation of the energy system over the course of this century. Throughout this transition, oil and gas will continue to be an important part of the broad energy mix needed to deliver affordable, reliable and modern energy products and services.”<sup>(a)</sup>*

— IPIECA

As noted by the International Energy Agency (IEA), the U.S. oil and gas industry is expected to produce at a level 50% higher than any other country. With this increase in supply, the country will continue to be a net exporter of natural gas and likely a net exporter of oil, into the late 2020s.

The IEA also anticipates the U.S. will become the world’s largest liquefied natural gas (LNG) exporter, and natural gas will become the second-largest global fuel source after oil. Developing countries will drive the majority of natural gas demand, as gas performs better than other fossil fuels in reducing pollutant emissions.

Greenhouse gas emissions concerns, and the framework outlined by the Paris Agreement, will continue to encourage global energy change. The Paris Agreement, an initiative of the United Nations, challenges countries to keep a global temperature rise below 2 degrees Celsius of pre-industrial levels within this century. Industry support for the Paris Agreement acknowledges the need to address climate change risks, while also working to provide affordable, reliable energy to all.

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*Within this report, Chesapeake provides analysis of the company’s projected performance in a lower-carbon future and highlights the company’s actions to manage and reduce emissions that could impact climate change.*





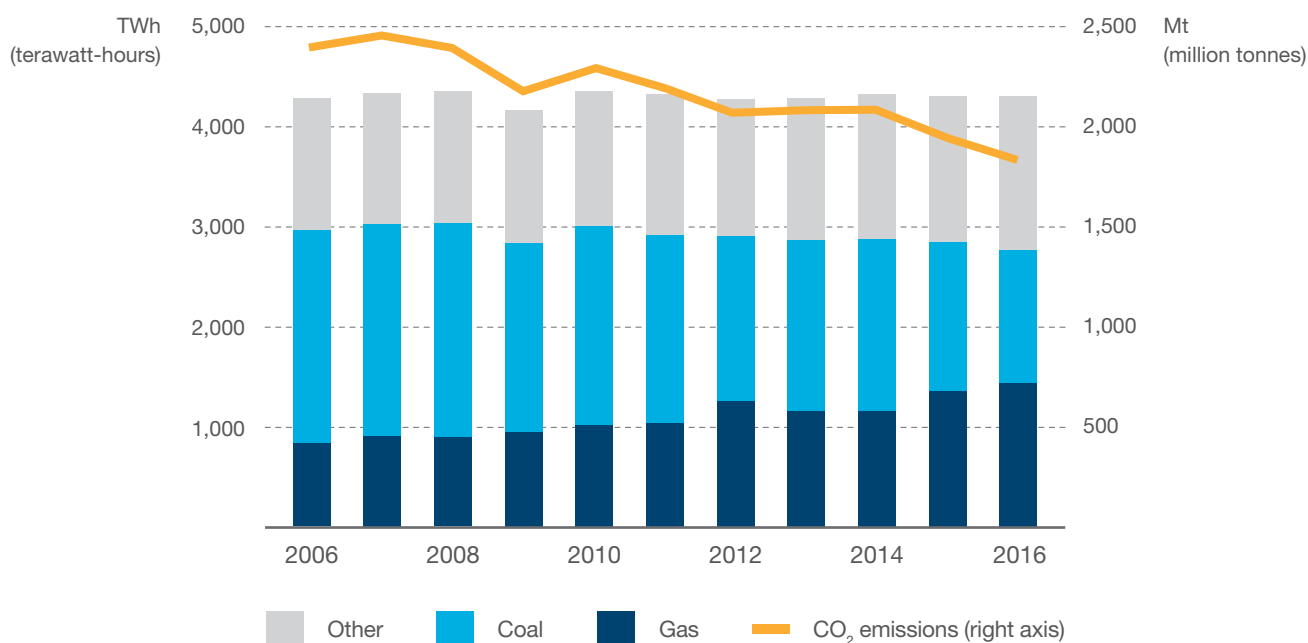
## THE ROLE OF NATURAL GAS IN REDUCING EMISSIONS

As a domestic exploration and production company with a production mix weighted toward natural gas, we are proud to play a role in helping to reduce global greenhouse gas emissions. According to the IEA's [World Energy Outlook 2017](#), natural gas is credited for helping to reduce global energy-related emissions since 2014, even as the world economy has grown.

Specific to the U.S., during the period between 2005 and 2017, emissions declined by approximately 30%. This emissions reduction is due in large part to our country's switch from coal to natural gas in electricity generation. In fact, estimated 2017 carbon dioxide emission levels already reached the 2025 emissions reduction target as outlined in the former Clean Power Plan, the U.S. Environmental Protection Agency's (EPA) regulatory response to the Paris Agreement as finalized under the Obama Administration.<sup>(b)</sup>

Natural gas' readiness to meet global energy needs and its record as the cleanest-burning fossil fuel make it a key part of the solution for projected energy growth in a lower-carbon future. Natural gas releases approximately 45% less carbon dioxide than coal and approximately 25% less than diesel, heating oil and gasoline when burned.<sup>(c)</sup>

**U.S. ELECTRICITY GENERATION BY FUEL AND RELATED CO<sub>2</sub> EMISSIONS<sup>(d)</sup>**



# Governance and Risk Management

Elected by our shareholders, Chesapeake's Board of Directors oversees the long-term health and viability of our business, including the company's strategy, vision and risk profile.

At least quarterly our Board receives a report on our organization's top risks as determined by our enterprise risk management (ERM) process. This reporting allows the Board to analyze the company's material risks and direct business strategies accordingly.



We integrate risk management throughout our business, utilizing the three lines of defense model as a framework. The first line of defense begins at the department and business unit level to identify and control risk at the front lines of the organization.

## THREE LINES OF DEFENSE MODEL



The second line of defense — our Risk and Compliance Department — provides impartial enterprise risk and compliance analyses and reports directly to the Board's Audit Committee. This team also manages our ERM process.

Through ERM, internal risk committees comprised of senior management and subject matter experts across the company review and assess the company's risks. Once all related risks are reported and analyzed, high-priority risks are evaluated at the executive level and quarterly ERM updates are provided to the Board's Audit Committee.

The third line of defense is our Internal Audit Department, an independent and objective assurance group that also reports directly to the Audit Committee. The department uses a standardized, objective process to identify risk-based audits of department and business unit controls and processes.

### Risk Measurement Characteristics

When identifying enterprise-wide risks, we measure risk severity based on a set of characteristics:

- » **Impact:** The expected effects of a risk on an organization
- » **Likelihood:** The potential for a risk to occur in various scenarios
- » **Velocity:** The speed at which a risk could impact an organization
- » **Response Maturity:** An evaluation of the controls and response plans already in place to mitigate a risk

Should a risk require mitigation, management oversees the development and execution of specific plans to reduce the risk to an acceptable level. Mitigation options include, but are not limited to, adopting or enhancing corporate policies and procedures, contingency plans, insurance policies, technologies or hedging strategies.



# Climate Risk Identification and Mitigation

Risk identification is the responsibility of all Chesapeake team members, and a number of groups take specific ownership for recognizing and managing risks related to climate change. Although our current evaluations show climate concerns as lower risk, we acknowledge the impact they could have on our business by proactively implementing risk mitigation plans.

## Climate-Related Risks

1. Increased legislation and regulation affecting operational costs
2. Physical risks from extreme weather
3. Market resiliency due to demand shifts in a lower-carbon future

### 1 Regulatory Risk and Operational Impact

Legislative and regulatory proposals to restrict greenhouse gas emissions could increase our operating costs relative to obtaining permits, operating our equipment and facilities, installing specialized controls, paying taxes specific to emissions and managing an emissions program. At the federal level, the EPA has issued regulations that require us to establish and report a prescribed inventory of greenhouse gas emissions. These regulations, including the potential restriction on methane or carbon dioxide emissions, could continue and expand due in part to the goals set forth in the Paris Agreement. States may also pursue the issue directly or indirectly, including enacting new localized regulations governing or restricting greenhouse gas emissions.

## Risk Mitigation

As we continue to study and plan for both our current and potential policy environments, we take a comprehensive approach to reducing risk.

## MANAGING REGULATORY RISK



### Policy

Collaborate with government organization and other stakeholders for science-based regulation



### Research

Support of scientific research to enhance our understanding of air pollution, greenhouse gas emissions and climate change



### Innovation

Identify and adopt technologies that reduce our environmental footprint

Through our policy engagement, we collaborate with stakeholders to develop policy that meets environmental goals. We define sound policy as regulations that are based on scientific research and also effective and applicable across industries. Regulations should also recognize the expected growth and need for modern energy, as well as the continued technical advancements of the oil and natural gas industry.



In conjunction with policy engagement and in compliance with current regulations, we voluntarily implement proactive measures, where feasible, to reduce emissions.

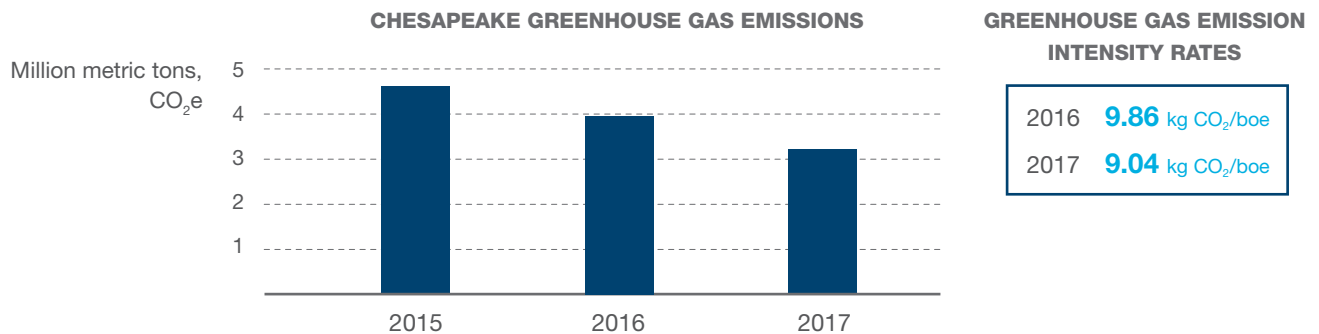
### EMISSIONS REDUCTION AND MANAGEMENT PRACTICES

- » Automatic tank gauging
- » Increased pipeline infrastructure
- » Leak detection and repair
- » Preventive maintenance practices
- » Solar and wind-powered equipment
- » Facility electrification via Electric Distribution Systems
- » Zero, low or intermittent-bleed pneumatic controllers
- » Remote facility monitoring and shut down
- » Vapor recovery
- » Use of diesel-alternative fuels
- » Green completions



### METRICS

We study and report a number of air-related metrics on a consistent basis. For transparency with our stakeholders, we publish several of these numbers annually within our Corporate Responsibility Report and recently expanded our metrics to include more intensity rates and year-over-year comparison data. These numbers include Scope 1 emissions and are calculated under the EPA's Greenhouse Gas Reporting Program.

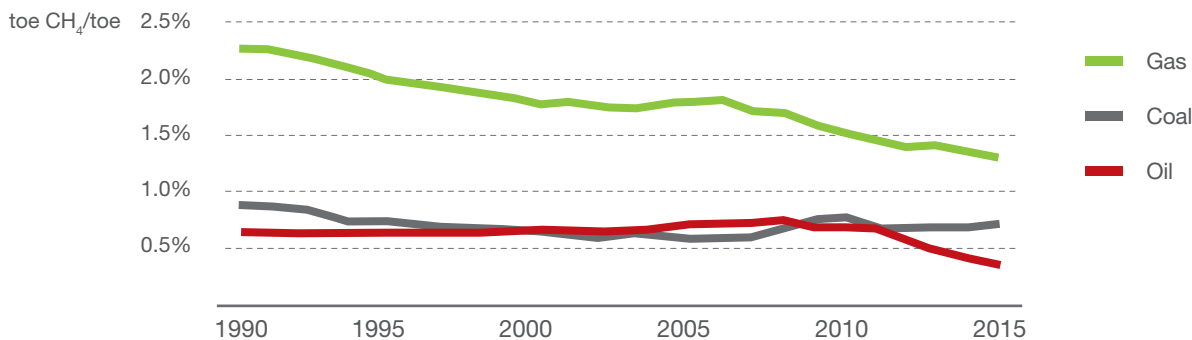


# Climate Risk Identification and Mitigation

## METHANE EMISSIONS MANAGEMENT

The long-term resiliency of natural gas is dependent on minimizing the industry’s environmental footprint, including reducing and managing our methane emissions. As methane is the primary constituent of natural gas, the industry is incentivized to recover and sell the gas to meet consumer demand, thereby decreasing methane emissions. Industry leadership and investment in new recovery technologies are reducing methane emissions.

**METHANE EMISSION INTENSITY OF OIL, GAS AND COAL IN THE U.S.<sup>(d)</sup>**



Chesapeake utilizes two primary methods — infrared cameras and regular on-site inspections — for methane leak detection and monitoring. Forward-looking infrared (FLIR) cameras help field technicians to identify emissions that may not be detected by unaided senses, as well as help pinpoint the leak source and direct specific maintenance activities.

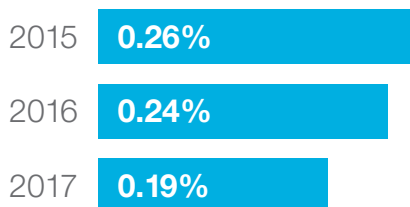


Employees operate a FLIR camera in Kingfisher, Oklahoma during a site inspection.

Our FLIR inspectors are certified, having completed the Optical Gas Imaging Certification Training through the Infrared Training Center. Also, many have lease operator experience or suitable training, giving them both the knowledge and authority to repair certain leaks immediately. In addition to FLIR cameras, our lease operators perform audio, visual and olfactory (AVO) observations as part of their routine on-site activities.

The importance of targeted leak detection leads Chesapeake to voluntarily survey a number of our sites, going beyond regulatory requirements. All sites are considered for surveying, and we utilize a risk-based approach to determine which sites should be voluntarily inspected at prescribed times. These efforts help us to maintain and reduce our methane loss rate each year.

### CHESAPEAKE METHANE LOSS RATE





## 2 Extreme Weather Conditions

Many scientists have concluded that increasing concentrations of greenhouse gases in the Earth's atmosphere may produce climate changes that have significant physical effects, such as higher sea levels, increased frequency and severity of storms, droughts, floods and other climatic events. If any of these effects do occur in our operating areas, we could experience an incident at our sites, including safety or environmental concerns, downtime or damaged equipment. Our operational resources could also become limited, such as through a drought.

### Risk Mitigation

Managing physical risk, such as extreme weather-related events, requires a number of risk mitigation practices to protect our assets and properly contain our products. Through the adoption of advanced technology, stringent processes and emergency preparedness, we prioritize the safety of our employees, neighbors and the environment.

During any type of emergency, preventing the loss or spill of hydrocarbons is of significant importance. Through our spill prevention initiatives employees analyze spill data, identify spill causes and collaborate to implement operational design improvements to prevent spills. Our analysis has shown weather to be a primary spill cause, which has led to the installation of several site design elements to protect our operational equipment in the event of a weather-related event.

#### MEASURES TO PROTECT OPERATIONAL SITES DURING EXTREME WEATHER

- ▶ Catenary protection system reduces the risks associated with lightning strikes
- ▶ Flood plain analysis led to the installation of cables anchoring tanks to concrete bases
- ▶ Elevated berm serves as secondary containment to protect soil
- ▶ Solar panel powers remote monitoring and shutdown capabilities
- ▶ Sign provides site identification which corresponds to an emergency action plan specific to the location



Chesapeake production site in the Mid-Continent operating area.

# Climate Risk Identification and Mitigation

## PREPARATION PROTECTS FLOODED OPERATIONS

Prolonged rain, coupled with an already waterlogged river basin, caused historical flooding in the heart of the Haynesville Shale in 2016. Flooding reached such heights that some Chesapeake sites were only accessible by boat.

Chesapeake's Haynesville operational team responded with an integrated approach to keep sites safe and limit downtime. Field leadership and lease operators monitored equipment, quickly removing anything on-site and not attached to the ground. To offset the force of the floodwater, the team weighed down tanks using a certain level of each tank's existing liquid.

Smart facility design also aided in site safety. In areas already prone to flooding, Chesapeake had bolted tanks to concrete bases and installed slightly taller pads to elevate equipment above ground level. Remote monitoring helped to secure the affected sites, and each site's automatic shut-in function offered backup assurance that tank levels stayed safe. At certain sites, wells were proactively shut-in for a limited period of time.

While the Operations team managed flood response on-site, our Environment, Health, Safety and Regulatory (EHSR) representatives engaged with FEMA and local first responders on the status of our operations.

Due in part to strong field leadership and thoughtful preparedness, Chesapeake experienced no reportable spills, no injuries and no regulatory violations. Production downtime was kept to a minimum, as were equipment repair costs.



## EMERGENCY PREPAREDNESS

Should extreme weather cause an emergency at one of our sites, our Emergency Response Plan (ERP) provides employees with the framework and action steps critical for responding to incidents in a safe, effective and efficient manner.

As part of our robust ERP, employees are trained using the National Incident Management System (NIMS), a nationwide incident response template. This training enables Chesapeake to work cooperatively with local, state and federal agencies and emergency responders, and allows for the integration of facilities, equipment, personnel and communications. We also develop and ready specialized teams of local employees — Local Emergency Response Teams — to safely and efficiently assume command and control of an incident.

While it is our goal to continue operations during an emergency, sometimes we must temporarily shut down a site or facility. Should an emergency require a prolonged closure, we utilize our business continuity and disaster recovery process to maintain critical operations. Our recovery team assesses the business impacts of certain risks, including extreme weather, and develops enterprise response and recovery plans to reduce potential associated impacts. These plans can include arranging alternate workspace, providing a secondary power source or engaging with employees outside of our standard communication channels.

### Chesapeake prepares for possible incidents by:

- 1** Utilizing risk identification tools to help determine sensitive sites/areas
- 2** Having an ERP and predetermined emergency response practices in place
- 3** Developing tactical response plans specific to the operating area
- 4** Conducting on-location drills based on possible scenarios
- 5** Performing in-depth exercises, including setting up incident command with Operations team members and corporate leadership

### 3 Resiliency in a Lower-demand Market

The demand for oil and natural gas could be negatively impacted by regulatory or market incentives to conserve energy or use alternative energy sources in combating climate change.

#### Risk Mitigation

When evaluating our operational strategy and organizational resiliency against a lower-carbon future, we conducted a scenario analysis studying both product demand and pricing effects. In reviewing these potential risks, we confirmed the mitigation practices we have in place are sufficient to moderate a drop in demand and any resulting effects.

In our evaluation we utilized the World Energy Outlook 2017 scenario analysis due to its scope, prominence and science-based approach. Recommended by the Task Force on Climate-related Financial Disclosures (TCFD), this outlook is also inclusive of climate change policies relative to the goals of the Paris Agreement.

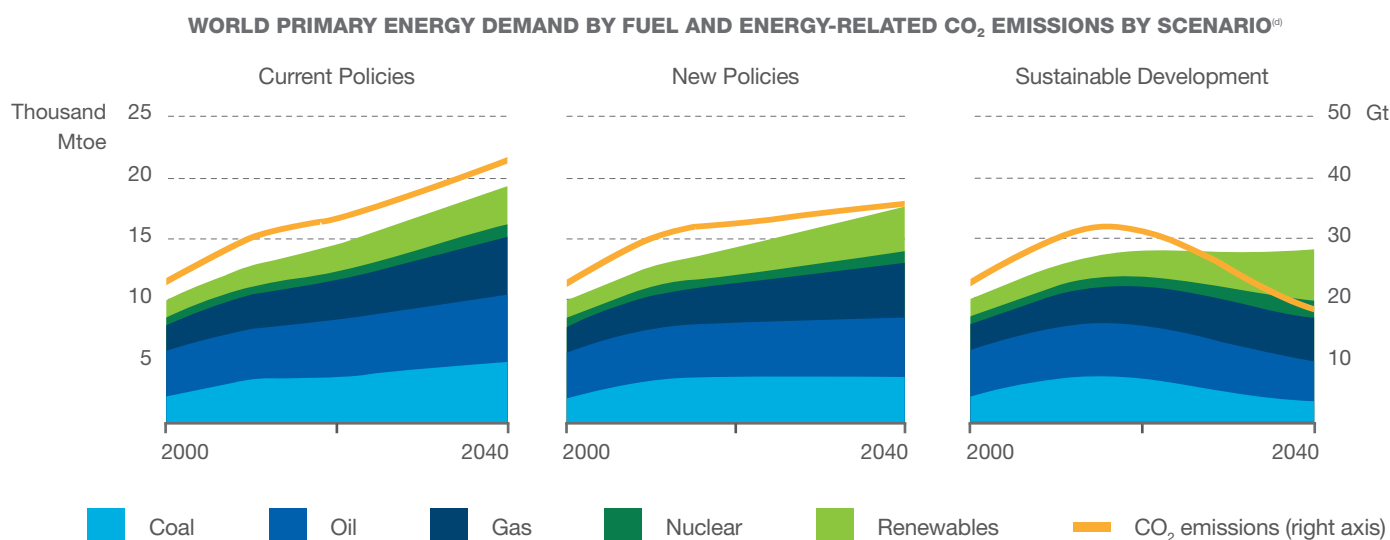
The World Energy Outlook 2017 presents three scenarios within its modeling:

- » **Current Policies:** Describes a future outlook assuming today's current regulatory environment continues
- » **New Policies:** Suggests the impact of future regulations based on the adaptation of existing policies as decision makers work to improve global energy efficiency
- » **Sustainable Development:** Best anticipates the most stringent regulatory environment; is the only situation that achieves the energy-related aspects of the UN Sustainable Development Goals, including Paris Agreement objectives

Within these scenarios are predicted fluctuations of product price and energy demand through 2040. Emissions impact is also analyzed, including measuring each scenario's ability to meet Paris Agreement objectives.

Under the IEA's modeling, oil and natural gas will remain a significant energy source. Prices will increase at varying levels through 2040, as will emissions as defined by the Current and New Policies Scenarios. Only under the Sustainable Development Scenario do emissions decrease to a point of keeping the global temperature rise below 2 degrees Celsius.

Although these scenarios provide studied constructs of the future, they are not "forecasts, or predictions, nor are they sensitivity analyses" as noted by TCFD.<sup>(e)</sup> They represent a potential future, identifying possible trends or factors that could influence business models should a scenario's key assumptions occur.



# Climate Risk Identification and Mitigation

## OIL DEMAND AND PRICING

As our global energy landscape changes and more alternative energy sources are introduced, there is much speculation about the long-term prospect of oil demand. In today's environment, lower oil prices have driven robust demand growth that will continue under the Current Policies Scenario. This outlook suggests oil demand will grow on average by 1 mb/d every year to 2040, similar to historic levels of growth.

The IEA anticipates under the New Policies Scenario a continued increase in oil demand, although at half the levels of the Current Policies Scenario. Short-term, within the next five years, differences between the two scenarios are not as pronounced but do widen over time primarily due to fuel-economy standards in major developing countries. To 2040, the annual oil demand increase is just under .05 mb/d.

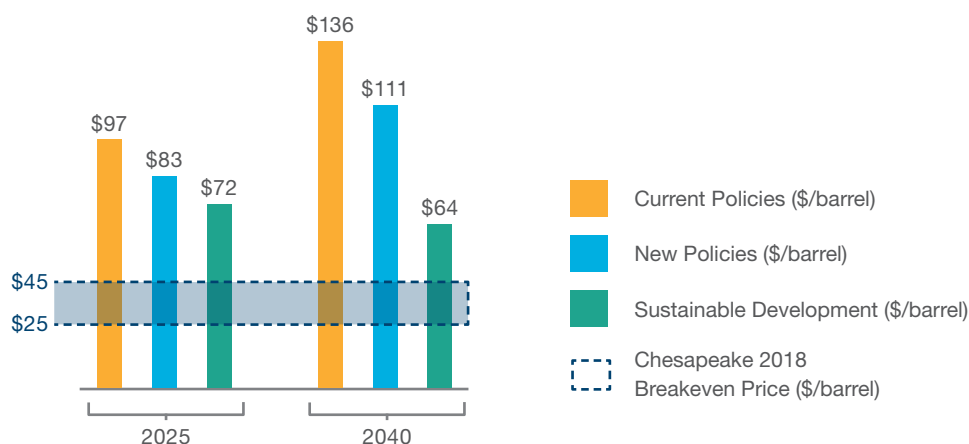
Oil demand does fall under the Sustainable Development Scenario beginning in 2020 primarily due to transportation sector changes with the predicted adoption of electric cars.

**OIL AND TOTAL LIQUIDS DEMAND AND SUPPLY BY SCENARIO (MB/D)<sup>(6)</sup>**

	2000	2016	CURRENT POLICIES		NEW POLICIES		SUSTAINABLE DEVELOPMENT	
			2025	2040	2025	2040	2025	2040
World oil demand	76.7	93.9	104.1	118.8	100.3	104.9	92.4	72.9
World liquids demand	76.9	95.5	106.3	122.1	102.8	109.1	96.5	80.3
World oil production	75.2	92.4	101.4	115.4	97.8	101.9	90.1	70.8
World oil supply	77.0	94.6	104.1	118.8	100.3	104.9	92.4	72.9

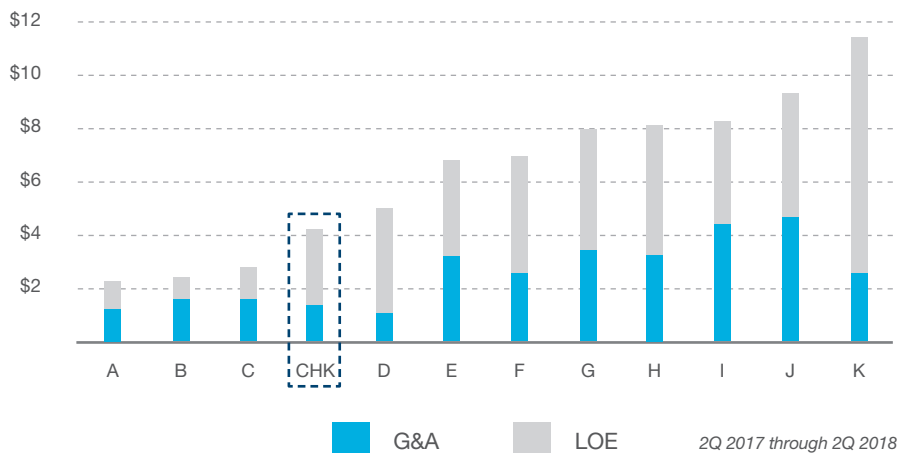
Even with an oil demand peak around 2020 according to the most stringent Sustainable Development Scenario, the scenarios suggest that companies developing high-value projects at streamlined costs will continue to remain competitive. Based on the pricing data provided, we believe Chesapeake will continue to offer efficient investment returns through the scenarios' end date of 2040.

**OIL IMPORT PRICE BY SCENARIO<sup>(6)</sup>**  
as compared to Chesapeake breakeven pricing



Chesapeake's emphasis on cost leadership and technological efficiencies positions the company for success even in a lower-carbon future. We have a proven history of increasing efficiencies while reducing costs, and operating with flexibility to respond to new innovations and changes in the energy landscape.

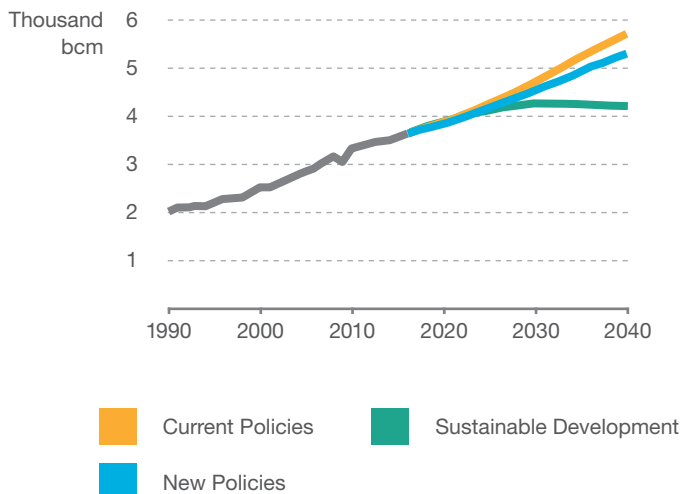
### COST LEADERSHIP COMPARISON (CHK VS. PEERS)



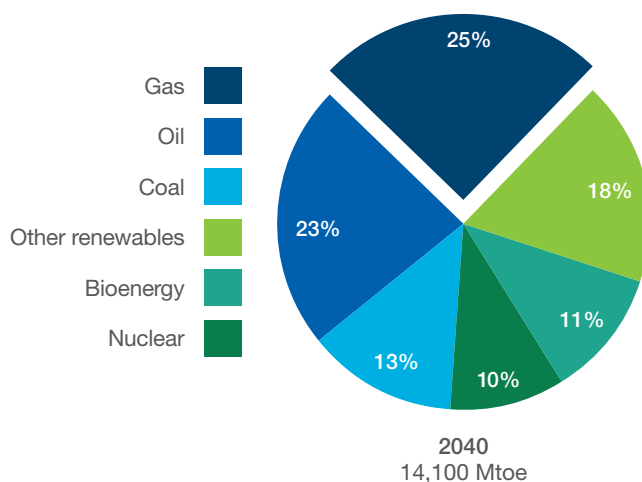
### NATURAL GAS DEMAND AND PRICING

All three scenarios, representing various assumptions, show natural gas demand increasing. In fact, in the Sustainable Development Scenario, natural gas demand rises or stabilizes through 2040 even with the expansion of alternative energies, low-carbon technology and efficiency improvements. Not only is natural gas the only fossil fuel that does not experience a significant peak or decline, but even in this most conservative scenario, demand for natural gas grows an average of 0.6% per year. In 2040, natural gas is projected to provide a quarter of our primary global energy supply.<sup>(f)</sup>

### WORLD NATURAL GAS DEMAND BY IEA SCENARIO<sup>(g)</sup>



### GLOBAL PRIMARY ENERGY DEMAND IN THE SUSTAINABLE DEVELOPMENT SCENARIO<sup>(g)</sup>

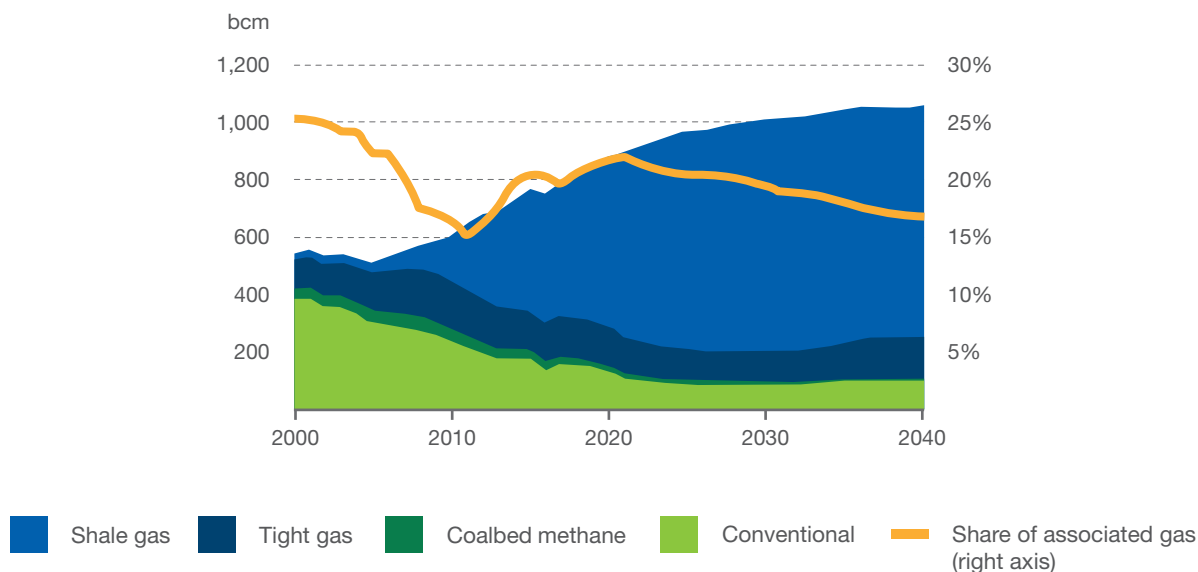




# Climate Risk Identification and Mitigation

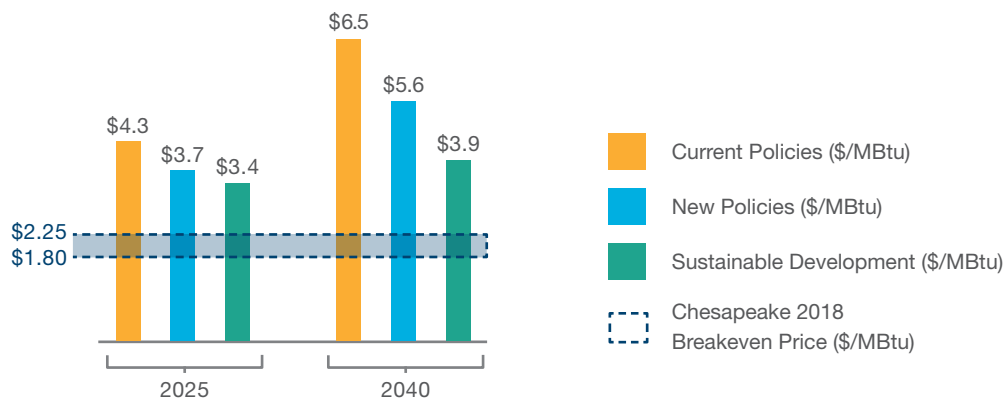
The New Policies Scenario anticipates the U.S. becoming the world's largest natural gas producer and the largest LNG exporting country. In addition, the U.S. will increase production more than any other country with the vast majority of product sourced from unconventional gas formations.

**U.S. GAS PRODUCTION BY TYPE IN THE NEW POLICIES SCENARIO<sup>(d)</sup>**



Similar to our oil price outlook, Chesapeake's cash cost efficiency suggests a strong future for our natural gas projects. Chesapeake's current breakeven price reinforces the strength of our operational strategy as both demand and pricing increases under all three scenarios.

**NATURAL GAS IMPORT PRICE (U.S.) BY SCENARIO<sup>(d)</sup>**  
as compared to Chesapeake breakeven pricing



## THE FUTURE OF OUR RESERVES

Even with the potential of a low-carbon future, we are well positioned due to our strong resource portfolio. Our assets — domestic and unconventional — have short-duration development cycles with more efficient cost structures as compared to international or deepwater developments. And, our history of producing more with less in our operating areas is yet another advantage contributing to the resiliency and future of our reserves.

### DIVERSE PORTFOLIO ACROSS MULTIPLE BASINS<sup>(g)</sup>

~1.9 bboe

Reserves

~3.64mm

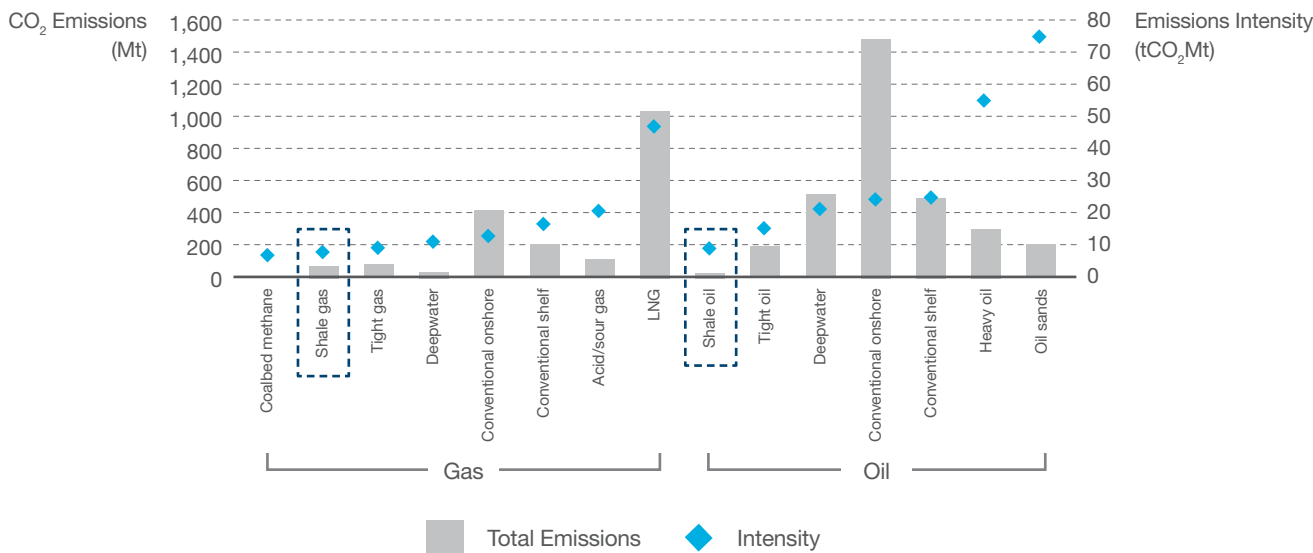
Net acres

~11,550

Undrilled locations  
onshore and in the U.S.

Developing unconventional shale oil and natural gas assets also has benefits related to emissions intensity. Although a lower-carbon future could affect all fossil fuel development, it is most likely to impact those fuels with the highest carbon dioxide footprints.

### 2016 – 2025 EMISSIONS AND INTENSITY BY RESOURCE THEME<sup>(h)</sup>



As energy research group Wood Mackenzie notes, there are significant variations in upstream emissions intensity, and those assets with the highest emissions intensity have the greatest potential for financial liability related to climate policy changes such as carbon pricing. Of the 15 fuel resources studied by Wood Mackenzie, shale oil and gas are projected to be among the lowest in terms of total emissions and intensity through 2025.<sup>(h)</sup>

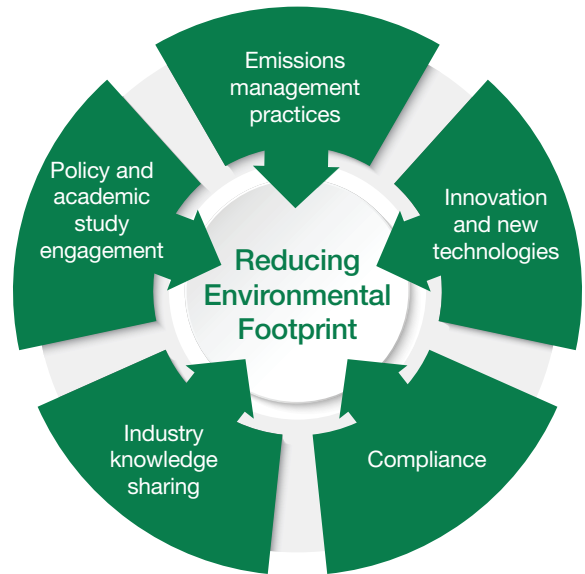
The IEA also adds that one energy source in particular – natural gas – can help reduce the carbon intensity of the global energy system. As energy demands increase, gas will be well-positioned as a cleaner, more flexible and available energy source. For these reasons, IEA projects the continued development of both natural gas reserves and resources, making the stranding of upstream natural gas assets unlikely.

## Progress Made, Continued Work Ahead

In any scenario, our commitment remains the same — to be constantly improving stewards of our assets and the environment. Our emissions management and reduction practices are strong, and we work every day to add new technological innovations and adopt leading environmental practices.

We believe our global energy future will include a number of forms of energy, including some that may not yet be developed. Even with these additional energy sources, the vast majority of our energy and product needs, from transportation and heating and cooling to plastics, will continue to be met today and in the foreseeable future by oil and natural gas.

As we work to reduce our environmental footprint, our industry's purpose — to meet the growing energy demand worldwide — is both challenging and rewarding. In our generation, the assets we produce will help those in the most vulnerable economies experience affordable and accessible energy.



*“Achieving the long-term aims of the Paris Agreement will require worldwide action among governments, business and civil society... The oil and gas industry plays an important role in providing the energy that is essential for the growth of strong economies. It is working to be part of the solution, helping to ensure these benefits both for today and for further generations, while supporting efforts to reduce emissions.”*

— IPIECA<sup>(i)</sup>



**Associated gas:** Natural gas as a by-product of oil production

**Barrel (BBL):** Unit of measurement most typically used for oil; equal to 42 U.S. gallons

**Breakeven pricing:** The price an asset must be sold for to cover acquisition and development costs

**Clean Power Plan:** Policy created under the Obama administration aimed at reducing anthropogenic emissions; proposed by the U.S. Environmental Protection Agency in June 2014; policy is currently under repeal by the Trump Administration

**Downtime:** A time period during which production or other activity is stopped

**Emissions intensity:** Average emission rate from a specific source related to the intensity of a certain activity

**Enterprise risk management (ERM):** Specific to a company, the practices and processes used to manage risk within an organization; this program typically includes steps such as risk identification, evaluation and management or treatment

**Environmental Protection Agency (EPA):** This U.S. government agency works to protect human health and the environment by, in part, protecting air and water quality

**Forward-looking infrared (FLIR) camera:** A thermographic camera that can visualize infrared radiation most often from a heat source; the camera creates an image that captures the heat source which can often indicate a leak on a production site

**Greenhouse gas emissions (GHGs):** Made up primarily of carbon dioxide (CO<sub>2</sub>); also includes methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O)

**International Energy Agency (IEA):** A Paris-based intergovernmental organization established in 1974 serving as an information source on statistics about the international energy market, among other functions; publishes the annual World Energy Outlook

**IPIECA:** Formed as the International Petroleum Industry Environmental Conservation Association; a global association with a mission to improve the environmental and social performance of the oil and natural gas industry

**MBtu:** One million British thermal units; British thermal unit is a unit of work equal to about 1055 joules or the amount of work needed to raise the temperature of one pound of water by one degree Fahrenheit

**Modern energy:** As noted in the United Nations' Sustainable Development Goals; reliable and affordable energy services provided by a well-established energy system

**Mtoe:** Unit of measurement; million tons of oil equivalent

**New Policies Scenario:** As defined in the 2017 World Energy Outlook; scenario that suggests the impact of future legislative and regulatory action specific to improving the global energy landscape

**Net exporter:** A country or territory that exports more of a certain resource (in this case, oil and natural gas) than it imports

**Paris Agreement:** Adopted within the United Nations Framework Convention on Climate Change through negotiations by representatives of 196 parties; the agreement's goal is to keep a global temperature rise below 2 degrees Celsius above pre-industrial levels (within this century); also referred to as the Paris climate accord or Paris climate agreement

**Proved reserves:** The amount of oil or natural gas that is economically recoverable using current technology and under existing operating conditions; an analysis of geologic and engineering data proves the existence of the energy source

**Renewables or renewable energy:** Energy collected from resources able to be replenished such as solar, water or wind

**Scope 1 emissions:** Direct emissions from sources owned or controlled/regulated by the EPA; sources can include: Vehicles, equipment and stationary sources

**Stranding:** The devaluing of assets to the potential point of economic loss

**Sustainable Development Scenario:** Introduced via the 2017 World Energy Outlook; scenario lays the framework for achieving universal access to energy by 2030 and the reduction (by half) of energy-related CO<sub>2</sub> emissions by 2040

**Task Force on Climate-related Financial Disclosures (TCFD):** Formed by the Financial Stability Board; recommends voluntary climate-related financial risk disclosures to increase transparency with stakeholders

**Unconventional shale:** Petroleum or natural gas found in a specific type of sedimentary rock (shale) extracted using techniques different than conventional extraction methods

**Upstream:** Within the oil and natural gas industry; exploration and production

**World Energy Outlook:** Publication produced by the International Energy Agency that provides analysis and insight into future energy impacts; published annually since 1998 and is considered to be the world's most authoritative source of energy-market analysis; this report refers to the 2017 publication

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## ABOUT CHESAPEAKE

As a leading independent producer in the United States, Chesapeake discovers and develops its diverse resource base of unconventional oil and natural gas assets with careful attention to safety and environmental stewardship. Within its portfolio, the company also owns an oil and natural gas marketing business.

We are committed to executing our business strategies and maximizing shareholder returns by operating responsibly and reducing risk. Corporate responsibility is embedded in Chesapeake's culture, and our core values guide us to conduct our business with integrity and continuous improvement. We set a high standard for ourselves recognizing the responsibility entrusted to us by our stakeholders.

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## ABOUT THIS REPORT

In this report we discuss our approach to assessing and addressing business risks and opportunities, including those that may arise from climate change. When presenting this information we referenced the framework outlined by the Task Force on Climate-related Financial Disclosures (TCFD) to confirm our disclosures against the transparency recommended by a third party. Data and information included in this document were subject to internal review and are believed to be correct at the time of reporting. For certain reporting elements, later changes in categorization could affect data after publication.

This work is partially based on the World Energy Outlook 2017 developed by the International Energy Agency, © OECD/IEA 2017. The resulting work has been prepared by Chesapeake Energy Corporation and does not necessarily reflect the views of the International Energy Agency.

- (a) "Exploring Low-Emissions Pathways: Advancing the Paris Puzzle." *IPIECA*, November 2016. Web: 2. [www.ipieca.org/resources/awareness-briefing/exploring-low-emissions-pathways-advancing-the-paris-puzzle/](http://www.ipieca.org/resources/awareness-briefing/exploring-low-emissions-pathways-advancing-the-paris-puzzle/).
- (b) Anderson, Jeffrey J., Rode, David, Zhai, Haibo, and Fischbeck, Paul. "Will We Always Have Paris? CO<sub>2</sub> Reduction without the Clean Power Plan." *Environmental Science & Technology* 52.5 (2018): 2432 – 2433. Web. February 15, 2018. [pubs.acs.org/doi/10.1021/acs.est.8b00407](https://pubs.acs.org/doi/10.1021/acs.est.8b00407).
- (c) "How Much Carbon Dioxide is Produced When Different Fuels are Burned?" *U.S. Energy Information Administration*. [www.eia.gov/tools/faqs/faq.php?id=73&t=11](http://www.eia.gov/tools/faqs/faq.php?id=73&t=11). Accessed July 2018. Last reviewed June 8, 2018.
- (d) Based on IEA data from *World Energy Outlook 2017* © OECD/IEA 2017, [www.iea.org/statistics](http://www.iea.org/statistics), License: [www.iea.org/t&c](http://www.iea.org/t&c); as modified by Chesapeake Energy Corporation.
- (e) "Technical Supplement: The Use of Scenario Analysis in Disclosure of Climate-Related Risks and Opportunities." *Task Force on Climate-Related Financial Disclosures*, June 2017. Web: 2. [www.fsb-tcfd.org/wp-content/uploads/2017/06/FINAL-TCFD-Technical-Supplement-062917.pdf](http://www.fsb-tcfd.org/wp-content/uploads/2017/06/FINAL-TCFD-Technical-Supplement-062917.pdf).
- (f) © OECD/IEA 2017, *World Energy Outlook 2017*, IEA Publishing. License: [www.iea.org/t&c](http://www.iea.org/t&c).
- (g) Net acreage estimates as of June 30, 2018 and proforma for announced Utica asset divestitures.
- (h) "Carbon Intensity – Not All Assets are Created Equal." *Wood Mackenzie*. Wood Mackenzie / Verisk, February 8, 2018. Web: 1, 3 & 8. <https://www.woodmac.com/news/editorial/carbon-intensity-not-all-assets-are-created-equal/>.
- (i) "Exploring Low-Emissions Pathways: Advancing the Paris Puzzle." *IPIECA*, November 2016. Web: 10. [www.ipieca.org/resources/awareness-briefing/exploring-low-emissions-pathways-advancing-the-paris-puzzle/](http://www.ipieca.org/resources/awareness-briefing/exploring-low-emissions-pathways-advancing-the-paris-puzzle/).





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## FORWARD-LOOKING STATEMENT

This report includes “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Forward-looking statements are statements other than statements of historical fact. They include statements that give our current expectations, including statements regarding the analysis of our projected performance in a lower-carbon future and our actions to manage and reduce emissions that could impact climate change, and the assumptions on which such statements are based. Although we believe the expectations reflected in the forward-looking statements are reasonable, we can give no assurance they will prove to have been correct. They can be affected by inaccurate or changed assumptions or by known or unknown risks and uncertainties. Factors that could cause actual results to differ materially from expected results include the factors described under “Risk Factors” in Item 1A of our annual report on Form 10-K and any updates to those factors set forth in Chesapeake’s subsequent quarterly reports on Form 10-Q or current reports on Form 8-K (available at <http://www.chk.com/investors/sec-filings>).

We caution you not to place undue reliance on the forward-looking statements contained in this report, which speak only as of the filing date, and we undertake no obligation to update this information. We urge you to carefully review and consider the disclosures in this report and our other filings with the SEC that attempt to advise interested parties of the risks and factors that may affect our business.

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## COMMUNICATE WITH THE COMPANY

### Board of Directors

866-291-3401  
(Director Access Line)  
[TalktoBoD@chk.com](mailto:TalktoBoD@chk.com)

### Compliance and Ethics

877-CHK-8007  
(877-245-8007)  
(anonymous)  
[compliance@chk.com](mailto:compliance@chk.com)  
[www.chkethics.com](http://www.chkethics.com)

### Investor Relations

405-935-8870  
[ir@chk.com](mailto:ir@chk.com)

### Owner Relations

877-CHK-1GAS  
(877-245-1427)  
[contact@chk.com](mailto:contact@chk.com)

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## CORPORATE RESPONSIBILITY REPORT

Corporate responsibility is embedded in the culture of Chesapeake. Our Corporate Responsibility Report communicates our high standards and highlights our operations focused on safety, stewardship and sustainability. To read our report, please visit: [www.chk.com/responsibility](http://www.chk.com/responsibility)



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