

RISK & RESILIENCE IN A LOWER CARBON FUTURE

2022

REPORTING YEAR

CLIMATE REPORT

CHESAPEAKE
ENERGY

Letter to Our Stakeholders

The world is short on energy and we need sustainable, reliable and secure solutions. To adequately support our global economy in the years ahead, we'll need to significantly increase energy supply while also responding to the concerns of climate change.

This means continuing to develop energy that is affordable, reliable and lower carbon. Chesapeake's portfolio is uniquely positioned to answer the call for the energy needed across the globe. We firmly embrace a lower carbon future, recognizing the need for a thoughtful and strategic balance of stakeholder needs.

Chesapeake's Sustainability Fundamentals help support the delivery of needed energy and the ambitions of the Paris Agreement. Recognizing our role in a lower carbon future, we are committed to net zero Scope 1 and Scope 2 GHG emissions by 2035. As we work to achieve this goal, we continue to make measured progress across our interim targets, including reducing our Scope 1 and Scope 2 GHG emissions intensity and methane emissions intensity by 37% and 64% (respectively) as compared to our 2020 portfolio.

These reductions have been fueled by capital investments, employee innovation and emerging technology, and were built upon our proven track record of responsible production. We were the first operator to independently certify two major shale basins as responsibly sourced gas (RSG). This accomplishment included incorporating two significant acquisitions into our RSG portfolio in less than one year.

We continue to work with third parties to verify our assets' methane emissions intensities, policies and procedures, most recently, achieving an "A" rating for our high-level of operational practices and performance. This added layer of accountability further drives our emissions reduction progress.

It is our goal that Chesapeake's lower carbon, responsibly sourced energy fuels the global gas market. Continued and accelerating global energy security threats, and international over-reliance on carbon-intensive fuels, are perpetuating the need for an increase in domestic natural gas production (with LNG export capacity). The U.S. natural gas market is poised to meet significant European and Asian demand due to our availability, lower cash costs and emissions profile.

Chesapeake is LNG ready. With an additional 8.5 bcf/d of LNG capacity scheduled to come online by 2025, we are focused on efficiently developing our deep Haynesville inventory, continuing our decade-plus track record of capital cost leadership. We have also expanded our midstream capacity through strategic partnerships and, in 2022, added more than 1 bcf/d of future gathering and transport. This increased capacity supports our long-term target of tying 15 to 20% of our company volumes to international indices.

Some believe we must choose between affordable, reliable energy and lower carbon resources. We firmly reject this viewpoint, proving every day that we can support energy security, global prosperity and reduce emissions through RSG production. As we work to achieve net zero Scope 1 and Scope 2 GHG emissions by 2035, our sustainability fundamentals — and our talented team — will drive our performance.

We encourage your accountability and will continue to provide transparent disclosures with measurable progress.



Photo credit to Marshall Hawkins, Sundance Photography

A handwritten signature in black ink that reads "D.J. Dell'Osso, Jr." in a cursive style.

Domenic J. "Nick" Dell'Osso, Jr.
President, Chief Executive Officer and Director
December 2023

Our Sustainability Fundamentals

Deliver energy to sustain economic progress and welfare

Minimize emissions from operations

Invest in low carbon solutions with adjacent technologies

Transparent disclosures with measurable progress

Table of Contents

About This Report	4
Our Commitment to Net Zero	5
Governance	6
Strategy & Risk Management	9
Portfolio Resilience	15
Metrics & Targets	18
Net Zero Strategy	21
TCFD Content Index	22
Definitions & Notations	23



Headquartered in Oklahoma City, Chesapeake Energy Corporation is powered by dedicated and innovative employees focused on responsibly developing leading positions in top U.S. natural gas plays. With a goal to achieve net zero (Scope 1 and Scope 2) GHG emissions by 2035, Chesapeake is committed to safely answering the call for affordable, reliable, lower carbon energy.



Consistent Climate-Related Progress



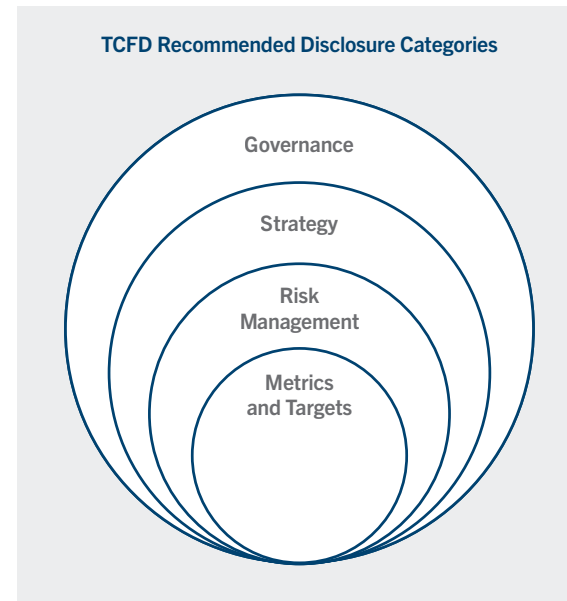
About This Report

Energy is one of the most fundamental drivers of modern society, providing power, fuel and feedstock for countless products critical to our quality of life. However, energy production is not without impact, including impact on our climate. This report reviews Chesapeake’s climate-related risks and opportunities and discusses the company’s resilience in a lower carbon future.

The long-term risk possibilities highlighted in this report draw primarily from the company’s existing disclosures, such as our most recent Form 10-K and our other filings with the U.S. Securities and Exchange Commission (SEC). Inclusion of risks in this report doesn’t indicate that we have determined the risk to be material as defined by the SEC.

TCFD Alignment

This report is aligned with the Task Force on Climate-Related Financial Disclosures (TCFD) framework. The TCFD developed its framework to guide companies on standard disclosures for climate-related risks and opportunities.



Verified Performance Metrics

Chesapeake’s climate-related performance data reflect year-end 2022 operations and include year-over-year comparison. The data has been verified by Internal Audit and an independent [third-party organization](#) (under limited assurance), using the best available information at the time of report preparation. For certain reporting elements, later changes in categorization could affect data and will be updated for accuracy on our website.

Our core natural gas assets are certified as RSG, offering another layer of data assurance as part of an independent certification process. Our Scope 1 metrics are rooted in our Environmental Protection Agency (EPA) Subpart W reporting, and we continue to evaluate different methodologies to further improve accuracy and transparency across our metric categories.

Performance Targets

Chesapeake is committed to lowering the carbon intensity of our operations and meeting the near- and long-term pledges adopted by our Board of Directors. We recognize the dynamic nature of the exploration and production (E&P) sector and will update our pledges relative to impactful operational changes. These changes could include: acquisitions and divestitures; new emissions monitoring and quantification technology; emissions inventory reporting regime changes and updated stakeholder priorities.

A&D Activity and Its Reporting Impact


In 2022 and early 2023, we executed significant A&D activity.

Acquisitions	Transaction Closure Date	2022 Climate Data Reporting Impact
Vine Energy (Haynesville) – 123,000 acres	November 1, 2021	100% included
Chief E&D Holdings (Marcellus) – 113,000 acres	March 9, 2022	100% included from time of ownership (except for emissions which are wholly included)
Divestitures		
Powder River Basin asset	March 25, 2022	Excluded from 2022 GHG emissions data per EPA’s Greenhouse Gas Reporting Program requirements
Brazos Valley asset	March 20, 2023	100% included
Black Oil Eagle Ford asset	April 28, 2023	100% included
Remaining Eagle Ford assets	November 30, 2023	100% included


Considering Climate in our M&A Activity

In 2021, Chesapeake established acquisition non-negotiables to serve as a decision-making framework when considering M&A activity. Within these non-negotiables, we evaluate emissions performance and whether we can improve the environmental performance of assets in consideration.


Acquisition Non-Negotiables




Better, not just bigger




Protect the balance sheet



Accretive to key metrics

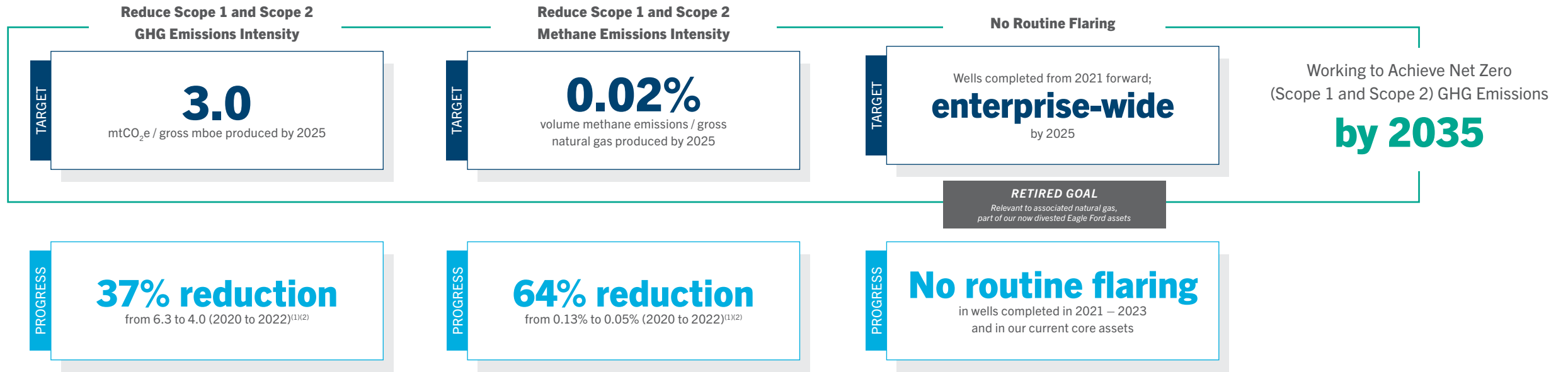


Don’t overpay



Lowers emissions profile, increases RSG capacity

Measured Progress Against Our Emissions Reduction Targets



Our Accountability

We voluntarily partner with third-party and peer organizations to verify our data, consistently check our progress and certify our high standards for performance.



EO100

Certifies our RSG; 100% of our gas volumes are certified



MiQ

Grades our methane emissions intensity, policies and procedures



Veritas: GTI

Engages stakeholders in a transparent and science-based methane measurement reconciliation protocol development process



OGMP 2.0

Provides the only comprehensive, measurement-based international reporting framework for the sector



AMI

Enhances methane monitoring throughout the Appalachia Basin, industry-wide coalition



Spirit Environmental

Provides third-party limited assurance of our GHG and other sustainability metrics

(1) Inclusive of acquisitions and divestures made during that time period.

(2) Our baseline includes those assets we owned at YE 2020: Eagle Ford, legacy Haynesville, legacy Marcellus and Powder River Basin.

Governance

Our climate governance includes accountability and ownership at every level, from our Board of Directors to the employees who impact our operations every day.

Board of Directors Oversight

Chesapeake’s Board has ultimate oversight of our strategy, planning and engagement around climate change and its related impacts.

Our Board’s Environmental and Social Governance (ESG) Committee takes active ownership in engaging with our executive team and organizational leaders to manage and mitigate climate-related risks. This committee meets at least quarterly to discuss climate-related risks and opportunities, among other ESG topics. Relevant findings, progress and issues are raised to the Board-at-large or shared with other Board committees as needed.

57% of our directors have EHS / sustainability management expertise



Board of Directors

Promotes the long-term success of the company and ensures proper oversight of management

Climate-related:

- Oversees and monitors environmental matters, including emissions reduction performance
- Reviews and evaluates significant company risks, including relevant ESG issues
- Develops and maintains executive compensation plans that tie executive pay to company performance, including emissions reduction targets when defined

12 meetings (2022)



Sarah A. Emerson
Board Director and Environmental and Social Governance Committee Chair

“Chesapeake will continue its keen focus on measuring and reducing emissions to meet low carbon energy demand.”

Audit Committee

Oversees financial reporting, legal compliance, internal and external audit functions and risk management systems

Reviews climate-related risk as part of the enterprise risk management (ERM) process

8 meetings (2022)

Compensation Committee

Establishes and oversees compensation policies and standards that effectively attract, retain and motivate executive officers to achieve strategic and financial goals

Incorporates emissions reduction goals in our executive and employee annual incentive compensation program

7 meetings (2022)

Environmental and Social Governance Committee

Oversees ESG policies, programs and practices

Oversees climate-related performance, from managing and mitigating climate risk to confirming progress toward our ESG (including emissions reduction) goals

5 meetings (2022)

Nominating and Corporate Governance Committee

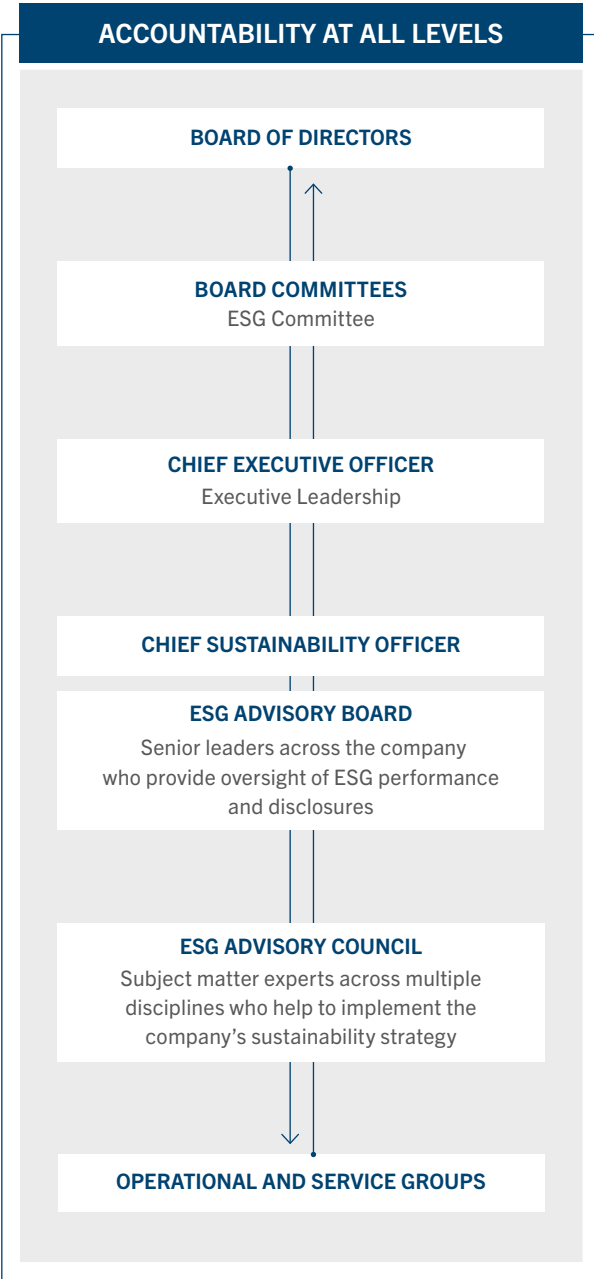
Oversees corporate governance structure and practices, Board composition and performance, and corporate social responsibility matters

Reviews climate and other ESG-related experience / factors when considering new directors

4 meetings (2022)

Board-level Climate Discussions

- Risk management and mitigation
- Emissions reduction and management practices
- Regulatory and legislative risk
- Goal setting and progress made
- Executive and employee compensation tied to climate-related goals
- Market sensitivity analysis



Management’s Oversight of Climate Performance

Chesapeake’s CEO and leadership team direct our climate performance, setting the strategic direction and holding business units accountable. Although our management team works together to champion our climate-related efforts, their individual responsibilities help ensure comprehensive coverage and planning related to this important issue.

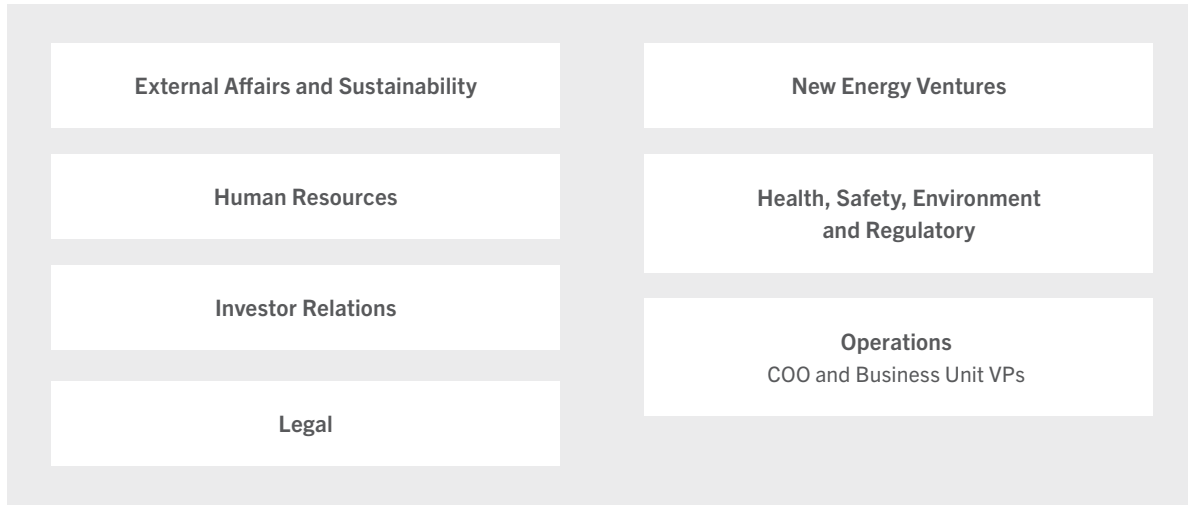
Oversight Category	CEO	Executive Leadership <i>(Reports to CEO)</i>	Chief Sustainability Officer <i>(Reports to CEO)</i>
Climate-Related Risks and Opportunities	Reviews ERM reporting and confirms risk mitigation planning	Oversees the ERM process assessing climate-related risk and mitigation plans; manages the Air team as well as the Internal Controls and Internal Audit teams	Provides oversight and leadership of our sustainability strategy, inclusive of current trends, climate-related risks and opportunities, and presents mitigation plans (in collaboration with other department partners) to management
Strategy Planning, Including Net Zero Goal and Emissions Reductions	Directs long-term, strategic planning and ensures climate is factored when considering A&D opportunities; oversees progress related to emissions reduction targets and Annual Incentive Plan (AIP) metrics	Leads the teams executing the emissions reduction strategies to reach our net zero goal; actively involved with the New Energy Ventures (NEV) team on emerging technologies and industry-adjacent lower carbon commercial solutions	Partners with the Environmental, Operations and NEV teams on the progress of and future opportunities toward achieving the company’s strategies; identifies and engages in third-party partnerships to further the identification and mitigation of emissions and advocate for supporting policies
Public Policy	Participates in trade association conversations (at the board level) and targeted meetings with industry, academia and legislative leaders	Provides input on emerging issues within legislative, regulatory and public opinion forums	Leads public policy engagement and is actively involved with trade association advocacy on key issues, including federal and state climate policy; manages the Government & Regulatory Affairs team
Sustainability (and Climate) Transparency	Reviews and approves our annual sustainability reporting, including our TCFD disclosure; engages in discussions at the board level regarding disclosures		Oversees our annual sustainability reporting process and is the key liaison with the Board’s ESG Committee; leads the Sustainability team and both the ESG Advisory Board and ESG workgroups; is a primary company spokesperson with stakeholders interested in climate-related matters

ESG Advisory Board

Made up of cross-disciplinary senior leaders and chaired by our Chief Sustainability Officer, our ESG Advisory Board provides management-level leadership and oversight of the company's ESG performance. The group meets regularly to:

- Ensure ongoing attention to monitoring, managing and reporting major ESG issues
- Validate the company's sustainability and TCFD disclosures
- Help communicate sustainability-related matters with stakeholders
- Establish and implement climate policy strategy, including the path to net zero
- Aid in decision-making regarding emissions management solutions
- Approve emissions reduction projects

The ESG Advisory Board meetings provide opportunity for ongoing dialogue with departments across the company including:



Targeted Employee Action

Chesapeake employees care deeply about improving our carbon emissions performance. At our business unit level, we have several departments with dedicated climate-related job responsibilities, including our Air, Operations and Government & Regulatory Affairs teams.

We also maintain internal, multidisciplinary workgroups focused on implementing and improving our sustainability strategy and carbon emissions performance. This group of subject matter experts executes the company's sustainability strategy, including our emissions reduction efforts. The council meets regularly for consistent accountability and company integration.

Executive and Employee Remuneration Programs

For added accountability, we tie our executive and employee remuneration programs to sustainability goals. Our AIP aligns payout with the value drivers and discipline our shareholders value. Of the total amounts payable under the 2022 AIP, 20% were based on the attainment of certain companywide strategic leadership goals, including emissions reduction.

Should we fail to meet our environmental and safety performance thresholds, the AIP payout is capped at target for all other metrics regardless of results.



Brian Steck, Board Director and Compensation Committee Chair, discusses Chesapeake's executive compensation approach, which is designed to align both pay and performance as well as the interests of our management team and shareholders. [Watch here.](#)



Strategy & Risk Management

Managing Climate-Related Risk

Guided by our long-standing ERM program, Chesapeake takes a methodical approach to identifying, assessing and managing ESG risks, including climate-related risks.



Risk identification is the responsibility of all Chesapeake team members according to our Three Lines of Defense model, with several teams specifically tasked with recognizing and managing risks related to climate change.

Three Lines of Defense Model

1st Line of Defense	2nd Line of Defense	3rd Line of Defense
Owns and Manages Risk <i>(Operational and Service Groups)</i>	Oversees Risks, Controls and Compliance <i>(Internal Controls)</i>	Provides Independent Assurance <i>(Internal Audit)</i>
Encourages the department and business unit level to identify and control risks at the front lines of the organization	Provides impartial enterprise risk and compliance analyses	Uses a standardized, objective process to identify risk-based audits of department and business unit controls and processes
Internal risk owners (senior managers and subject matter experts) regularly review and assess company risks		Reports directly to the Board Audit Committee
An annual risk survey asks employees throughout the organization to review existing risk drivers and identify emerging risks		

Assessing Risks through ERM

All leaders within the organization are asked to participate in the Annual Enterprise Risk Assessment and rank current risk drivers, provide context behind rankings and identify emerging risks. The ERM team also performs subject matter expert interviews across the organization to ensure a comprehensive process for risk identification at levels within the organization.

When identifying enterprise-wide risks, we measure severity based on two characteristics:

- 1 | Risk level (the potential for a risk to occur and its expected effects)
- 2 | Risk trend (the speed of the risk's impact)

Relevant risks are linked to core ESG categories and regularly reviewed at the executive level to help ensure strategy alignment and appropriate risk response. Any risk owner can raise climate-related risk concerns with ultimate climate risk ownership attributed to our Chief Sustainability Officer.

At quarterly meetings, our Chief Sustainability Officer reports relevant climate-related risks to our Board's ESG Committee under a broader category of sustainability. If a risk requires mitigation, we develop and execute plans to reduce the risk to an acceptable level.

The Board's Audit Committee also reviews pertinent risks and mitigation plans quarterly through our ERM reporting process. This reporting allows the Board to gain insight into the company's material risks and direct business strategies accordingly.



Usha Turner
Vice President –
Chief Sustainability Officer

“We monitor sustainability risks formally through our ERM process and keep company stakeholders updated and engaged through regular communications and risk mitigation planning. We work to develop and execute plans to reduce risks to acceptable levels.”

Identifying Climate Risks

Through our ERM process, we have identified climate-related risks that could impact our business. The TCFD separates these risks into two primary categories: transition (risks associated with transitioning to a lower carbon economy) and physical (risks specific to the physical impacts of climate change). For the purposes of this report, we categorize climate-related risks according to three time horizons.

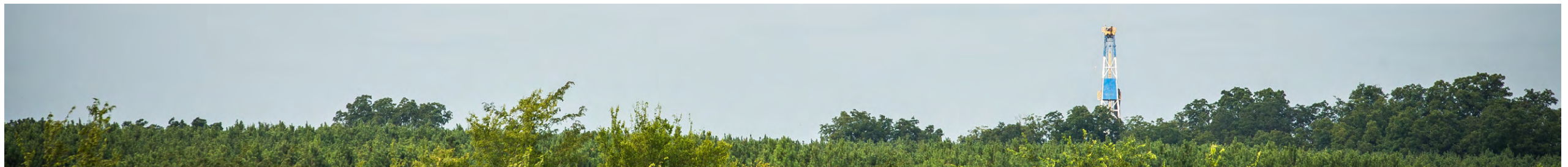
Climate Risk Time Horizons

<3 years
Short-term

3 – 5 years
Medium-term

5+ years
Long-term

Risk	Category	Potential Impact	Timing	Mitigation Strategies
Policy and Legal	Transition	Increased operating and compliance costs	Short- to medium-term	Policy engagement, consortia and trade group involvement, emissions reduction practices, new technology adoption
Technology	Transition	Reduced demand for our product due to renewable energy sources; lost capital due to failed technology investments	Medium- to long-term	NEV team (explores emerging, industry-adjacent low carbon technologies); research, pilot testing and capital deployment for low carbon energy solutions; operational emissions reduction practices and operational efficiencies
Reputation	Transition	Negative corporate reputation perception; loss of access to capital and increased stakeholder activism (including increased political pressure and regulatory scrutiny)	Short- to medium-term	Emissions reduction practices, stakeholder engagement and reporting transparency, new technology adoption, strategic partnerships in the energy transition space
Market	Transition	Depressed prices affecting our financial performance	Medium- to long-term	Market sensitivity analysis, diversity in sales point (LNG), RSG as market differentiator, hedging activity
Extreme Weather	Physical	Damage to facilities, disruption of operations and / or safety incidents	Short-term and ongoing	Emergency preparedness, business continuity, disaster recovery planning and facility design



Policy and Legal Risk

As the global economy shifts to a lower carbon future, legislative and regulatory proposals could restrict or tax GHG emissions and increase our operating costs relative to obtaining permits, operating our equipment and facilities and adopting new technology. At the federal level, the EPA has issued regulations that require us to establish and report an inventory of GHG emissions and the SEC has proposed enhanced, standardized climate-related disclosures.

These current or pending regulations, including any new potential controls or fees on methane or carbon dioxide emissions, could expand because of targets set forth by the Biden administration or other regulatory agencies. U.S. targets, including the “nationally determined contribution” (NDC), a formal submission to the United Nations Framework Convention on Climate Change (UNFCCC), support the goal of reaching net zero emissions economy-wide by no later than 2050. States may also pursue the issue, enacting localized regulations governing or restricting GHG emissions.

We manage our policy and legal risk by collaborating with policy makers, complying with regulatory requirements, supporting science-based research and adopting innovative technologies to reduce our footprint.

Mitigation Strategies

Policy Engagement

We collaborate with stakeholders to develop policies that meet mutually beneficial environmental goals. We work with trade associations and other organizations to partner with governmental agencies in developing regulations.

Research

We partner with universities (and other institutions such as the Stanford University Natural Gas Initiative) to support scientific research that enhances our understanding of GHG emissions and climate change. Our most recent partnerships have focused on the study of methane detection and reduction.

Innovation

We’ve adopted a number of innovative technologies to better detect emissions and prevent leaks or loss. Some of these technologies include fixed methane emissions sensors, pneumatic retrofits, aerial methane detection, a comprehensive LDAR program and our WellTender mobile app.

Defining Sound Policy

Aligned with our policy engagement, we encourage policy that:

- Is based on scientific research
- Remains effective and equitable across regulated industries
- Recognizes the expected growth and need for modern, affordable energy and
- Accounts for continued technological and innovative advancements of our industry.

We endorse AXPC’s Climate Policy and Principles as a guide for our climate advocacy efforts, and support policy that facilitates meaningful GHG emissions reductions, balances economic, environmental and energy security needs, and promotes innovation.

Technology Risk

With a shift to lower carbon resources, emerging technologies could displace or affect the competitiveness of more traditional energy and reduce consumer demand. Certain incentives (private or government) may encourage more adoption of these technologies. Also, as we continue to explore and adopt new technology within our industry, there are risks and uncertainties related to efficacy and capital deployment.

We continue to study and adopt emerging technologies and commercial solutions to increase our operational efficiencies and reduce our GHG emissions to be most competitive in a lower carbon future.

Mitigation Strategies

Emerging Technologies and Commercial Solutions

Led by our Chief Geoscientist, our NEV team explores and advances emerging technologies and commercial solutions in low carbon energies.

We’re targeting investment opportunities adjacent to our core business that offer new ways for Chesapeake to enhance our strategies and diversify our portfolio. These opportunities include, but are not limited to:

- Geothermal
- Carbon capture and sequestration (CCS)
- Geologic energy storage
- Natural gas-derived fuels like low carbon intensity hydrogen and ammonia

Thorough Vetting of Capital Deployment

Through our NEV program, we use defined project objectives to direct our investments. These objectives include:

- Maintaining positive return propositions and improving revenue generation
- Leveraging technical and operational expertise
- Driving lower end-use consumer costs
- Replacing high emission energy sources

Operational and Cost Efficiencies

We mitigate emissions while reducing our cash costs and decreasing cycle times. Our well productivity continues to increase as a result of enhanced operational efficiencies, allowing us greater flexibility in the changing energy landscape.

We are also adopting facility design improvements to reduce emissions at various points across our sites.

Engaging in Carbon Capture and Permanent Sequestration

In 2022, we entered into an agreement with Momentum Midstream that is expected to deliver 700 mmcf per day of Chesapeake natural gas volumes to premium Gulf Coast markets beginning in late 2024. Permanent carbon capture and storage opportunities (related to the associated natural gas processing) are available through the joint venture, of which Chesapeake owns a 35% equity interest.

Reputation Risk

Market and social pressures related to a lower carbon energy may result in increased reputational risks for our industry and decreased access to capital. Poor ESG performance may lead to subpar ratings from organizations that track ESG-related performance, impacting investment recommendations and actions by key investors, analysts and stakeholders. Negative ESG publicity may also affect public sentiment and, in turn, a company's social license to operate.

We're committed to transparent stakeholder engagement and forward-looking programs that work to reduce our industry's environmental impact.

Mitigation Strategies

Responsibly Sourced Gas (RSG)

We were the first operator to achieve RSG certification across two natural gas basins. This independent certification verifies that our gas is produced to the highest ESG standards and meets strict emissions requirements, among a number of additional factors. RSG also provides additional data assurance as part of the certification process.

Stakeholder Engagement and Reporting Transparency

Through regular engagement, complemented by active listening, we respond to stakeholder concerns and continue to improve our operations.

Also responsive to stakeholder interest, we continue to evolve and enhance our sustainability reporting for greater transparency. We consult with an independent, third-party organization to review and verify our highest-profile sustainability performance metrics.

We also participate in industry efforts to standardize sustainability reporting and are increasing our communications to key stakeholders about our reporting. We commit to reporting progress on our climate-related pledges at least annually.

Proactive Sustainability-focused Programs

To meet our climate-related targets, we continue to build upon our emissions reduction practices and partner with peers and third-party organizations to advance emissions reductions as an industry. A few of our industry partnerships include:

The Environmental Partnership (TEP): Companies across the industry focused on information sharing around technically-feasible, commercially proven solutions, best practices and technological breakthroughs.

Appalachian Methane Initiative (AMI): A group of leading U.S. natural gas operators committed to enhancing methane monitoring across the Appalachia Basin and facilitating additional methane emissions reductions in the region; coalition fully funded by industry.

GTI Methane Emissions Inventory Project: Supported by Chesapeake data and operator expertise, GTI Energy will use funding from the Department of Energy (DOE) under the Innovative Methane Measurement, Monitoring and Mitigation Technologies (IM4) program to implement the Veritas measurement and reconciliation protocols to generate a detailed measurement-informed methane emission inventory of the Haynesville Basin.

Market Risk

The demand for natural gas could be negatively impacted by regulatory or market incentives to conserve energy or use alternative energy sources in combating climate change. Lower demand for our products could temporarily or permanently reduce pricing should a significant share of energy reliance shift to other sources.

Long-range planning and strategic financial analysis allow us to reduce market volatility risk.

Mitigation Strategies

Market Analysis

At least quarterly, we conduct market sensitivity analyses during which we evaluate our operational strategy and business portfolio against market factors that could impact company performance based on product demand and pricing effects. Should a scenario show an enhanced risk, we develop a targeted mitigation plan.

Hedging

We strategically protect our capital program by using hedging to offset downside risk. By locking in future market prices, we protect our capital program and affiliated revenue should there be a dip in demand or a significant negative shift in natural gas pricing.

Diversified Market Access

In 2023, Chesapeake made significant steps to take advantage of a growing global LNG market. This included announcing separate long-term LNG supply partnerships with Gunvor and Vitol Inc. For a period of 15 years, both Gunvor and Vitol have committed to purchasing LNG supplied by Chesapeake (up to 2 mtpa and up to 1 mtpa, respectively).



Extreme Weather Risk

Climate change may produce global physical effects, such as higher sea levels, increased frequency and severity of storms, droughts, floods and other extreme weather events. If any of these effects occur in our operating areas, we could experience incidents at our sites, including safety or environmental concerns, downtime or damaged equipment. Our operational resources could also become limited or disrupted, affecting our production and financial performance.

Through the adoption of advanced technology, stringent processes to promote operational resilience and emergency preparedness, we protect our sites against physical risks.

Mitigation Strategies

Facility Design

Our facility design standards require several elements to protect our operational equipment from extreme weather-related events. Some of these elements include:

- Grounding and bonding systems to reduce the risks of lightning strikes
- Operational winterization measures to protect against freezing temperatures
- Elevated berms for secondary containment if a spill occurs
- Tank floodproofing measures
- Automated, autonomous process safety systems that safely shutdown production facilities
- Continuously (24/7) manned operations support center that monitors all facilities and wells for adverse conditions that may require executive action or emergency response

Emergency Response Planning and Business Continuity

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

If an emergency requires a well or operational 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 effects. These plans can include arranging alternate workspace, providing a secondary power source or engaging with employees outside of our standard communication channels.

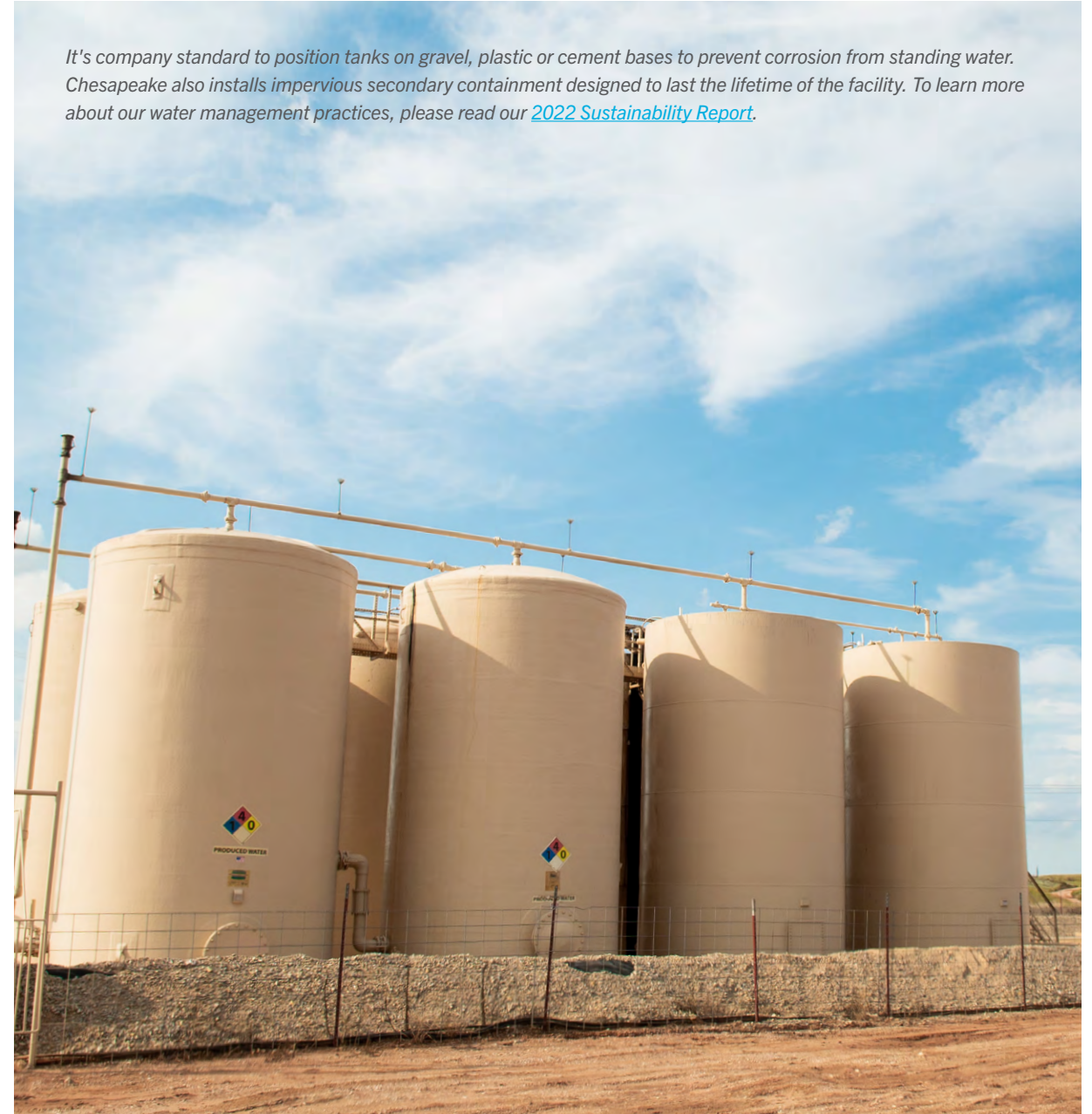
Water Accessibility and Availability

We regularly assess water-related risks associated with freshwater use, water stress, extreme weather (including operating in floodplains) and water disposal/final disposition through our operational planning.

As described in our [water stewardship position](#), we work to mitigate these concerns through site assessment; strategic and highly localized water use planning, sourcing, logistics and reporting; and by forecasting water needs. We continue to explore and adopt new technologies for operational and water use efficiency and water recycling.

Additionally, we monitor for drought and water scarcity, although our core operating areas have historically not been water stressed. We evaluate water stress levels as published through the World Resources Institute (WRI)'s Aqueduct Water Risk Atlas and seek to develop and implement strategies to reduce our freshwater use in these areas.

It's company standard to position tanks on gravel, plastic or cement bases to prevent corrosion from standing water. Chesapeake also installs impervious secondary containment designed to last the lifetime of the facility. To learn more about our water management practices, please read our [2022 Sustainability Report](#).



Climate-Related Opportunities

Through our nimble operating structure, emissions reduction efforts and commitment to sustainability performance improvements, we are well-positioned to capitalize on a lower carbon future — creating value for both the planet and our bottom line.

Opportunity	Impact	Ongoing Activities
Resource Efficiency	Reducing operating costs due to operational efficiencies and emissions reduction programs	<ul style="list-style-type: none"> • Operational / facility efficiencies • Emissions reduction programs • Fixed methane emissions monitoring system and LDAR program
Energy Source	Shifting to lower carbon energy sources for power generation to reduce costs and emissions	<ul style="list-style-type: none"> • Alternative fuel (non-diesel) capabilities • Industry-adjacent commercial solutions • Emerging technologies
Product and Services	Focusing our portfolio on lower emissions products and exploring industry-adjacent commercial services/products to maintain competitiveness	<ul style="list-style-type: none"> • RSG certification • Emissions reduction programs • Industry-adjacent commercial solutions • Emerging technologies
Markets	Proactively positioning our portfolio to lead the RSG market and meet global LNG demand	<ul style="list-style-type: none"> • LNG partnerships • Strategic portfolio positioning • Annual RSG recertification
Resilience	Maintaining our nimble operating structure and continuing to enhance our facility design to best respond to climate change (managing risks and seizing opportunities)	<ul style="list-style-type: none"> • Geographically diverse portfolio • Nimble operating structure • Emergency response program and business continuity plan



Jim Grant
Vice President –
New Energy Ventures &
Chief Geoscientist

“Chesapeake’s NEV team is looking for opportunities to directly reduce GHG emissions either for our company or a partner. Using our subsurface expertise and financial investment capability, we are advancing projects that will ultimately provide consumers with lower cost, lower carbon energy options.”



In our Haynesville and Marcellus operating areas, we utilize fixed methane monitoring technology to detect emissions at our production sites. We are currently utilizing more than 2,000 sensors across both areas.

Portfolio Resilience

Chesapeake utilizes the International Energy Agency (IEA)'s World Energy Outlook (WEO) to assess the company's current portfolio against potential scenarios in a lower carbon future. This analysis is in addition to the industry outlook research we utilize as part of our strategic planning — including economic and policy projections, supply and demand forecasts and future business conditions.

IEA has published its WEO, an analysis of global energy projections, annually since 1998. The outlook is widely recognized across the energy industry as a resource for examining future energy trends across scenarios that “reflect different assumptions about the actions taken in the coming years to shape energy systems and reduce energy-related CO₂ emissions.”⁽¹⁾

2023 WEO's Three Scenarios⁽²⁾

Stated Policies Scenario (STEPS)	Announced Pledges Scenario (APS)	Net Zero Emissions by 2050 (NZE) Scenario
Provides direction of the energy system as it progresses based on the current policy landscape (looks at the government / regulatory state as it is today)	Assumes that governments will meet their national determined contribution (formally submitted to the UNFCCC) and other announced climate-related commitments, including longer-term net zero targets	Portrays a pathway for limiting the global temperature rise to 1.5°C above preindustrial levels in 2100 and meeting the key energy-related UN Sustainable Development Goals, including universal access to reliable, modern energy
<i>Associated temperature rise in 2100: 2.4°C</i>	<i>Associated temperature rise in 2100: 1.7°C</i>	<i>Associated temperature rise in 2100: 1.5°C</i>
	Paris Agreement-aligned	Paris Agreement-aligned

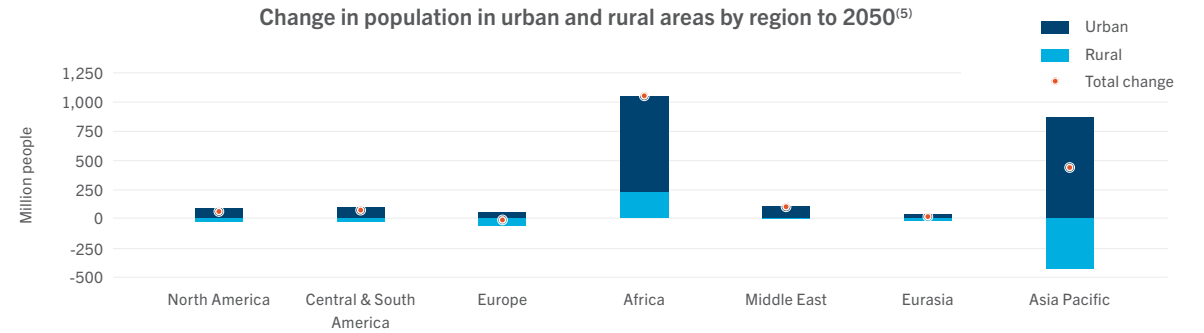
It's important to note that all the defined scenarios provide studied constructs of the future, but they're not forecasts. They represent potential futures, identifying possible trends or factors that could influence business models should a scenario's key assumptions occur. Many of the scenarios also assume the adoption of technologies that are either unproven or are in various stages of development. As a result, the supply and demand analysis conducted in the WEO may not fully represent the future energy environment and landscape.

Current Energy Landscape and Future Demand Impact

Foundational to its analysis, the IEA describes the current state of the energy landscape before presenting its future projections. This description notes the world's growing modern energy needs overlaid with a global desire and pathway to limit rising temperatures. The WEO also notes the need for people-centered transitions focused on both access and affordability.⁽³⁾

Populations are growing; energy access can't keep up with the pace

In all three scenarios, the global economy is assumed to grow by more than 2% each year and the global population is assumed to rise from 8 billion people in 2022 to 9.7 billion in 2050. Much of this population growth will occur in urban areas, predominantly in Africa and Asia.⁽⁴⁾

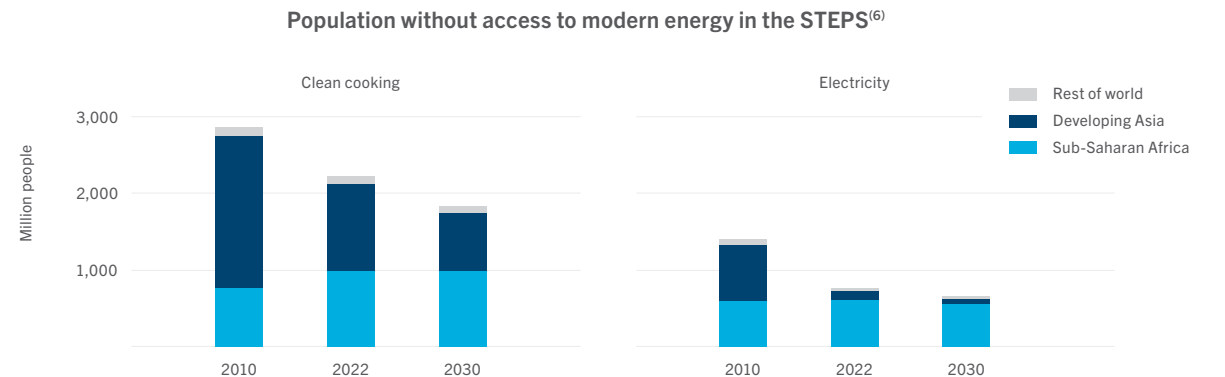


Except in Africa, the increase in population in the coming decades will be entirely concentrated in urban areas

Sources: UN DESA (2022); World Bank (2023b); IEA databases and analysis.

IEA. CC BY 4.0

While energy access has increased worldwide, 760 million people still lack access to electricity. In parts of Africa, 80% of the population doesn't have electricity and expanding access to electricity is unable to keep pace with the growing population.



Number of people without access to clean cooking methods declines by more than 15% in the STEPs, and progress on electricity access remains slow

Note: Sub-Saharan Africa excludes South Africa.

IEA. CC BY 4.0

(1) International Energy Agency (IEA). [World Energy Outlook 2023](#), p 25. Published October 2023

(2) International Energy Agency (IEA). [World Energy Outlook 2023](#), p 91 – 92. Published October 2023

(3) International Energy Agency (IEA). [World Energy Outlook 2023](#), p 183. Published October 2023

(4) International Energy Agency (IEA). [World Energy Outlook 2023](#), p 93. Published October 2023

(5) Based on IEA data from the [World Energy Outlook 2023](#) © OECD/IEA 2023, [www.iea.org/statistics](#), all rights reserved, as modified by Chesapeake Energy Corporation ([World Energy Outlook 2023](#), p. 95).

(6) Based on IEA data from the [World Energy Outlook 2023](#) © OECD/IEA 2023, [www.iea.org/statistics](#), all rights reserved, as modified by Chesapeake Energy Corporation ([World Energy Outlook 2023](#), p. 184).

Developing economies are working to balance energy needs and affordability with lower carbon pathways

Developing economies and emerging markets “face a diverse set of development challenges that will largely shape their regional energy, and emissions pathways.”⁽¹⁾ The decisions made by these countries, where approximately 64% of the world’s population lives, other than China, will have global implications.⁽¹⁾

Historically, these countries have relied on carbon-intensive fossil fuels, but many are now exploring emerging markets and pathways that allow them to meet their energy access needs and support planned urban growth while reducing environmental pollutants.⁽²⁾ However, undue financial burdens, such as having households shoulder the upfront costs of clean energy technologies, could play a role in their energy transition. As the WEO states, “political support for the transition can dissipate quickly if households or industries bear too much upfront cost without seeing tangible, near-term benefits.”⁽³⁾

The path to a lower carbon future must be affordable, based on secure supply, and strategically paced for consistent access and reliability.

The pathway to 1.5°C is limited but remains open

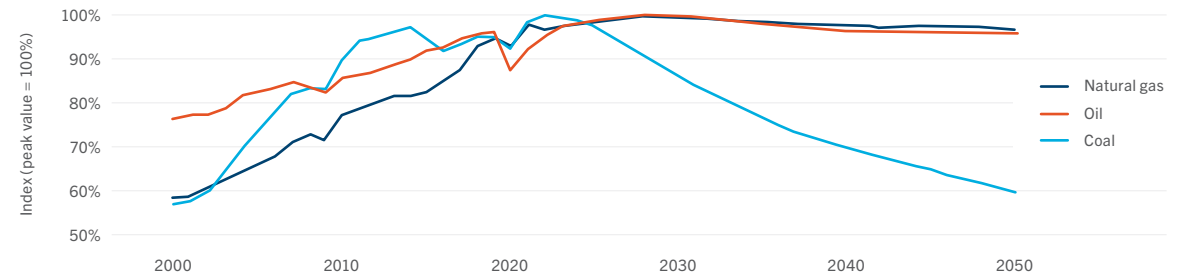
As the IEA reports, the pathway to net zero emissions by 2050 has narrowed but is still feasible. Continued optimism requires significant progress around clean energy policies, clean energy deployment, continued investment in innovation and emerging technologies, including infrastructure.

Increased energy options may limit fossil fuel demand

According to STEPS, the momentum behind clean energy transitions may be enough to taper fossil fuel demand by 2030. In this scenario, coal, oil and natural gas — typically making up about 80% of global energy supply — will edge down toward 73% through 2030. While this is a decrease in demand, these fossil fuels remain the dominant global fuel supply in all three scenarios.⁽⁴⁾

It’s important to note that while STEPS indicates a decrease in demand for fossil fuels; coal, oil and natural gas will decline at varying levels. Coal consumption will be the fuel most significantly impacted.⁽⁵⁾

Fossil fuel consumption by fuel in the STEPS, 2000 – 2050⁽⁶⁾



All fossil fuels peak before the end of this decade with declines in advanced economies, and China offsetting increasing demand elsewhere

As noted in the WEO, when considering these changes in demand (“trends”), there are important issues to consider:⁽⁷⁾

- Energy security challenges will remain for the foreseeable future.
- Demand trends for each fuel, particularly natural gas, vary by region and in some cases reduced demand in advanced economies can offset increased use in developing markets.
- The demand outlook will not be linear and will inevitably react to changing weather and geopolitical conditions.
- These changes are not steep enough to meet net zero ambitions.

(1) International Energy Agency (IEA). [World Energy Outlook 2023](#), p 63. Published October 2023

(2) International Energy Agency (IEA). [World Energy Outlook 2023](#), p 64 – 65. Published October 2023

(3) International Energy Agency (IEA). [World Energy Outlook 2023](#), p 52. Published October 2023

(4) International Energy Agency (IEA). [World Energy Outlook 2023](#), p 18 and 264. Published October 2023

(5) International Energy Agency (IEA). [World Energy Outlook 2023](#), p 26. Published October 2023

(6) Based on IEA data from the [World Energy Outlook 2023](#) © OECD/IEA 2023, www.iea.org/statistics, all rights reserved, as modified by Chesapeake Energy Corporation ([World Energy Outlook 2023](#), p. 26).

(7) International Energy Agency (IEA). [World Energy Outlook 2023](#), p 27. Published October 2023

Natural Gas Demand and Pricing

The WEO suggests the changes in natural gas demand reflect a “gradual rebalancing after the shocks of recent years.”⁽¹⁾ While demand does slow in STEPS, natural gas demand remains somewhat linear through 2050.⁽²⁾

In STEPS, natural gas prices stay relatively elevated as compared to pre-crisis levels. Various factors, including adjustment to the loss of Russian pipeline gas supply to Europe and a new wave of LNG export capacity, create gas market shifts. In the APS, an expected reduction in European natural gas demand may cause reduced prices and the NZE Scenario suggests a glut of natural gas supply.

For an alternative, policy independent pricing outlook, we also included the U.S. Energy Information Association (EIA)’s Henry Hub natural gas spot pricing projections for 2030 and 2050, which factors how the LNG market might impact natural gas pricing.

U.S. Natural Gas Prices by Scenario⁽³⁾ as Compared to Chesapeake’s 2023 Breakeven Price Range: \$2.35 – \$2.70 (USD / Mbtu)

	EIA	STEPS	APS	NZE
2030	\$2.91	\$4.0	\$3.2	\$2.4
2050	\$3.77	\$4.3	\$2.2	\$2.0

The reported 2023 breakeven price range is based on internal company estimates for our positions in the Haynesville and Marcellus shales. If we continue to follow long-term market trends, our breakeven prices could benefit due to industry efficiencies, innovation and easing inflationary pressures. Also, as we continue to expand our global LNG market presence, we will be able to diversify revenues by accessing global pricing indices.

Chesapeake’s current breakeven prices reinforce the strength of our operational strategy and capital allocation flexibility, in addition to our formidable hedging strategy that helps ensure consistent future revenue. Our current scenario analysis only measures against U.S. pricing (the most conservative pricing offered by WEO), and specific to Chesapeake, we included inflation overhang.

Competing Market Share: Innovation and Agility Create Sustainability

Despite decreasing demand, natural gas remains a much relied upon global fuel through 2030 in all three scenarios. Producers that are innovative, agile and planning for a lower carbon future are most likely to retain (or grow) their market share. Nimble operators can best position themselves for sustainability by taking action on several recommendations posed by WEO.

WEO Recommendations for a Lower Carbon Future	Chesapeake’s Action
Reduce methane emissions Methane abatement in the energy industry is one of the best ways to reduce GHG emissions globally. ⁽⁴⁾	In support of our net zero emissions by 2035 goal, we committed to reduce our Scope 1 and Scope 2 methane intensity to 0.02% by 2025. Since 2020, we have reduced our methane intensity by 64% across our assets
Take advantage of the LNG market The global natural gas market increases nearly 15% by 2030 according to STEPS. Two-thirds of this market will be delivered as LNG with U.S. as the leading exporter. ⁽⁵⁾	Our strategic portfolio positioning in the Haynesville offers the company significant LNG export opportunity. Our path to being LNG ready includes achieving value-driven scale, entering into supply agreements, and building out our network through overseas LNG joint ventures and marketing agreements among other initiatives. We view LNG as an important component to responsibly meeting the projected global energy demand throughout the transition. Chesapeake ultimately aims to dedicate 15 – 20% of its certified RSG production to LNG markets.
Support hydrogen and CCUS projects Under the right circumstances, progress from hydrogen and CCUS projects could be instrumental to meeting APS milestones. ⁽⁶⁾	Through our NEV team, Chesapeake is actively exploring industry-adjacent solutions and emerging technologies, such as geothermal, CCUS and hydrogen energy development. Read more here.

The WEO notes that “vigilance on oil and gas security remains essential throughout clean energy transitions,”⁽⁷⁾ and the “extreme volatility in energy markets during the global energy crisis has highlighted the importance of affordable, reliable and resilient supply.”⁽⁸⁾ As we phase out more carbon intensive resources, we must be able to sustain our current energy supply to meet growing demand both now and as it increases in the future. For this reason, we will rely on affordable and reliable forms of energy that are widely available now and into the future.

To replace more carbon intensive resources, lower carbon options — such as natural gas — need to already be in place to meet today’s energy demands with affordability and reliability. Our portfolio positioning and readiness, responsibly sourced certification, strict operational and regulatory standards and organizational agility will make Chesapeake resilient in a lower carbon future.

(1) International Energy Agency (IEA). [World Energy Outlook 2023](#), p 86. Published October 2023
 (2) International Energy Agency (IEA). [World Energy Outlook 2023](#), p 104. Published October 2023
 (3) Based on IEA data from the [World Energy Outlook 2023](#) © OECD/IEA 2023, www.iea.org/statistics, all rights reserved, as modified by Chesapeake Energy Corporation ([World Energy Outlook 2023](#), p. 96)
 Energy Information Agency (EIA), [Issues in Focus: Effects of Liquefied Natural Gas Exports on the U.S. Natural Gas Market](#) (Annual Energy Outlook 2023 supplement). Published May 23, 2023

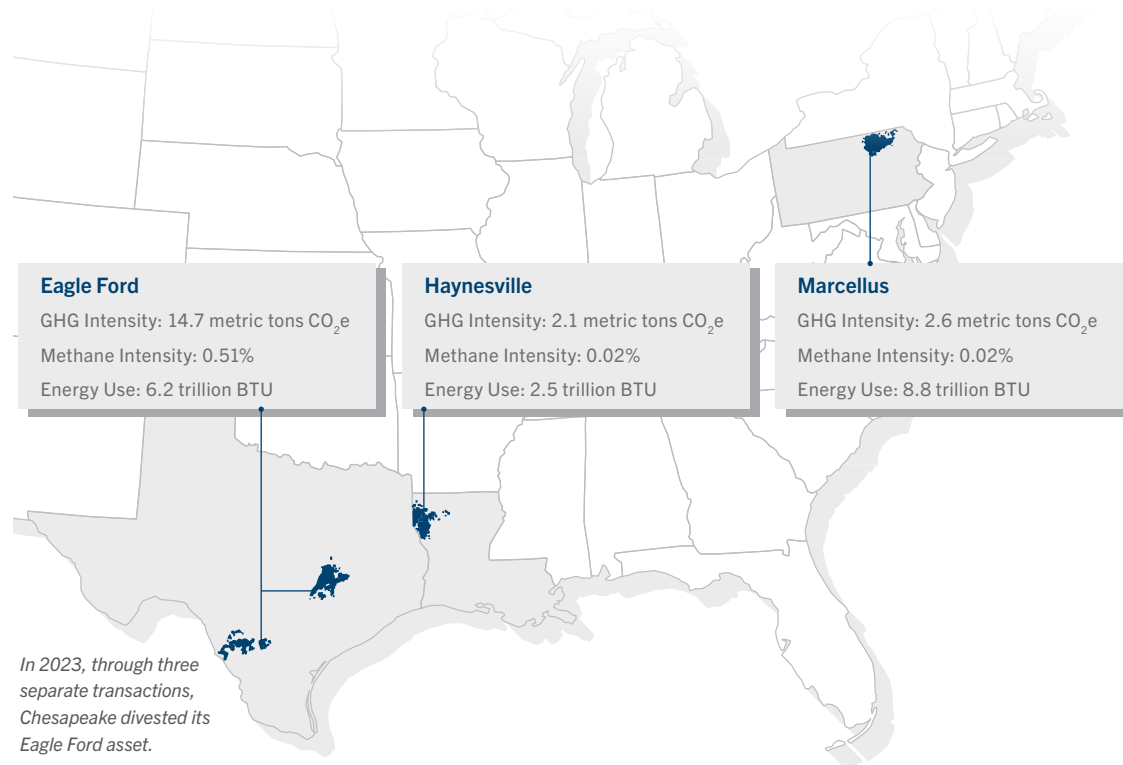
(4) International Energy Agency (IEA). [World Energy Outlook 2023](#), p 163. Published October 2023
 (5) International Energy Agency (IEA). [World Energy Outlook 2023](#), p 139. Published October 2023
 (6) International Energy Agency (IEA). [World Energy Outlook 2023](#), p 101. Published October 2023
 (7) International Energy Agency (IEA). [World Energy Outlook 2023](#), p 21. Published October 2023
 (8) International Energy Agency (IEA). [World Energy Outlook 2023](#), p 23. Published October 2023

Metrics

We use performance metrics to measure our progress, recognize trends and identify opportunities for improvement. Our climate-related metrics help inform the action steps needed for us to achieve our net zero (Scope 1 and Scope 2) GHG emissions goal by 2035.

Chesapeake continues to monitor industry best practices and participate with third-party organizations to improve data reporting and accuracy. Our GHG emissions intensity and methane emissions intensity metrics are reviewed and verified by an independent, [third-party organization](#).

2022 Metrics by Operating Area



Metric	2022	2021	2020
Scope 1 GHG emissions (million metric tons CO ₂ e) ⁽¹⁾	1.68	1.83	1.86
Carbon dioxide (million metric tons)	1.15	1.09	0.94
Methane (million metric tons CO ₂ e)	0.54	0.74	0.91
Methane (% of Scope 1)	32%	40%	49%
Nitrous oxide (million metric tons CO ₂ e)	0.001	0.001	0.001
Flared hydrocarbons (metric tons CO ₂ e)	9,836	24,327	57,992
Other combustion (metric tons CO ₂ e)	1,122,325	1,050,328	902,773
Process emissions (metric tons CO ₂ e)	0	20,323	71
Other vented emissions (metric tons CO ₂ e)	484,199	696,120	861,062
Fugitive emissions (metric tons CO ₂ e)	41,770	32,334	34,084
Scope 1 GHG emissions intensity (metric tons CO ₂ e / gross mboe produced) ⁽¹⁾	3.8	4.5	6.0
Scope 1 and Scope 2 methane emissions intensity (volume methane emissions / volume gross natural gas produced) ⁽¹⁾	0.05%	0.07%	0.13%
Eagle Ford	0.51%	0.81%	0.64%
Haynesville	0.02%	0.03%	0.04%
Marcellus	0.02%	0.01%	0.03%
Gross annual volume of flared gas (mcf) ⁽¹⁾	116,204	293,595	711,934
Flaring intensity (gross annual volume of flared gas (mcf) / gross annual production (mcf)) ⁽¹⁾	<0.01%	0.01%	0.05%
Flaring intensity (gross annual volume of flared gas (mcf) / gross annual production (boe)) ⁽¹⁾	<0.001	0.001	0.002
Scope 2 GHG emissions (million metric tons CO ₂ e) ⁽²⁾	0.053	0.057	0.063
Scope 1 and Scope 2 GHG emissions intensity (metric tons CO ₂ e / gross mboe produced)	4.0	4.6	6.3
Eagle Ford	14.7	15.7	16.6
Haynesville	2.1	2.4	1.6
Marcellus	2.6	1.9	1.8
Scope 3 GHG emissions (million metric tons CO ₂ e) ⁽³⁾	82	59	57
Energy use, fuel and electricity consumption (trillion BTU)	17.6	–	–
Corporate Headquarters (OKC)	0.1	–	–
Eagle Ford	6.2	–	–
Haynesville	2.5	–	–
Marcellus	8.8	–	–

Data and information included in this report were subject to internal review and are believed to be correct at the time of reporting. Data reflects year-end calculations and may include divested assets until divestitures' closing dates. For certain reporting elements, later changes in categorization could affect data after publication.

(1) Emissions estimate developed under the EPA's Greenhouse Gas Reporting Program (operated onshore production, Brazos Valley sand mine and gathering and boosting facilities).

(2) Chesapeake calculates its reported emissions using EPA eGRID subregion emission factors.

(3) Chesapeake reports our estimated indirect Scope 3 emissions on an equity basis using Category 11 of the Estimating petroleum industry value chain (Scope 3) greenhouse gas emissions reporting guidance developed by IPIECA / API (2016). The calculation methodology applies the EPA's emission factors for listed fuel types; representing indirect end use greenhouse gas emissions of the products created from our crude oil and natural gas.

For additional sustainability performance metrics, view our [2022 Sustainability Report](#).

Targets

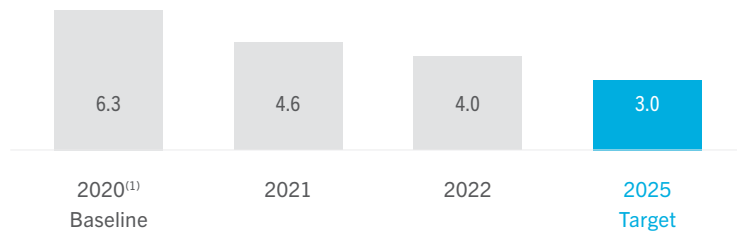
In 2021, we committed to achieving net zero GHG emissions (Scope 1 and Scope 2) by 2035 to make meaningful change in support of global climate goals.

Reduce
Scope 1 and Scope 2
GHG emissions intensity to
3.0
mtCO₂e / gross mboe produced by 2025

Reduce
Scope 1 and Scope 2
methane emissions intensity to
0.02%
volume methane emissions / gross
natural gas produced by 2025

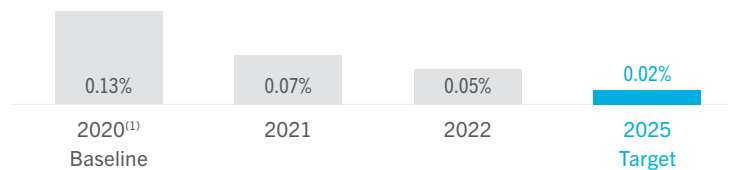
Achieve
net zero
GHG emissions
(Scope 1 and Scope 2) by 2035

Scope 1 and Scope 2 GHG emissions intensity
mtCO₂e / gross mboe produced



37% reduction
Scope 1 and Scope 2
GHG emissions intensity⁽²⁾

Scope 1 and Scope 2 methane emissions intensity
Volume methane emissions / volume gross gas produced



64% reduction
Scope 1 and Scope 2
methane emissions intensity⁽²⁾

Due to our A&D activity, we have retired one of our previously announced interim goals to best reflect our 2023 operations. In 2021, we pledged to eliminate routine flaring by 2025 with emphasis on our Eagle Ford assets. These assets were divested in three transactions, all completed in 2023. In our Haynesville and Marcellus assets, we don't engage in routine flaring.

Continuing Our Pathway to Net Zero

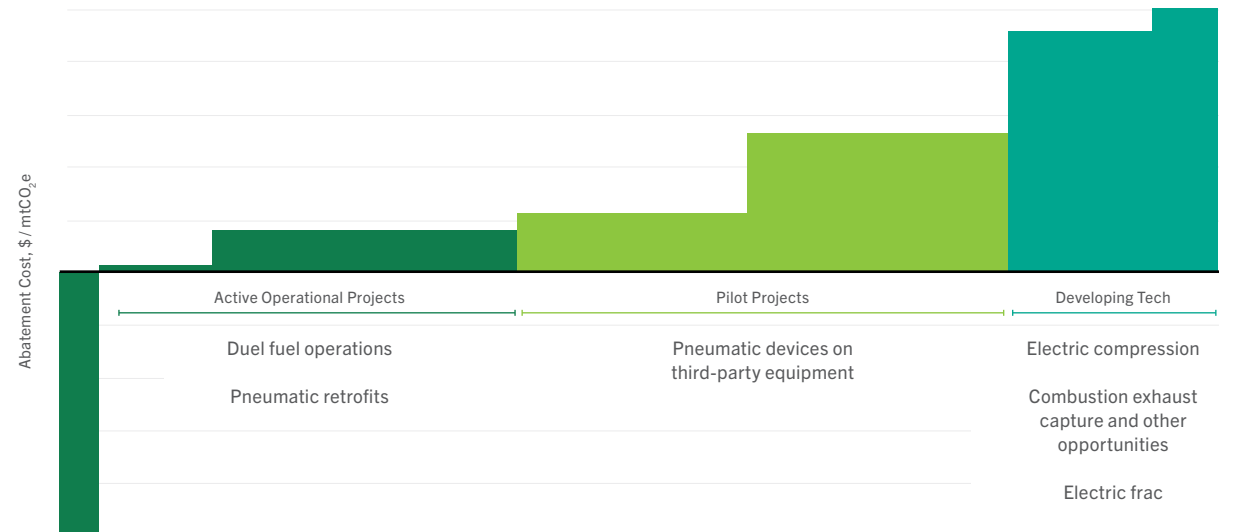
Through capital allocation and a layered toolkit of technologies and best management practices, we will continue our measured progress in reducing emissions in support of our GHG emissions reduction goals.

Our emissions-reduction approach is holistic, recognizing the opportunities for improvement across our operations and operational lifecycle. This approach starts by evaluating abatement projects according to the cost-benefit analysis they offer.

Our marginal abatement cost curve (MACC) is a useful tool for strategic planning to achieve our interim targets. Projects are high graded based on life cycle cost ability to scale, incremental value generated and volume of emissions abated. The MACC shown below is illustrative.

To date, Chesapeake has invested more than \$30 million on emissions monitoring and reduction initiatives. Most of this investment was dedicated to retrofitting more than 19,000 pneumatic devices, offering significant emissions reductions. Chesapeake is actively engaged in the evaluation of and investment in emerging technology as we continue to chart our path to net zero.

MACC: Evaluating Emissions Abatement Opportunities



The above are examples of reduction opportunities and not exhaustive of all that Chesapeake is evaluating.

(1) Our baseline includes those assets we owned at YE 2020: Eagle Ford, legacy Haynesville, legacy Marcellus and Powder River Basin.
(2) Inclusive of acquisitions and divestitures made during that time period.

We continue to identify and implement emissions reduction opportunities across the organization.

Strategies	Implementation
<p>Advanced Emissions Assessment <i>Better understand our emissions profile and adopt consistent industry methodology</i></p>	<ul style="list-style-type: none"> • Track and integrate data from fixed methane emissions monitoring technology • Partner with industry peers and third parties to continuously improve the accuracy of emissions inventories • Join OGMP 2.0 Initiative
<p>Tangible Emissions Reductions <i>Utilize technology, best practices and energy efficient operations to reduce emissions</i></p>	<ul style="list-style-type: none"> • Progress more efficient facility design • Retrofit pneumatic devices • Reduce well venting from liquids unloading • Power drilling and completions fleets with alternative fuels where feasible • Deploying alternative technology (e.g. aerial methane detection and fenceline monitoring) to enhance LDAR
<p>Credibility and Transparency <i>Independent verification of processes with transparent disclosure of measurable progress</i></p>	<ul style="list-style-type: none"> • Partner with a third party to verify emissions data (as part of a larger ESG data audit) • Participate in RSG certification process that includes third-party validation of data processes
<p>Innovation <i>Adopt technology and engage in partnerships and investments to support a lower carbon future</i></p>	<ul style="list-style-type: none"> • Evaluate the use of geothermal or renewable microgrid technology powered by solar/wind to provide baseload power • Research the capability and capacity of natural gas-derived fuels like low carbon hydrogen and ammonia • Explore carbon capture opportunities including EOR and permanent sequestration • Engage in partnerships with peers, nonprofits and academic institutions working to enhance methane detection and emissions reduction technologies

Exploring Emerging Technologies, Partnering for Progress

We recognize that supporting these programs requires significant research and development capital, which involves a certain degree of risk. We're committed to spending capital to deliver improved performance in this area, and we're also exploring pooling resources with other companies for more efficient technology analysis and development. Part of our partnership strategy is centered on looking beyond Chesapeake's core upstream business and exploring opportunities with our midstream and downstream providers and the end users of our fuel.

In support of this commitment, we established our NEV team. This dedicated, cross-functional group explores and advances emerging technologies in low carbon energies to both support our net zero goal and help us capitalize on a lower carbon future. These possible investments, including geothermal, CCS, geologic energy storage and natural gas-derived fuels like low carbon hydrogen and ammonia, offer new ways for Chesapeake to enhance our strategies and diversify our portfolio.

As we invest capital in NEV projects, we do so with a goal of:



Maintaining positive return propositions and improving revenue generation



Driving lower end-use consumer costs



Leveraging technical and operational expertise




Replacing high emission energy sources


Our strategy for ACHIEVING NET ZERO

A key focus in our commitment to sustainability leadership is achieving net zero Scope 1 and Scope 2 GHG emissions intensity by 2035, inclusive of future acquisitions.

We will continue to allocate capital and dedicate resources to meaningful, economic emissions abatement and revenue-creating projects.




Advanced Emissions Assessment
Better understand our emissions profile and adopt consistent industry methodology



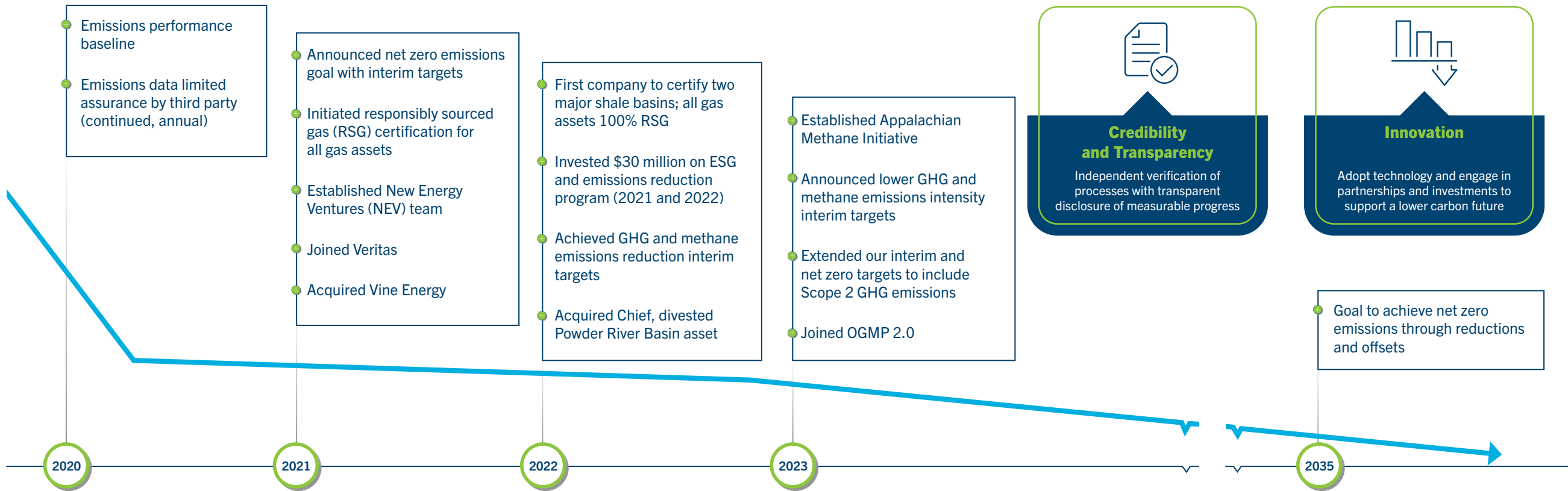
Tangible Reductions
Utilize technology, best practices and energy efficient operations to reduce emissions



Credibility and Transparency
Independent verification of processes with transparent disclosure of measurable progress



Innovation
Adopt technology and engage in partnerships and investments to support a lower carbon future



(1) Scope 1 and 2 GHG emissions intensity (metric tons CO₂e / gross mboe produced), Methane emissions intensity (volume methane emissions / volume gross natural gas produced).

TCFD Content Index

Our climate reporting follows the Task Force on Climate-Related Financial Disclosures (TCFD) framework. By disclosing through this framework, we offer high-quality information that enhances our transparency on the impacts of climate change to our business. We respond to each of the four TCFD disclosure categories noting our climate-related risks and opportunities. For additional sustainability-related disclosures, please review our [2022 Sustainability Report](#).

Disclosure Category	Description	Disclosure Location
Governance <i>Disclose the organization's governance around climate-related risks and opportunities.</i>	a) Describe the Board's oversight of climate-related risks and opportunities. b) Describe management's role in assessing and managing climate-related risks and opportunities.	Governance
Strategy <i>Disclose the actual and potential impacts of climate related risks and opportunities on the organization's businesses, strategy and financial planning where such information is material.</i>	a) Describe the climate-related risks and opportunities the organization has identified over the short, medium and long term. b) Describe the impact of climate-related risks and opportunities on the organization's business, strategy and financial planning. c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	Strategy & Risk Management, Portfolio Resilience, Net Zero Strategy
Risk Management <i>Disclose how the organization identifies, assesses and manages climate-related risks.</i>	a) Describe the organization's processes for identifying and assessing climate-related risks. b) Describe the organization's processes for managing climate-related risks. c) Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organization's overall risk management.	Strategy & Risk Management
Metrics and Targets <i>Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.</i>	a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk-management process. b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions and the related risks. c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	Net Zero Strategy, Metrics, Targets



Definitions & Notations

Defining Our Metrics

Scope 1: Direct GHG emissions that occur from our operations

Scope 2: Indirect GHG emissions associated with the purchase of electricity to support our operations

Scope 3: Indirect GHG emissions from the combustion and use of the oil and natural gas we produce

Methane emissions intensity: The ratio of direct methane emissions to gross natural gas produced

GHG emissions intensity: The ratio of direct GHG emissions released to gross annual production

Routine flaring volume: The amount of natural gas flared from the primary separator; flaring is the regulated and controlled combustion of natural gas (in alignment with AXPC)

Routine flaring intensity: The ratio of natural gas flared from the primary separator (in alignment with AXPC)

Abbreviations and Definitions

AIP: Annual Incentive Plan

Associated Natural Gas: Natural gas that is produced along with crude oil from oil wells

AXPC: American Exploration & Production Council

EPA: U.S. Environmental Protection Agency, an independent governmental agency tasked with environmental protection (including climate)

ESG: Environment(al), social and governance

GHG: Greenhouse gas

LDAR: Leak detection and repair

LNG: Liquefied natural gas

MBTU: Million British Thermal Units

MiQ: MiQ is a third party that developed a universally applicable certification standard for credibly assessing the methane performance of natural gas production around the world. The standard is independent, third-party audited, quantitative, and graded across a sliding A–F scale based on three metrics: methane emissions intensity, company practices, and methane detection technology deployment

Mtpa: Million tonnes per annum

Net Zero: Shorthand for “net zero emissions” or balancing the emissions you produce with removal of the same number of emissions; emissions are often defined as GHG and by scope

NEV: Chesapeake’s New Energy Ventures team explores and advances emerging technologies and commercial solutions in low carbon energies

OGI: Optical Gas Imaging, most often referring to a camera type used for infrared gas detection (leak detection)

Paris Agreement: An international treaty on climate change, adopted by 196 parties at the UN Climate Change Conference in 2015; overarching goal is to hold the global average temperature to below 2°C above pre-industrial levels (and ideally limit the increase to 1.5°C)

RSG: Responsibly sourced gas — natural gas production that is independently verified by third-party certification organizations as meeting high standards of environmental and social performance

Subpart W reporting: Quantification of GHG emissions annually according to the scope, boundaries and methodologies established by EPA’s GHG Reporting Program, 40 CFR 98

Notations

On Scope 3 emissions reporting:

As an independent, upstream company, Chesapeake has limited control over the final use and consumption of our oil and natural gas production. For enhanced transparency, we’ve reported our estimated indirect Scope 3 emissions on an equity basis using Category 11 of the estimating petroleum industry value chain (Scope 3) greenhouse gas emissions reporting guidance by IPIECA/API (2016). The calculation methodology applies the EPA’s emission factors for listed fuel types. The estimated emissions reported represent the indirect end use GHG emissions of the products created from our liquid products and natural gas.

Chesapeake recognizes that stakeholder demand for reporting Scope 3 indirect emissions is rapidly evolving; however, it’s important to note that emissions-estimation methodologies are uncertain and subject to double counting along our value chain. Double counting may occur if entities report certain emissions as Scope 1 or Scope 2 for their organizations and then we include them in our Scope 3 total.



Forward-Looking Statements

Certain information within this report contains “forward-looking” statements related to Chesapeake Energy Corporation (the “Company”) within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”) and Section 27A of the Securities Act of 1933 and include statements based on management’s current assumptions and expectations, including statements regarding the Company’s (sustainability vision, sustainability performance, strategies, targets, goals, commitments and programs). Forward-looking statements reflect the Company’s current expectations and projections about future events at the time, and thus involve uncertainty and risk. The words “believe,” “expect,” “anticipate,” “will,” “could,” “would,” “should,” “may,” “plan,” “estimate,” “intend,” “predict,” “potential,” “continue,” and the negatives of these words and other similar expressions generally identify forward-looking statements.

It is possible that the Company’s future performance may differ from expectations due to a variety of factors including, but not limited to the following: the Company’s ability to achieve the strategic plans, goals, targets and commitments set forth in this Website and unexpected delays, difficulties, and expenses in executing against such plans, goals, targets and commitments, the volatility in commodity prices for crude oil and natural gas, the presence or recoverability of estimated reserves, particularly during extended periods of low prices for crude oil and natural gas during the COVID-19 pandemic; the ability to replace reserves; environmental risks, drilling and operating risks, including the potential liability for remedial actions or assessments under existing or future environmental regulations and litigation; exploration and development risks; competition, government regulation or other actions; public health crises, such as pandemics (including COVID-19) and epidemics, and any related government policies and actions; the potential disruption or interruption of the Company’s operations due to war, accidents, political events, civil unrest, severe weather, cyber threats, terrorist acts, or other natural or human causes beyond the Company’s control; and the Company’s ability to identify and mitigate the risks and hazards inherent in operating in the global energy industry, and the other risk factors discussed in the Company’s Annual Report on Form 10-K for the year ended December 31, 2022 and any subsequently filed Annual Report on Form 10-K, Quarterly Reports on Form 10-Q or the Company’s other filings with the Securities and Exchange Commission.

It is not possible to foresee or identify all such factors. Any forward-looking statements in this Website are based on certain assumptions and analyses made by the Company in light of its experience and perception of historical trends, current conditions, expected future developments, and other factors it believes are appropriate in the circumstances. Forward-looking statements are not a guarantee of future performance and actual results or developments may differ materially from expectations. While the Company continually reviews trends and uncertainties affecting the Company’s results or operations and financial condition, the Company does not assume any obligation to update or supplement any particular forward-looking statements contained in this Website. Furthermore, while future events discussed in this Website may be significant, any significance should not be read as necessarily rising to the level of materiality of certain disclosures included in our SEC filings. In addition, many of the disclosures and performance metrics used and referred to in the plans, goals, targets and commitments set forth in this Website continue to evolve and are based on management expectations and assumptions believed to be reasonable at the time of preparation but should not be considered guarantees. The standards and performance metrics used, and the expectations and assumptions they are based on, have not unless otherwise expressly specified, been verified by any third party. In addition, while we seek to align these disclosures with the recommendations of various third-party frameworks, such as the Task Force on Climate-Related Financial Disclosures (“TCFD”), we cannot guarantee strict adherence to these framework recommendations. Additionally, our disclosures based on these frameworks may change due to revisions in framework requirements, availability of information, changes in our business or applicable governmental policy, or other factors, some of which may be beyond our control.



COMMUNICATE WITH THE COMPANY

Board of Directors


866-291-3401

TalktoBoD@chk.com

Investor Relations

405-935-8870

ir@chk.com

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