

2021 Climate Risk Report

PIONEER
NATURAL RESOURCES



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Message from the Chairman of the Board

J. Kenneth Thompson

“ The ongoing global pandemic has put this framework to the test, and we are pleased to see that our strategy of low-cost and low-emission operations – combined with a longstanding commitment to low-leverage – positions Pioneer to succeed through one of the most volatile periods in our industry’s history. ”

Pioneer’s Board of Directors (Board) and executive leadership team acknowledge the global threats posed by climate change due to increasing greenhouse gas (GHG) emissions and the resulting impact on rising global temperatures. Pioneer also recognizes the importance of providing accessible, reliable, low-cost, low-emission oil and gas resources that serve to enhance and improve the well-being and economic development of communities around the world. Meeting this dual mandate of supplying the world with affordable and reliable energy, while significantly reducing GHG emissions is a tremendous challenge. We realize this effort will not only require global coordination and participation, but also immediate action by the oil and gas industry.

As one of America’s leading energy companies, we are uniquely positioned to provide the world with low-cost, low-emission oil and gas from our world-class Permian Basin assets, while concurrently pursuing our ambition to reduce our Scope 1 and Scope 2 emissions to net zero by 2050. As illustrated in this report, Pioneer has one of the lowest breakeven costs in the world, combined with a low CO₂ intensity (per barrel equivalent), which is a critical combination when considering our economic and environmental resiliency through the global energy transition.

Our Board and executive leadership team recognize the importance of adhering to the principles of the Task Force on Climate-related Financial Disclosures (TCFD) in a world impacted by climate change. We are committed to communicating transparently with our investors and stakeholders regarding the company’s climate resiliency. We began implementing TCFD principles at Pioneer from a solid foundation, with robust scenario planning, corporate governance, and environmental and risk management processes already in place. We are on track to fully implement TCFD reporting protocols by the end of 2022 – one year earlier than originally expected.

This work has not only elevated climate resiliency discussions at Pioneer, but it has also helped us develop a framework to evaluate corporate oversight, strategy, risks and goal-setting processes at the Board and executive leadership levels.

The ongoing global pandemic has put this framework to the test, and we are pleased to see that our strategy of low-cost and low-emission operations – combined with a longstanding commitment to low-leverage – positions Pioneer to succeed through one of the most volatile periods in our industry’s history. Our low-leverage and low-cost financial position, combined with our experienced leadership team, gave us the confidence to pursue two opportunistic and accretive acquisitions: Parsley Energy, Inc. (Parsley) and DoublePoint Energy (DoublePoint).

These additions resulted in Pioneer becoming the largest oil and gas producer in the Permian Basin and the largest oil producer in the state of Texas, along with having one of the largest future drilling inventory portfolios in the United States.

We expect our top-tier assets to continue to competitively provide the world with oil and gas resources, even in a net zero world. With extensive oversight from Pioneer’s Board and executive leadership team, combined with the leadership of our Environmental, Social & Governance (ESG) Task Force, we are pleased to publish Pioneer’s inaugural Climate Risk Report.

Pioneer’s metrics and targets are based on an operationalized plan that was developed after soliciting stakeholder feedback, and we are confident that we are following best practices and leading the way among independent oil and gas companies. We are currently evaluating Scope 3 GHG emissions related to our oil and gas production and recognize that they are an important consideration for many of our stakeholders.

We view this report as a beginning. We plan for it to be an evolving exercise through which Pioneer will regularly engage with our stakeholder community, while continuing to develop our understanding of the impacts of the energy transition and climate change on our business. While we recognize the risks associated with climate change (as discussed in this report), we believe our strategy, governance, operational efficiency, capital discipline and best-in-class portfolio positively position Pioneer to meet both the opportunities and challenges of the foreseeable future, as well as the expectations of shareholders and other stakeholders. Our low-cost, low-emission oil and gas and strong balance sheet strategy positions Pioneer to continue as a leading American energy provider, and our governance, scenario-planning and risk-management processes continue to mature and enhance the viability of the company in the decades to come.

Thank you for your interest in Pioneer and our ESG and climate-related initiatives.

Sincerely,

J. Kenneth Thompson

Chairman of the Board of Directors

2021 TCFD Highlights

GOVERNANCE



Increased the weighting of Health, Safety and Environment (HSE) and ESG performance in executive incentive compensation goals from 10% to 20%



Restructured the Board's Sustainability Reporting Committee, which is comprised of chairpersons of our standing Board committees, and updated the name to the Sustainability and Climate Oversight Committee, acknowledging the expanded climate-risk oversight scope of the committee



Engaged external experts to provide energy transition views and related scenarios with respect to future oil and gas demand; these third-party analyses allow the Board and executive leadership team to assess the impact on the company related to advancements in climate policy, energy transition technology and consumer preferences



Board and executive leadership engaged with major shareholders, as part of an ongoing process, to solicit their viewpoints on climate risk and understand any changes in their perspectives



Continued our long-standing position to advocate for the federal regulation of methane emissions for the upstream oil and gas sector and supported the Texas Railroad Commission's work to limit flaring

STRATEGY



Tested Pioneer's strategy over a variety of time frames and industry outlooks, assessing the financial viability of the organization given potential changes in oil and gas demand, commodity prices and carbon costs



Evaluated our core competencies and human capital to assess the company's ability to pivot during the energy transition



Assessed the climate resiliency of both Parsley and DoublePoint assets and identified operational practices that would lead to immediate reductions in emissions intensity and longer-term synergy opportunities to reduce Pioneer's combined-asset GHG footprint



Investing in two energy transition funds to increase financial and technical exposure to the energy transition

2021 TCFD Highlights

RISK MANAGEMENT



Integrated physical and transition climate risks into our existing Enterprise Risk Management process



Measured climate risks based on impact, likelihood and velocity of the potential risk event, with each analysis reviewed by the Board and the executive leadership team

METRICS AND TARGETS



Announced an ambition to achieve net zero emissions for Scope 1 and Scope 2 by 2050



Strengthened emissions-intensity targets due to strong performance in 2020:

- Updated GHG emissions-intensity target from a 25% to a 50% reduction by 2030 from a 2019 baseline
- Updated methane emissions-intensity target from a 40% to a 75% reduction by 2030 from a 2019 baseline

METRICS AND TARGETS



Maintained the goal of limiting annual flaring to less than 1% of our natural gas production – Pioneer's actual flaring during 2020 of 0.21% was significantly below Rystad Energy's Permian Basin producer average of 2%



Formally endorsed the World Bank Zero Routine Flaring by 2030 initiative, with an aspiration to end routine flaring by 2025



Integrating the emissions footprints attributable to the Parsley and DoublePoint acquisitions with Pioneer's updated emissions – and flaring-reduction targets



Established a target to limit the use of freshwater during completion operations to 25% by 2026

About this Report

Pioneer's Inaugural Climate Risk Report

“ We believe the TCFD recommendations represent an important step toward establishing a widely accepted framework for climate-related financial risk disclosure that should allow companies to be assessed on a comparable and consistent basis. ”

This inaugural Climate Risk Report aims to increase the transparency of Pioneer's progress toward integrating climate-related risks and opportunities into our governance structure, business strategy and planning processes, and risk management practice. The report is structured in accordance with the four core elements of TCFD: Governance, Strategy, Risk Management, and Metrics and Targets.

Governance

This section describes our governance structure, including the role of the Board of Directors and executive management in identifying, assessing and mitigating climate-related risks and opportunities

Strategy

This section outlines our planning time horizons, how climate risk and opportunities are integrated into our planning strategy processes, and our climate-related scenario analysis and business resiliency

Risk Management

This section explains the processes used to identify, assess and manage climate-related risks and opportunities and Pioneer's assessment of the most relevant climate-related risks and opportunities

Metrics and Targets

This section describes the company's climate-related targets and provides the data used to assess performance

We believe the TCFD recommendations represent an important step toward establishing a widely accepted framework for climate-related financial risk disclosure that should allow companies to be assessed on a comparable and consistent basis. Pioneer understands the importance of communicating climate resiliency to stakeholders and believes that utilizing the TCFD framework will enhance our long-term business strategy and outlook.



Governance

Pioneer's Board and executive management team recognize that robust corporate governance ensures alignment with the long-term interests of our stakeholders and strengthens our culture, provides accountability and, ultimately, improves the sustainability of our organization.

Governance

2021 Climate Risk Report

Pioneer leadership believes consideration of climate-related risks and opportunities should be integrated into our policies, processes and culture. As a company, we employ an integrated approach to managing climate-related risks and opportunities to better inform decisions and implement business strategies that are reviewed against climate impacts across short-, medium- and long-term time horizons.

Additional information on Pioneer Corporate Governance practices and policies are described in our **Corporate Governance Guidelines**, **Proxy Statement** and **Sustainability Report**.

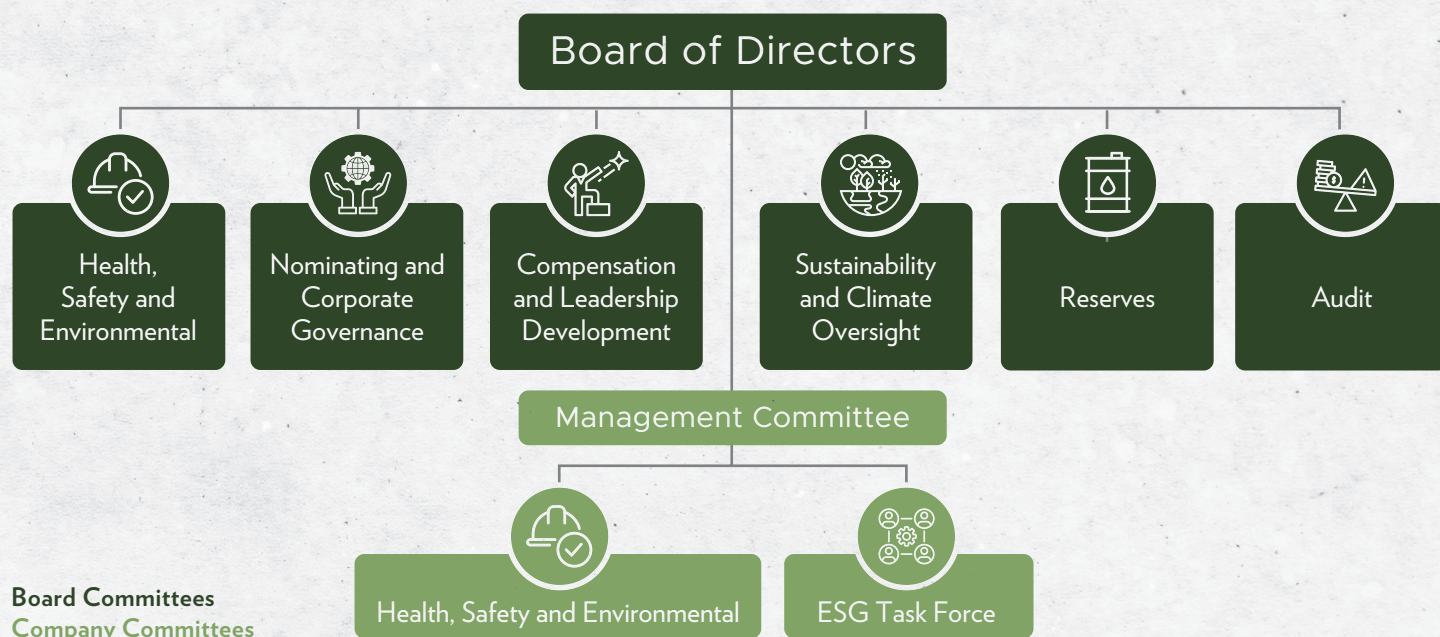
Board of Directors

Pioneer's Board is actively engaged in overseeing and monitoring the company's enterprise risks and long-term strategy. Over the past several years, climate-related discussions by the Board have increased in frequency as climate-related risks and opportunities have become more embedded in the Board's business oversight function and are evaluated at least quarterly, if not more often. As part of our strategic planning process, management periodically prepares and reviews scenarios with the Board under varying assumptions to stress-test the company's business outlook for potential risks, including climate-related risks.

Our Board comprises 14 directors with diverse backgrounds, skills and professional experience in areas relevant to Pioneer's business and strategy. Pioneer recently added a new Board member who brings extensive experience in ESG, climate change and sustainable investments and is one of two directors who serve on large investment management company boards.

The Board remains apprised of the latest climate issues by periodically participating in discussions with management and outside experts on a variety of oil and gas supply and demand scenarios and energy transition topics. Additionally, directors and members of executive management regularly engage with shareholders and other stakeholders on various issues (including ESG and climate) to solicit feedback on Pioneer's corporate governance, sustainability and environmental programs. The Board recognizes the value of regularly conducting external outreach to ensure a variety of perspectives are considered. It is this balance of diversity, experience and external engagement that we believe enables Pioneer's Board to effectively provide oversight of the company's climate-related risks and opportunities.

Additional detail on our Directors' qualifications and recent actions resulting from Pioneer's external engagement process can be found in the latest **Proxy Statement**, **Sustainability Report** and on **PXD.com**.



Board Committees

In addition to its oversight of climate-related sustainability issues, the Board has delegated the oversight of specific climate-related risks to the following four committees:

SUSTAINABILITY AND CLIMATE OVERSIGHT COMMITTEE

In 2021, the Sustainability Reporting Committee was renamed the Sustainability and Climate Oversight Committee to better reflect its expanded climate-risk oversight responsibilities. The Sustainability and Climate Oversight Committee is led by the Chairman of the Board and is comprised of the chairs of the Board committees. The committee is responsible for the oversight of the company's climate strategy as well as overseeing Pioneer's Sustainability Report and Climate Risk Report.

HEALTH, SAFETY, ENVIRONMENTAL (HSE) COMMITTEE

The HSE Committee oversees the company's management of current and emerging HSE and climate change-related issues and trends in legislation, as well as proposed regulations affecting the company. This

committee is also responsible for establishing, and monitoring, with input from the Management Committee, certain environmental and climate-related targets, such as emissions-intensity reduction targets.

NOMINATING AND CORPORATE GOVERNANCE COMMITTEE

The Nominating and Corporate Governance Committee considers whether Board governance, structures and processes are in place to appropriately address oversight of significant social, governance, public policy trends, issues and concerns, and other sustainability and corporate responsibility matters that could affect Pioneer's business and reputation, including climate-related risks and opportunities.

COMPENSATION AND LEADERSHIP DEVELOPMENT COMMITTEE

The Compensation and Leadership Development Committee is responsible for aligning executive compensation with company performance, including the incorporation of climate-related goals established by the HSE Committee, such as emissions-intensity and freshwater reduction targets.

Executive Management

Pioneer's Management Committee, which includes the Chief Executive Officer and 14 additional members, is responsible for establishing and executing the company's climate-related strategy, assessing climate-related risks and opportunities, and establishing and tracking climate-related targets, all of which are overseen by the Board. The Management Committee remains apprised of the latest climate issues by reviewing internal climate-related research and participating in climate-related discussions with Pioneer subject-matter experts and outside experts on a variety of oil and gas supply-and-demand scenarios and energy-transition topics.

With oversight of the Board, the Management Committee establishes annual targets and goals and routinely assesses performance, including measurement of progress against the company's climate-related targets and goals. Through Pioneer's annual incentive program, Management Committee members have financial incentives related to emission-reduction targets and other climate-related improvement objectives. Beginning in 2021, the weighting of HSE and ESG performance in executive incentive compensation goals increased from 10% to 20%. During annual goal setting, management, with input and approval from the Board, defines measures of attainment for each goal to objectively evaluate performance. This proactive, incentive-based approach focuses the organization on key climate-related goals to achieve Pioneer objectives and targets.

The Management Committee has established two multi-disciplinary sustainability groups to assist with the tactical aspects of strategy development and operational execution of climate-related initiatives: the ESG Task Force and the HSE Committee.

ESG Task Force

Established in 2020, the ESG Task Force is comprised of a subset of the Management Committee, officers and key leaders from various disciplines across the company. Pioneer's ESG Task Force is responsible for shaping our long-term ESG strategy and overseeing Pioneer corporate ESG goals and related reporting. The ESG Task Force ensures project resources are available and provides strategic direction and expert advice, including

reviewing and approving the company's Sustainability Report and Climate Risk Report content, along with other relevant publications. Including leaders from various disciplines across the company on the ESG Task Force allows for a broader discussion of climate-related decisions impacting strategy, sustainable operating practices, risk management and reporting throughout the organization. During 2021, the ESG Task Force objectives included the following:

- Working with the Board to enhance its ESG oversight responsibilities
- Evaluating a long-term net zero ambition, complemented by interim emission-intensity targets for GHG, methane and flaring intensity
- Aligning Pioneer risk management and decision-making processes with TCFD and Sustainability Accounting Standards Board (SASB) principles
- Implementing strategic and operational activities to position Pioneer to meet its long-term ESG continuous improvement targets
- Confirming the accuracy of data collection and reporting of key ESG measures, including GHG emissions and its constituent parts
- Progressing Supply Chain due diligence on the performance of our contractors, suppliers and service-providers related to ESG and human rights
- Commissioning and completing an internal audit review of the 2021 Sustainability Report
- Commissioning and completing the 2021 Climate Risk Report

Company-level HSE Committee

Pioneer's HSE Committee (HSEC) sets the company's HSE vision and strategy for our operations. Executive, technical and field staff participate in the cross-functional committee. The committee convenes monthly to manage HSE issues, regulatory compliance and operational initiatives, and provides quarterly updates to the Board HSE Committee. The development and implementation of HSEC initiatives lies with seven subcommittees that work to enhance our HSE programs:

- Incident Management
- Contractor HSE
- Safe Driving
- Proactive HSE
- Air Emissions
- Spills and Waste Management
- Management of Change



Strategy

The global energy landscape is undergoing a transformational shift to a more sustainable and lower-carbon future. While the direction of the energy transition is clear, the pace of technological adoption and the precise pathway of the transition remains unclear.

Strategy

2021 Climate Risk Report

Today, hydrocarbons account for the largest share of primary energy demand globally – products derived from hydrocarbons are found in virtually every aspect of society. As communities around the world continue to realize the benefits of available, reliable and affordable energy, we expect hydrocarbons will remain critical to the overall energy landscape for some time. Pioneer addresses this hydrocarbon demand with responsibly developed, low-emission and low-cost sources of supply, and we anticipate Pioneer will continue to play a crucial role in the energy transition.

Pioneer's business strategy is to be the lowest-cost U.S. shale oil and gas producer, with the lowest emissions footprint. We are proactively managing climate-related risks by employing leading operational practices, deploying emissions-reduction technologies, collaborating with companies throughout our value chain, and investing in technologies to enable Pioneer to thrive during the energy transition, while continuing to evaluate future energy demand scenarios and their impact on potential energy transition pathways.

We believe integrating climate-related risks and opportunities improves our existing systems, processes

and culture, enabling better decision-making while positioning Pioneer to continue delivering long-term shareholder value through the responsible deployment of capital and talent.

We utilize the following short-, medium- and long-term time frames during our risk assessment and strategy/planning processes:

Planning Time Horizons

SHORT-TERM (0-3 YEARS)

Driven by our near-term operational budgeting and planning schedule

MEDIUM-TERM (3-10 YEARS)

Aligns with the time frame of our strategic and financial planning process

LONG-TERM (10+ YEARS)

Reflects a variety of supply and demand scenarios that are underpinned by broader changes to the macro environment such as potential structural changes to supply and demand fundamentals, technology advancements and emerging trends

Integrating Climate into *Strategy* and Planning Processes

This section is designed to highlight the robust nature of Pioneer's strategic planning processes from a short-, medium- and long-term perspective. The different time frames allow for different future action plans, each measured by priority, but all timelines align around the central strategy, which includes:

- ***Maintaining a strong balance sheet*** and significant financial flexibility
- ***Returning free cash flow*** to shareholders via a stable and growing base dividend and a variable dividend
- ***Utilizing the company's scale*** and technology advancements to reduce costs and improve efficiency
- ***Delivering economic production*** and reserve growth through drilling, completion and production improvement activities
- ***Training employees and contractors*** to perform their jobs in a safe and environmentally responsible manner
- ***Maintaining industry-leading sustainable development*** and environmental stewardship efforts
- ***Researching and investing*** in select opportunities associated with the energy transition to potentially expand the company's business and inform its strategic planning process

SHORT-TERM PLANNING (0-3 YEARS)

Pioneer's approach to budgeting and planning utilizes a bottoms-up approach, with detailed scheduling of activity on a well-by-well basis. Over many years, we have built a variety of in-house tools and leveraged outsourced software to provide visibility into an operationalized three- to five-year schedule. This capability allows Pioneer to forecast drilling, completion, facility, water and other infrastructure requirements to mitigate emissions as well as takeaway and processing constraints on a location-specific basis. This also enables us to assess potential risks to execution and capital efficiency, allowing the company to select the most economically efficient and operationally feasible drilling locations for near-term development. Ample flexibility is then afforded for scheduling changes driven by operational or acute risks (e.g., extreme weather events, infrastructure availability and supply chain constraints) and efficiency improvements.

Additional near-term considerations include the potential for abrupt policy risks associated with changes in environmental standards. As described in our Sustainability Report, Pioneer is focused on best-in-class environmental stewardship and empowers our team to thoughtfully invest in a development program that meets the company's standards in efficiency as well as environmental stewardship and safety. This is reflected in our environmental performance relative to peers as seen in the Sustainability Report.

If regulatory standards are modified by federal or state legislators, we are confident that our track record and operational philosophy will continue to lead the industry. For example, we have been a consistent leader in advocating for the federal regulation of methane emissions during the Obama and Biden administrations and opposing the rollback of methane emissions that was proposed by the Trump administration. Meanwhile we have also supported the Texas Railroad Commission's work to limit flaring and have designed our facilities to reflect this leadership position.

MEDIUM-TERM STRATEGY (3–10 YEARS)

Early in 2020, Pioneer established an internal scenario-planning process whereby an extensive list of forces (i.e., oil supply and demand; potential regulatory changes, including adoption of carbon abatement regulations; the pace of energy transition) affecting Pioneer and the broader energy industry were compiled and ranked in terms of impact and uncertainty. These forces are identified in a collaborative working session that includes a cross-functional team and the Management Committee. These were utilized to develop four distinct future scenarios with each scenario including several medium-term climate-related risks (see the Risk Management section of this report).

The primary objective of this process is to stress-test Pioneer's business strategy and identify opportunities to improve the resiliency of the business over a medium-term time frame. Some of the resiliency improvements that were influenced by the scenarios included evaluating a Permian Basin consolidation strategy and progressing our focus on reducing emissions. This exercise ultimately led to the Parsley and DoublePoint acquisitions, which firmly align with our low-cost and low-emissions intensity strategy. Both acquisitions enable significant cost-savings through operational and resource synergies, and they also offered an opportunity to improve the emissions intensity on the acquired assets by employing Pioneer's environmentally conscious standard operating practices.

To inform Pioneer's future world view, the company monitors key leading indicators, which are routinely reviewed by the Management Committee and the Board. By remaining apprised of the rate of change of these indicators and the collective sentiment of other key factors impacting Pioneer and the broader energy industry, the company aims to educate and inform the Board and executive leadership team in order to improve strategic decision-making and planning around the various energy transition pathways.

Additionally, in conjunction with the medium-term strategy review process, the company models the various assumptions inherent to each scenario and conducts a financial impact assessment by stress-testing our corporate 10-year financial model. The result of this medium-term financial impact assessment is presented to both the Management Committee and the Board, and a summary of that analysis is provided in this report.

LONG-TERM STRATEGY (10+ YEARS)

On an annual basis, Pioneer conducts a long-term strategy review process, with active involvement from the Management Committee and the Board. We compare a variety of well-recognized long-term energy scenarios published by government agencies, large energy companies and research firms, including scenarios from the International Energy Agency (IEA) and IHS Markit. We select three or four scenarios that we believe best represent the range of potential outcomes and utilize the assumptions from each of the selected scenarios to stress-test Pioneer's full life-of-field development model, resulting in Net Asset Value (NAV), resource and inventory impact assessments. In conclusion, Pioneer's scenario and strategic planning process is not designed to predict a given outcome. Instead, the process is intended to test whether we have a strategic plan that is resilient through a variety of potential outcomes over various time frames.

Climate Scenario Analysis and Resiliency Assessment

As part of the Pioneer strategic planning process for the medium- to long-term future, the company leverages a combination of internal, proprietary scenarios in conjunction with expert analysis from the IEA to assess potential implications on our business model, including operating costs, capital expenditures, regulatory and environmental/climate-related developments, commodity price outlooks, and supply and demand changes. These efforts help to assess the potential risks to our portfolio in a lower-carbon energy world. IEA's World Energy Outlook (WEO) helps to examine supply and demand, along with related commodity and carbon pricing. Since 1993, the IEA has provided medium- to long-term energy projections using the World Energy Model (WEM) – a large-scale simulation model designed to replicate how energy markets function. The WEM is the principal tool used to generate detailed sector-by-sector and region-by-region projections for the WEO scenarios.

Additionally, Pioneer engages private commodity market analysis firms to provide us with industry outlooks and economic projections, which are utilized to test management's assumptions of future business conditions. These tools are used to assess potential impacts on global fossil fuel demand and our long-term business prospects, including key aspects of climate-related risks and opportunities.

The following scenarios were used for the purposes of the financial impact assessment summarized in this report:

PIONEER BASE CASE – The Pioneer Base Case assumes a Brent oil price of \$55 per barrel and NYMEX gas price of \$2.50 per one million British Thermal Units (MMBTU). The premise behind this scenario is supported by the view that oil and gas will continue to be a significant energy source needed to meet global demand over the long-term. Additionally, the Base Case assumes the current regulatory framework remains unchanged. Pioneer's assets are located in the Permian Basin of West Texas and the company is therefore not currently subject to a carbon price.

IEA STATED POLICIES – The Stated Policies Scenario, or STEPS, provides a scenario that reflects the direction in which today's policy ambitions would likely take the energy sector. Previously known as the New Policies Scenario, it has been renamed to highlight that it only considers the specific policy initiatives that have already been announced.

Per the IEA, in STEPS, coal demand declines between 2019 and 2040, while oil and natural gas demand grow 7% and 29%, respectively. Fossil fuels also make up 54% of the energy mix in 2040, supporting forecasted global spending by the oil and gas industry of about \$600 billion annually.

IEA SUSTAINABLE DEVELOPMENT – The Sustainable Development Scenario (SDS) maps out a way to meet sustainable energy goals in full, requiring rapid and widespread changes across all parts of the energy system. This scenario charts a path to keep

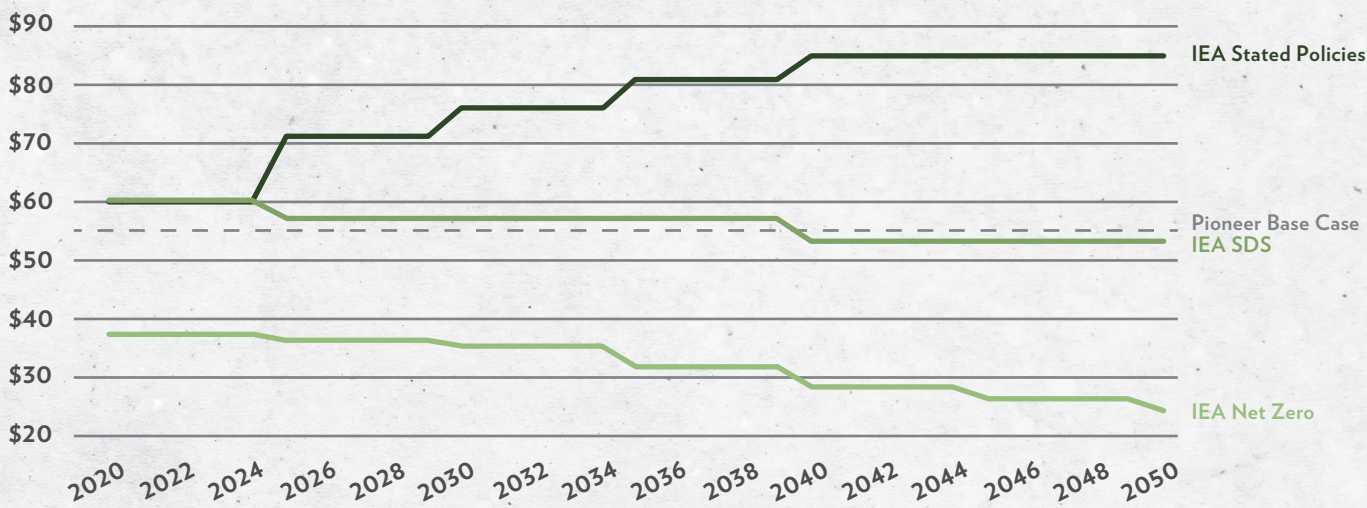
global warming to 1.8°C without relying on global net negative CO₂ emissions. It is fully aligned with the Paris Agreement to limit the rise in global temperatures to well below 2°C, while pursuing efforts to limit it to 1.5°C. The SDS is the most used scenario across the oil and gas industry to assess long-term resiliency.

In the SDS, investment continues in the oil and gas industry, albeit reduced to \$390 billion annually from the \$600 billion level in STEPS. While overall energy demand will decline in the SDS, hydrocarbon demand will still account for 46% of the energy mix which, according to the IEA, "creates a need for new upstream projects, even in rapid energy transition." (Attribution: 2020 WEO, page 21.)

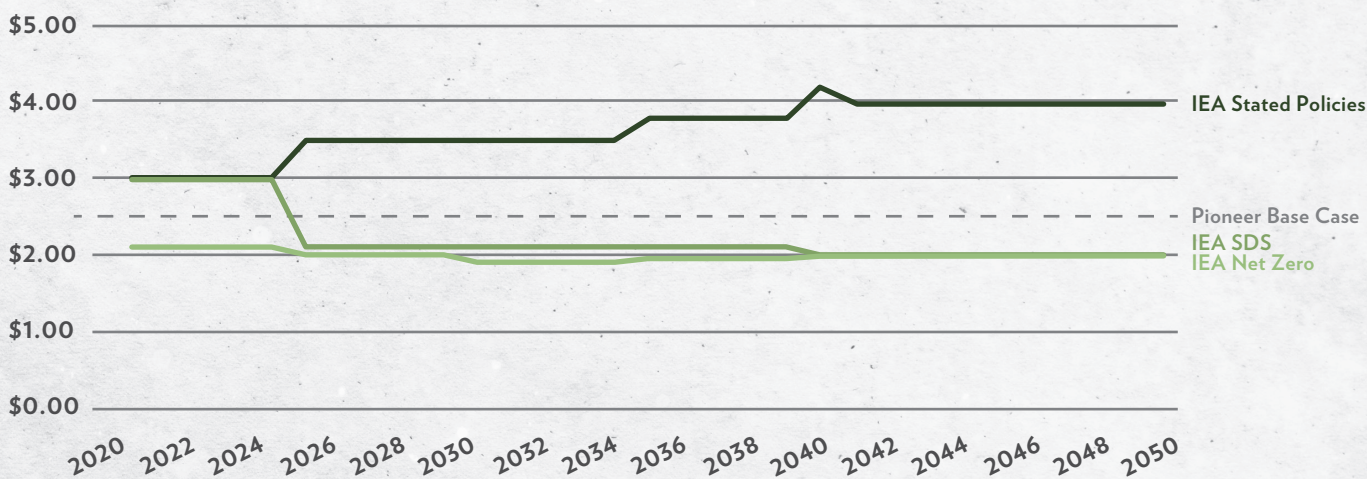
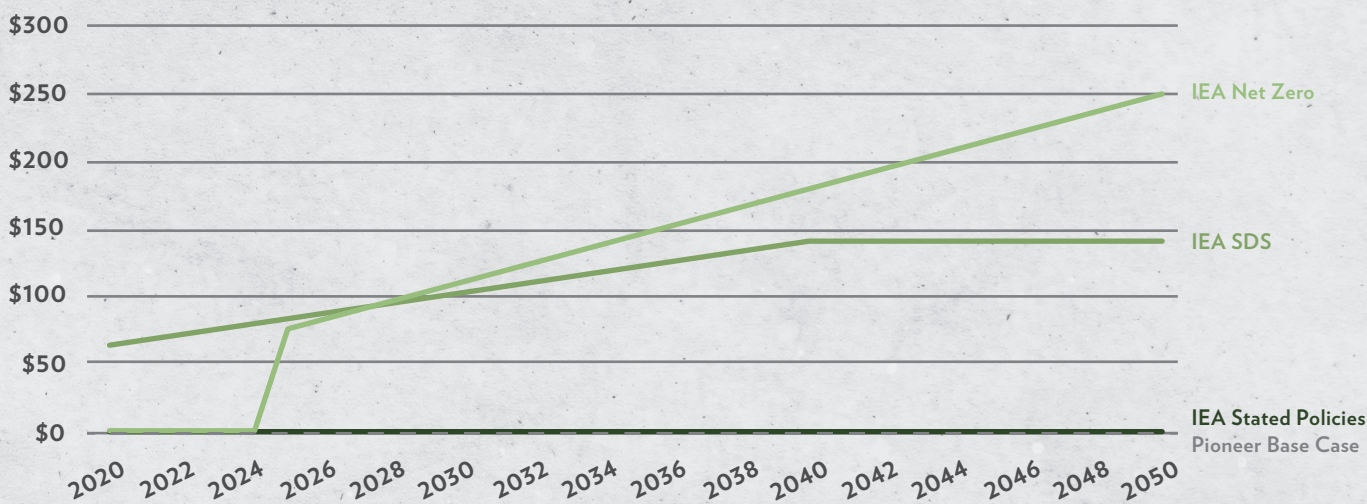
IEA NET ZERO – The Net Zero Emissions by 2050 (NZE50) examines what additional measures would be needed beyond SDS over the next 10 years to put global CO₂ emissions on a pathway to net zero emissions by 2050. It is in line with the pathways used by the Intergovernmental Panel on Climate Change for the Special Report on Global Warming of 1.5°C (IPCC SR1.5). According to the IEA, the primary goal of the NZE50 scenario is to inform policy makers, as they have the greatest capability to move the world closer to its climate goals, and current commitments made to date fall significantly short of what is required by the net zero pathway.

While the SDS showcases the importance of oil and gas investment for the global energy system, the NZE50 forecasts a decline in oil and gas demand on an absolute basis from 2019 levels by 2030. Despite the fact oil and gas continues to satisfy a significant portion of energy demand in multiple sectors (especially transport and industrial uses), NZE50 paints a challenging picture for the oil and gas industry through low-commodity and high-carbon prices.













BRENT OIL PRICE SCENARIOS (\$/BBL)






NYMEX GAS PRICE SCENARIOS (\$/MMBTU)

CARBON TAX (\$USD PER METRIC TON CO₂e)

IMPACT COMPARED TO BASE CASE SCENARIO

	IEA STATED POLICIES	IEA SUSTAINABLE DEVELOPMENT	IEA NET ZERO
Revenue			
EBITDAX/BOE			
Net Debt			
NAV			

 Positive Impact
  Negligible Impact
  Negative Impact

Revenue, EBITDAX/BOE and Net Debt reflect average impact over the next 10 years relative to the Base Case.

RESULTS OF SCENARIO PLANNING

Pioneer evaluated its future drilling inventory and activity leveraging the IEA STEPS, SDS and NZE50 scenarios to assess not only stranded asset risk but also the resiliency of our business model, including the impact to our revenue, earnings before interest, taxes, depreciation and exploration expense (EBITDAX) per BOE, net debt and net asset value (NAV) relative to Pioneer's Base Case. The following table highlights the key observations from this work.

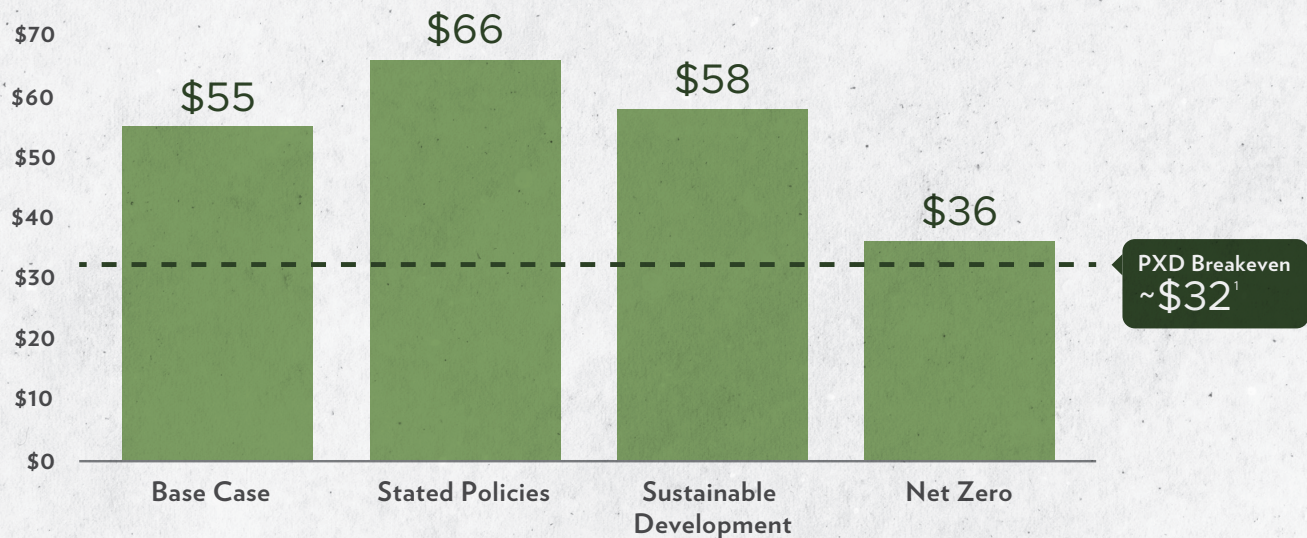
Of the scenarios evaluated, all but the NZE50 indicate a positive impact to the viability of Pioneer's long-term business strategy as compared to our Base Case. This outcome is primarily due to a higher commodity price outlook versus our assumed Base Case prices. When accounting for the various carbon price forecasts evaluated in these three scenarios, they have minimal impact on our business as compared to the Base Case. It is important to note that, in this analysis, the carbon pricing is attributable only to Scope 1 and Scope 2 emissions (not Scope 3). Pioneer has one of the lowest Scope 1 and Scope 2 carbon intensities among

producers in North America and is better situated than others to bear the cost of carbon prices associated with our emissions. Any effects of carbon pricing will be further muted as we continue to initiate additional emission-mitigation strategies. While Pioneer has not formally adopted an internal cost of carbon, we will continue to evaluate how various carbon-pricing mechanisms may impact our operations and the long-term development of our Permian Basin assets.

We are currently evaluating, testing and planning to review other technologies to further lower our emissions footprint throughout our internal operations. Once completed, these evaluations will better prepare us to fully appreciate the costs and benefits associated with emission-reduction opportunities in our organization, helping us better assess the ultimate impact of a price on carbon. Further, the company continues to monitor state and federal legislative and regulatory actions and intends to provide input on any pertinent policy proposals as they gain traction among policy makers. Pioneer's Board, executive leadership and subject matter experts will continue to be engaged on these issues.

PXD 2021 ESTIMATED CORPORATE BREAKEVEN PRICE vs. IEA PRICE FORECASTS

(IEA: 10-year average Brent pricing; \$/bbl)



1) Source: Bank of America Global Research estimates before dividend burden, February 2021. Brent pricing, which assumes a \$4 differential to WTI.

In contrast to carbon prices, changes in commodity prices materially impact our financial metrics when compared to our Base Case. In these scenarios, the effects of changes in commodity prices significantly outweigh the effects of a price on carbon. Based on this analysis, we believe our assets are resilient under the broad range of commodity and carbon prices evaluated.

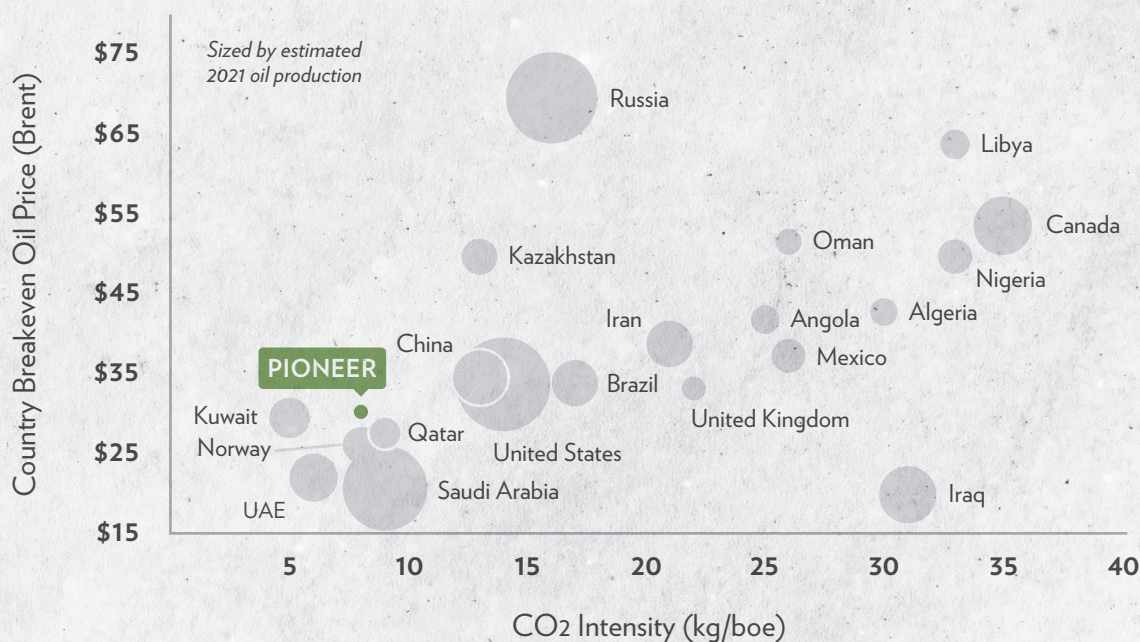
A significant result of this analysis is the resiliency of the company's EBITDAX, which is a proxy for cash flow. Pioneer is focused on returning free cash flow to shareholders, and it is important that our scenario analysis supports this thesis. Even in the context of the SDS scenario, the cash flow generated from our program closely matches our Base Case, affirming our long-term strategy.

This analysis not only highlights the robustness of Pioneer's strategy in the context of a lower-carbon economy, but also demonstrates the benefits of the company's strategic efforts in 2020 and 2021 to consolidate the best assets in the Permian Basin. The SDS scenario forecasts a continuing need for low-cost oil and gas in the world's economy in the coming decades, and it is those companies with the lowest-cost, lowest-emission barrels that are expected to retain their social license to operate.

Unlike the SDS, the NZE50 would result in lower realized prices for Pioneer's oil production. However, as discussed in more detail below, our work to develop our portfolio of low-cost, low-emissions-intensity oil and gas assets implies that Pioneer should be able to produce our assets profitably under the NZE50 in the short- to medium-term. As shown in the graph above, the average expected price over the next 10 years is still 10% above Pioneer's current breakeven oil price. This is a relatively advantageous position compared to many oil and gas producers.

While the NZE50 scenario is certainly a pathway to achieve net zero, it is not the only path, as made clear by the IEA. This scenario heavily depends on acute policy changes that would dissuade the utilization of fossil fuels and significantly increase energy costs and, as such, faces many headwinds. While we will continue to monitor leading indicators of the energy transition, our current low cost structure, position of scale and operational capabilities provide us the opportunity to adapt our strategy should aspects of the NZE50's assumptions come to fruition.

PIONEER IS PROVIDING THE WORLD LOW-COST, LOW CO₂-INTENSIVE OIL



1) Source: Rystad Energy, UCube and EmissionsCube (August 2021)

LOW-COST, LOW-EMISSION RESILIENCY

While each of the IEA climate scenarios described above assumes varying levels of policy, technology and consumer preference changes, a multitude of alternative pathways could also be realized. We believe Pioneer is in a strong operational position in these potential future scenarios due to the quality of the company's assets and our strong balance sheet, low-cost structure, low-emission intensity relative to other operators within the Permian and around the world, combined with our ambition to reduce our Scope 1 and Scope 2 emissions to net zero by 2050.

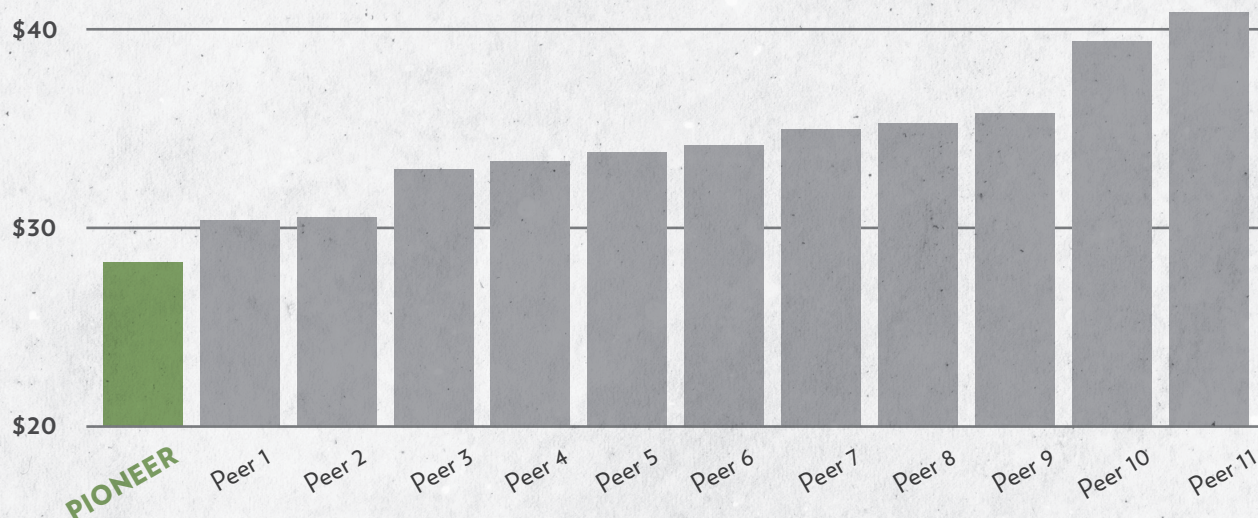
As shown in the chart above, Rystad Energy estimates Pioneer is among the lowest breakeven cost producers in the world, combined with a low CO₂ intensity per barrel equivalent. This combination is critical when considering the economic and environmental resiliency of global oil production in various climate scenarios. In the most carbon-constrained scenario, NZE50, the IEA forecasts oil prices will decline over the next several decades and global oil production will decline to 24 million barrels of oil per day (MMBOPD) in 2050

compared to 90 MMBOPD in 2020. This implies that only the lowest-cost, lowest-emission-intensive producers will remain viable in the NZE50.

The grouping of the six producing regions in the bottom left of the graph above, which includes Pioneer for purposes of comparison, boast the most economic and environmentally resilient oil production in the world. Incidentally, the 2021 estimated production attributable to this grouping is 18 MMBOPD, suggesting that this group (including Pioneer) should be viable even under NZE50.

Additionally, we believe we can maintain our low-cost leadership, which we achieve by combining our top-tier acreage position in the Permian Basin with our top-quartile drilling, completions, operations and supply chain performance, and industry-leading corporate overhead and interest costs. The chart below highlights Pioneer's peer-leading corporate breakeven pricing, which is below the average of our peers. We expect to continue to reduce our lower our corporate breakeven costs through efficiency improvements and adoption of new technologies in our operations.

2021 ESTIMATED CORPORATE BREAK-EVEN PRICE¹ (Pre-Dividend, WTI Pricing; \$/bbl)



1) Source: Bank of America Global Research estimates before dividend burden, February 2021. Peers include APA, CLR, COP, DVN, EOG, FANG (includes QEP), HES, MRO, OVV, OXY and XEC.

To summarize, our strategy focuses on maintaining industry-leading margins, while producing the lowest-emission-intensive barrel. This will enable Pioneer to remain resilient in the face of a decarbonizing economy and provide opportunities for Pioneer to further differentiate itself as the emphasis on achieving low-emission-intensive operations strengthens. Our analysis projects that Pioneer is expected to remain resilient even if demand erodes as the energy transition gains momentum.

The final piece of Pioneer's long-term strategy includes researching and investing in select opportunities associated with the energy transition. Pioneer is partnering and investing with select firms that have expertise in evaluating, executing and managing alternative energy investments. Investment

decisions (and related research) will be guided by Pioneer's evolving energy transition strategy, which includes:

- Maintaining a low-cost and low-emissions footprint via emerging and field-related technologies
- Mitigating residual carbon emissions where applicable
- Strategically supporting key energy transition technologies, which include battery storage, wind and solar renewable energy, and hydrogen and carbon capture, utilization and storage (CCUS)

These investments in the energy transition space, combined with research from Pioneer's technical teams, provides Pioneer the opportunity to expand its business and better inform its longer-term strategic planning process.



Risk Management

Pioneer recognizes that climate change risk is a global issue that may impact the way we operate our business. As such, we continue to seek ways to improve our understanding of climate-related risks and are integrating climate risk variables into our overall risk management process.

Risk Management

2021 Climate Risk Report

Enterprise Risk Management Process

Pioneer utilizes a comprehensive enterprise risk management process to identify, assess, manage and report our risks and opportunities, with the objective of aligning our risk management policies and procedures with our strategy.

The Board oversees Pioneer's enterprise risk management program, while the Management Committee evaluates, manages and executes day-to-day management activities across the major risk categories comprised of strategic, general business and industry, operational, financial, HSE, and regulatory risks. Key business and other relevant risks are tracked and monitored in a detailed enterprise risk management matrix that aligns those risks with any associated climate-related risks and the appropriate management oversight processes and practices. An annual assessment of these risks is supplemented by quarterly, or as needed, updates on selected issues.



COMPANY STRATEGY – Align company goals and risk identification with the strategic objectives of the Management Committee and Board of Directors

RISK IDENTIFICATION – Identify uncertainties that could impact the achievement of business objectives

RISK ASSESSMENT – Evaluate risks identified and possible impact to the company

RISK RESPONSE – Determine risk mitigation plans and responses to transfer, tolerate, terminate or otherwise address identified risks

MONITOR AND REPORT – Report risks in the enterprise risk management matrix and continuously monitor risks and associated responses



Each principal risk identified has an assigned owner, generally an officer of the company whose responsibilities are most impacted by the potential risk or whose function aligns with the mitigation of the risk. Each owner is responsible for managing the overall risk and the associated mitigation plan. Additionally, the company reviews each principal risk for associated climate-related risk. Potential climate-related risks are further divided into transition risks that stem from the world's transition to a lower-carbon economy or physical risks that stem from the physical impacts of climate change.

Our Internal Audit organization facilitates an annual risk identification and assessment process that includes input from all business groups and corporate functions through surveys and interviews. During this process, new risks are identified and discussed based on industry and regulatory developments, stakeholder engagement, and insights from external experts. Additionally, risk ratings, the likelihood and potential impact of all identified and assigned risks, as well as mitigation plans, are reassessed and updated by the owners. The updated enterprise risk management matrix is then distributed to the Management Committee for a holistic review to achieve alignment on risk identification, assessment and response.

Following review by the Management Committee, the updated enterprise risk management matrix is presented to the Board.

Although the risk identification and assessment process are formally executed on an annual basis, ***the enterprise risk management program is embedded into our day-to-day culture*** and the risk assessment, along with supplemental monitoring on selected issues, and is updated throughout the year as needed.

Integration of Climate-related Risk Assessment into the Overall Risk Management Process

Pioneer believes that the most effective approach to managing climate-related risks is by integrating assessment of these risks into our existing enterprise risk management process. Many of the risks associated with climate change (e.g., implementation of a carbon pricing tax) have been previously identified as part of our ERM process and categorized according to the underlying risk to the enterprise. We believe that the most robust management of enterprise risks occurs by fostering a corporate culture that encourages regular discussion and consideration of identified and emerging risks, including climate-related risks. We also ensure that the conclusions developed in our strategic and scenario planning processes are used to inform our ERM process in evaluating climate and other risks that could impact our business.

To capture the increasing importance of climate-related risks in the company's risk assessment, Pioneer has identified the following key focus areas:



HEALTH, SAFETY AND ENVIRONMENTAL CULTURE

Promoting a strong health, safety and environmental culture through employee engagement activities, training and communication. These programs are used to educate, empower and encourage Pioneer employees to focus on safety and environmental stewardship in their daily lives – both at work and at home.



EMISSION MITIGATION PRACTICES

Designing and constructing infrastructure that provides better and more efficient emission controls.



WATER MANAGEMENT

Minimizing the use of freshwater in completion activities by using reclaimed water and reusing produced water.



LANDSCAPE STEWARDSHIP

Engaging with third parties, including government agencies, researchers, consultants and others to source and explore new solutions for protecting local habitats and species in the areas where we operate.



SUPPLY CHAIN MANAGEMENT

Working with providers whose core values and climate-related policies align with our own. Our supplier onboarding process now incorporates data that benchmarks our suppliers on a variety of ESG criteria, including human rights, social and governance standards, as well as environmental policies and sustainable procurement methods. This program is designed to identify suppliers who are aligned with our ESG goals and policies and to monitor the relationship between our spend with those suppliers and their ESG scores.



INDUSTRY COLLABORATION

Working in a collaborative and transparent manner with industry peers and other energy companies to discuss climate-related risks and promote alignment on policies and procedures, should an event occur.

Climate-related risks are factored into our corporate decision-making processes, including during the evaluation of potential acquisitions or other business development opportunities. In evaluating the Parsley and DoublePoint acquisitions, due diligence procedures were completed to assess the impact on our GHG emissions as well as our aggressive emission-intensity reduction targets and industry-leading flaring reduction commitments. Consideration was given to how these companies' historical emissions performance aligned with our own and the type of mitigation efforts that would need to be implemented following the acquisitions.

Climate-related Risks and Opportunities

The energy transition will change Pioneer’s operational environment in a variety of ways. The impact of these developments to our business will depend on the speed and depth with which they occur. When considering the climate-related risks, TCFD identifies two categories of climate-related risks: physical and transitional. These risk categories include the potential financial impacts of climate change and are used to assist investors and companies as they evaluate longer-term strategic decisions regarding where and how to most efficiently allocate capital.



PHYSICAL RISKS

Having operated in the Permian Basin for decades, we have been able to identify and effectively mitigate most physical risks. For example, the winter storm experienced throughout Texas in early 2021 tested the readiness of our internal crisis management team and the resiliency of our operations. While our business was significantly impacted due to unprecedented downtime, we were able to quickly restore operations to normal conditions.

The company also mitigates business disruptions through strategic supplier relationships and by securing key materials and supplies critical to our operations. For example, Pioneer’s long-term agreements to secure casing and tubular supplies, local sand and reclaimed water provide physical risk mitigation. In addition, we also mitigate physical risks in the ways detailed in the Climate-related Risk Table.



TRANSITIONAL RISKS

Transitional risks present various changes when it comes to addressing the mitigation and adaptation requirements related to climate change. These risks have the potential to shift the supply and demand for fossil fuels, due to changes in consumer preferences, regulatory requirements, technology or other areas of impact. As shown in the Climate-related Risk Table, we evaluate and assess transitional risks on an ongoing basis.

Pioneer believes our business and risk management practices reduce the risk of damage to the company’s reputation and provide a long-term value accretion opportunity for our shareholders.



IDENTIFIED CLIMATE-RELATED RISKS

The following table reflects a subset of the climate-related risks identified in the company’s ERM process, specifically, those that are believed to have the potential to be the most material to our business.

CLIMATE-RELATED RISK TABLE

		Risk Driver	Potential Time Horizon	Potential Financial Impact	Risk Driver and Ongoing Mitigation Strategies
TRANSITION RISKS	MARKET	Energy and financial market volatility	Short-, medium- and long-term	Decreased revenue	<p>Commodity prices may fluctuate widely in response to relatively minor changes in supply and demand fundamentals and as result of consumer preferences towards less carbon-intense energy sources.</p> <p>Risk mitigation efforts include:</p> <ul style="list-style-type: none"> • Maintaining a low-net-debt to EBITDAX leverage ratio and low operating, corporate overhead and interest costs to ensure financial flexibility in a low commodity-price environment • Accessing global oil and gas markets • Utilizing derivative contracts to (i) reduce the effect of price volatility and (ii) support the company's annual budget and expenditure plans
	POLICY AND LEGAL	Carbon price implementation	Medium- and long-term	Increased operating expenses	<p>The company is not currently affected by carbon pricing; however, carbon pricing and/or carbon taxes exist in certain regions of the world. The company could become subject to carbon prices if future policy actions are enacted.</p> <p>Risk mitigation efforts include:</p> <ul style="list-style-type: none"> • Assessing the impact of a variety of potential policy changes, including a range of carbon prices • Monitoring emerging legislation and policy trends • Delivering on the company's GHG emissions intensity targets
		Restrictive regulatory regime	Short- and medium-term	<p>Increased capital expenditures</p> <p>Increased operating expenses</p> <p>Increased cost of capital</p>	<p>The oil and gas industry is regulated by numerous federal, state and local authorities. New climate-related legislation could affect the oil and gas industry by increasing the regulatory burden.</p> <p>Risk mitigation efforts include:</p> <ul style="list-style-type: none"> • Delivering on the company's Scope 1 and Scope 2 GHG emissions-intensity reduction targets • Engaging with policymakers to advocate for practical methane emission regulations • Continuing to implement operational policies and best practices that reduce GHG and methane emissions ahead of regulatory requirements

CLIMATE-RELATED RISK TABLE

		Risk Driver	Potential Time Horizon	Potential Financial Impact	Risk Driver and Ongoing Mitigation Strategies
TRANSITION RISKS	TECHNOLOGY	Technology advancements accelerate energy transition	Medium- and long-term	Decreased revenue	<p>Continued cost reductions in alternative energy technologies and/or the emergence of breakthrough technologies could accelerate fossil fuel substitution.</p> <p>Risk mitigation efforts include:</p> <ul style="list-style-type: none"> • Maintaining low operating, corporate overhead and interest costs • Preserving a strong balance sheet to ensure financial, strategic and operational flexibility • Investing in clean energy and energy-transition technologies
	REPUTATION	Attract and retain talented workforce	Medium- and long-term	Increased operating expenses	<p>The success of the company is dependent on its ability to identify, attract, develop, motivate, adequately compensate and retain highly skilled and qualified employees and management, which could be impacted by a negative perception of the company and/or the industry.</p> <p>Risk mitigation efforts include:</p> <ul style="list-style-type: none"> • Maintaining a recruiting presence at higher education institutions and local trade schools • Maintaining and communicating Pioneer's RESPECT values and Pioneer's focus on sustainability • Promoting the company's diversity, equity and inclusion (DEI) workforce policies • Fostering open communication about the role of hydrocarbons in the energy transition
		Negative perception of the company	Medium and long-term	Increased cost of capital	<p>ESG criteria are an increasingly popular way for investors and other stakeholders to evaluate the company's risk profile around ESG issues.</p> <p>Risk mitigation efforts include:</p> <ul style="list-style-type: none"> • Delivering on the company's GHG emissions intensity reduction targets and other key ESG goals • Publishing a Sustainability Report, Climate Risk Report and other related publications that enable quantitative and qualitative ESG analysis • Communicating regularly with the stakeholder community and soliciting feedback • Continuing the company's long-standing practice of supporting its local communities through its Corporate Giving program, which provides donations, grants and sponsorships to local charities • Participating in the Permian Strategic Partnership (PSP), which is working to improve local communities in the Permian Basin

CLIMATE-RELATED RISK TABLE

		Risk Driver	Potential Time Horizon	Potential Financial Impact	Risk Driver and Ongoing Mitigation Strategies
PHYSICAL RISKS	ACUTE	Increased severity of extreme weather events	Short-, medium- and long-term	Increased operating expenses Increased capital expenses	<p>Extreme weather events such as winter storms or flooding may negatively impact drilling, completions and production operations, midstream infrastructure and power providers, along with many other services.</p> <p><i>Risk mitigation efforts include:</i></p> <ul style="list-style-type: none"> • Maintaining robust business continuity programs and a crisis management response team that are routinely tested • Designing and installing production facilities and power distribution systems to minimize the potential impacts of extreme weather • Developing standard operating procedures for harsh weather conditions that prioritize employee safety and environmental safeguards • Utilizing Pioneer's remote operations monitoring system (SCADA) to provide real-time data, allowing our personnel to monitor operations safely during adverse weather and to efficiently dispatch resources to impacted locations
	CHRONIC	Shift in climate patterns	Medium- and long-term	Increased operating expenses Increased capital expenses	<p>Sustained changes to the climate can present operational challenges not previously experienced such as prolonged periods of excessive heat or drought conditions.</p> <p><i>Risk mitigation efforts include:</i></p> <ul style="list-style-type: none"> • Monitoring the impacts of weather conditions on equipment performance to better understand the challenges posed by sustained changes in climate patterns • Leveraging supplier relationships, including strategic relationships with key suppliers for casing and tubular goods, sand and reclaimed municipal water

CLIMATE-RELATED OPPORTUNITIES

Climate-related opportunities arise through efforts to mitigate and adapt to climate change, including improving resource efficiency, securing lower-emission energy sources, and producing differentiated oil and gas products for emerging markets. Climate-related opportunities include efficiencies that result in an increase in revenue, reduced operating and capital costs, and reduced insurance premiums.

Some of the climate-related opportunities that Pioneer has identified are noted below:

Opportunity	Description	Planned or Ongoing Projects/Activities
Resource Efficiency	Increase revenue through improved methane capture	<ul style="list-style-type: none"> • Upgrading legacy equipment to minimize emissions • Maximizing vapor recovery and minimizing fugitive emissions • Reducing flaring • Engaging in development of methane detection technologies (aerial and fixed-sensor monitoring) • Engaging with gas processors to improve schedule visibility and enabling sufficient takeaway capacity
	Increase production efficiencies and lower overall energy intensity	<ul style="list-style-type: none"> • Transitioning to electric compression at tank battery locations • Utilizing technology for remote monitoring and route optimization • Piloting electric drilling and completions equipment for improved efficiencies and lower emissions
	Improve water management flexibility through additional non-freshwater sourcing	<ul style="list-style-type: none"> • Expanding produced and reclaimed water reuse infrastructure • Evaluating potential opportunities in desalination <ul style="list-style-type: none"> - Investing in wastewater treatment facilities and securing long-term affordable reclaimed water supply
Energy Sourcing	Reduce energy costs and improve reliability	<ul style="list-style-type: none"> • Increasing field electrification through a combination of grid power utilization and renewable energy • Evaluating CNG, natural gas and hydrogen to replace diesel • Exploring opportunities to deploy in-field battery power storage solutions • Expanding the ~4,000 miles of power infrastructure owned by Pioneer
Products, Markets and Investments	Improve product pricing	<ul style="list-style-type: none"> • Testing methods to certify lower-carbon product intensity to potentially command premium pricing
	Bolster relevant global markets access by producing responsibly extracted oil and gas	<ul style="list-style-type: none"> • Continuing to transport product to the Gulf Coast allowing access to the global markets
	Invest in and increase exposure to the energy transition and low-carbon technologies	<ul style="list-style-type: none"> • Working with leading investment firms to gain knowledge and market insight in the renewable and energy transition space, develop renewable energy projects and pursue investment opportunities that could provide broader diversification opportunities into the clean energy technology sector

Please reference Pioneer's ***Sustainability Report*** for additional details.



Stakeholder Engagement

Pioneer prioritizes a constructive and transparent relationship with internal and external stakeholders to understand their views of perceived risks, the likelihood of the risks' occurrence and potential impacts. Our Investor Relations team facilitates communication with shareholders and answers questions about our business and ESG matters. Additionally, shareholder outreach occurs prior to the company's Annual Meeting to discuss matters to be voted on at the meeting. Following the Annual Meeting, our CEO and Chairman of the Board conduct shareholder outreach meetings to discuss a wide range of topics of concern. During 2020 and 2021, feedback from this engagement process covered a variety of topics, including strategy, risk management, executive compensation and ESG priorities. The topics covered in these discussions were collected, reviewed and shared with the Board.

In addition to shareholder engagement, Pioneer annually solicits feedback from ESG rating agencies, shareholder services and non-government organizations on our ESG practices and goals. Pioneer also engages with ESG rating agencies, experts and industry organizations to better align our ESG policies and disclosures with their stated priority issues for the upstream oil and gas industry.

Pioneer periodically conducts ESG materiality assessments to identify and prioritize sustainability topics that we believe are most significant to our stakeholders. The content prioritization of this report is the result of an ongoing process that considers internal perspectives, stakeholder feedback and relevant reporting guidelines.

We expect the content of our climate risk reporting to evolve as Pioneer assesses and responds to continued feedback and as changes to our business warrant. Our Annual Report and financial filings include material risks in compliance with regulatory requirements or that we believe are material to our investors. Detailed analysis of our financial performance can also be found in our **Annual Report**.



Metrics and Targets

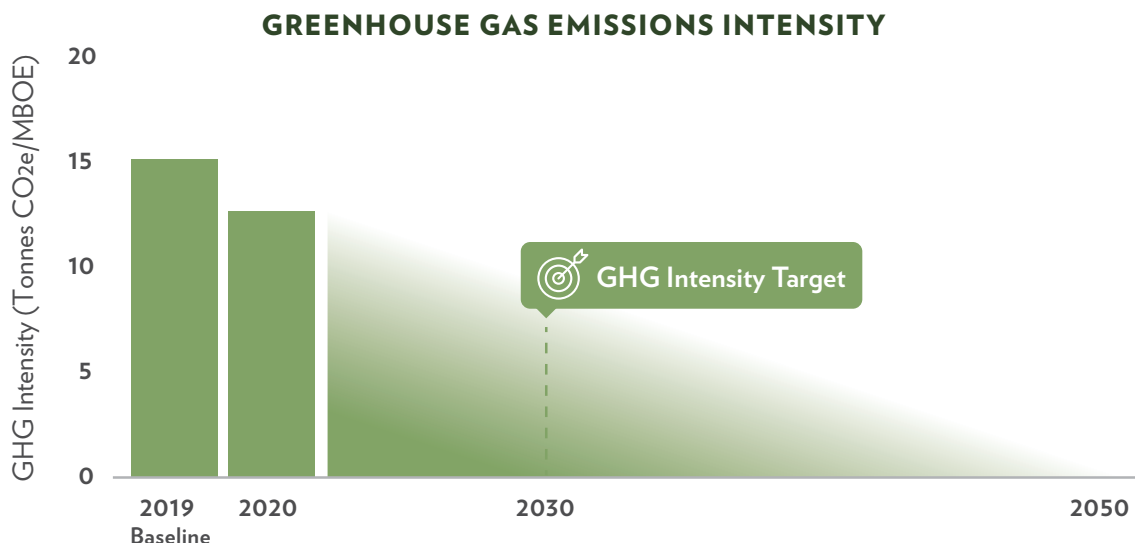
Climate change is an important priority for Pioneer and our stakeholders. Our strategy is to manage our environmental footprint proactively and limit methane and other GHG emissions, while also limiting the use of freshwater in our operations. We are committed to working with the industry and all stakeholders to address our impacts to the environment while ensuring the sustainable supply of abundant, affordable energy.

Metrics and Targets

2021 Climate Risk Report

Our Net Zero Pathway

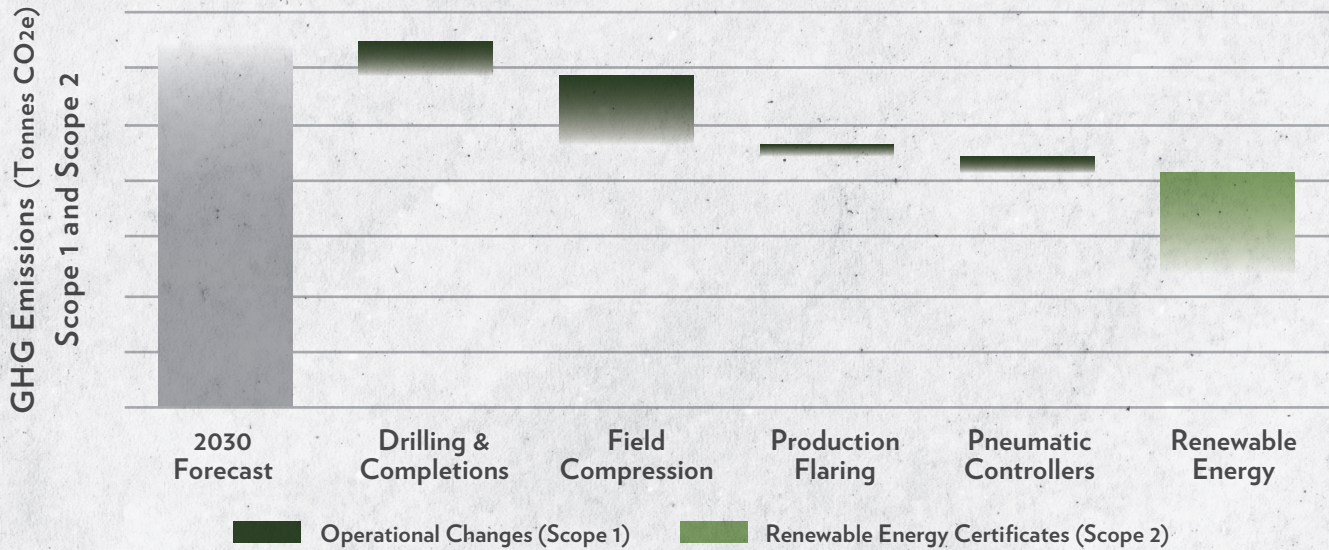
We have set goals to reduce our GHG emissions intensity by 50% and our methane emissions intensity by 75% by 2030 from our 2019 baseline, placing Pioneer on a path to net zero Scope 1 and Scope 2 emissions by 2050. Our focus is managing GHG emissions from our own operations. Reducing our Scope 1 (direct) and Scope 2 (indirect from the purchase of energy) emissions is fundamental to decreasing our company's climate-related risk, meeting shareholder expectations and contributing to the global decline of GHG emissions. Additionally, if we acquire assets, we will work diligently to have those operations meet Pioneer's performance standards expeditiously.



These are not merely long-term targets without shorter-term plans and targets. Pioneer goes beyond compliance by developing proactive strategies to achieve our emission targets through management and Board oversight, operational best practices, strategic planning, research and industry partnership, which are discussed in detail in our Sustainability Report.

We have achieved success through the cross-functional alignment of Board, Management Committee and support teams in the office and field. Collaboration allows us to leverage the varied skill sets of our teams to identify and create innovative practices to mitigate emissions and emission-related risks. This alignment is reinforced through annual goal setting and incentive compensation policies established by the Board. Reducing GHG and other air emissions and increasing salable product capture are key considerations in how Pioneer drills and completes our wells, as well as designs, builds and operates our facilities.

2030 VISION FOR EMISSION-REDUCTION OPPORTUNITIES



We are confident in our ability to achieve our net zero ambition, as we actively pursue reductions in emissions through:

- Electrification of drilling, completions and field compression
- Purchase and/or generation of renewable energy to power facilities and field operations

We are taking steps to implement these innovative solutions. We have conducted feasibility studies on renewable energy development on surface acreage owned by Pioneer in West Texas. In 2021, Pioneer is pilot testing grid-energy-supplied electric drilling rigs and beginning to design facilities for electric gas-lift compressors.

Our ongoing methane- and flaring-reduction initiatives are also integral to our net zero attainment plan:

- Requiring natural gas sales connections prior to well production to prevent flaring
- Producing oil and gas into modern and controlled facilities

- Prioritizing production vapor recovery equipment
- Expanding installation of no-bleed pneumatic devices at our well sites in addition to those at our tank batteries
- Working with gas processors to minimize flaring due to operational upsets
- Increasing frequency of aerial methane detection and deploying fixed-site sensors at our larger facilities
- Driving technology advances in methane detection and quantification through collaboration and partnerships such as Project Falcon, Project Astra and Cheniere Energy's Low Upstream Emissions Gas initiative
- Actively plugging and reclaiming uneconomic wells
- Managing operational performance progress towards emissions-related targets

We share our vision towards attainment of our goals, but we also recognize that the environment in which we operate is dynamic. As such, we plan to review and revise this plan on an ongoing basis. We are proactive in communicating and planning with third parties, especially where externalities can affect our progress, such as materials availability, equipment supply, technology development, and gas-gathering and power infrastructure buildout. Our emissions forecasting is also dependent upon publicly available information (e.g., fuel mix forecast for the ERCOT electrical grid). Should our assumptions throughout this process need to change significantly, we will adjust our forecasting and goals as necessary.

We do not intend to rely on carbon offsets to meet our emissions targets in the near-term. However, Pioneer is investigating carbon-reduction technologies and nature-based solutions that may play a role in helping us realize our net zero ambition in the longer term. Pioneer supports the goals of the Paris Agreement in ultimately limiting a global temperature increase to well below 2 degrees Celsius. Pioneer has both instituted operational changes and set Scope 1 and Scope 2 emissions intensity goals through 2030 that we believe are consistent with the IEA SDS reduction in global oil and gas GHG emissions intensity of 40% between 2019 and 2030. Per IEA, the SDS is fully aligned with the Paris Agreement.

At the same time, we have tested the resilience of our business cases with several IEA scenarios, including SDS and NZE50. As discussed earlier, we see SDS as having a neutral impact on our business; NZE50 would result in lower prices being realized for our oil and gas products than in our Base Case scenario. However, as discussed in more detail in the Strategy section, because of Pioneer's plan to develop its relatively low-cost, low-emissions acreage, we believe that we would be able to continue producing our reserves even under the NZE50. We will continue to gauge the resilience of our low-cost, low-emission and low-leverage oil and gas business via internal modeling efforts and with stakeholders as regulatory actions may accelerate the decline in demand for our products.

Finally, we recognize that there is an inherent subjectivity in the term "Paris-aligned" and appreciate that prominent NGOs and governments aim to produce more coherent and objective measures for the oil and gas industry. As these measures are developed and instituted, we will remain diligent in assessing these measures and advancing strategies that are resilient within a variety of climate initiatives.

Progress Toward Our Emissions Targets

In 2020, we set aggressive targets to reduce GHG emissions intensity 25% and methane emissions intensity 40% by 2030. Our progress against these goals exceeded expectations. In 2020, we limited our annual flaring intensity to 0.21% of natural gas production – 79% below our 1% target – and reduced our GHG Intensity by 27% and methane intensity by 50%. In summary, Pioneer achieved the following notable progress toward its emissions targets in 2020:

GHG Intensity

Achieved a
27% intensity reduction in 2020
from our 2019 baseline

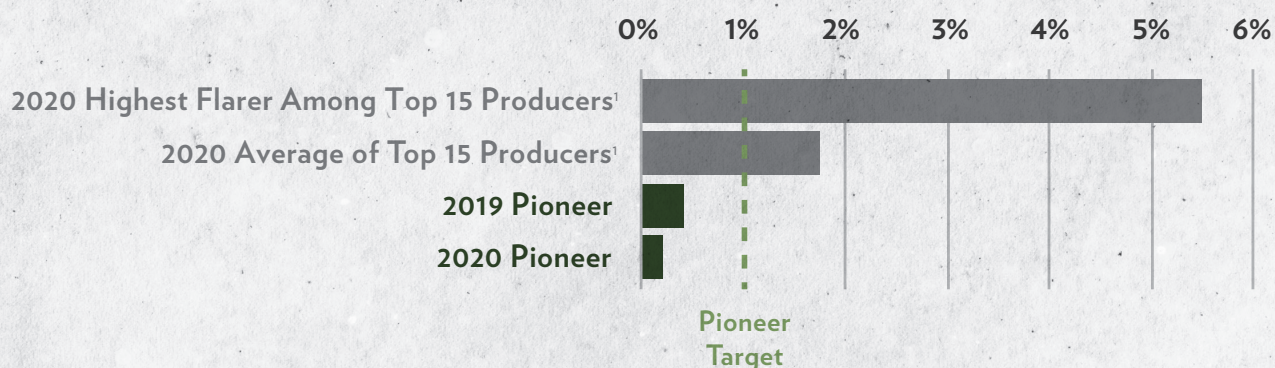
Methane Intensity

Achieved a
50% intensity reduction in 2020
from our 2019 baseline

Flaring Intensity

Limited our annual percent flared to 0.21 –
79% below our annual flaring target
of 1% of natural gas production

PERMIAN FLARING INTENSITY (% FLARED OF NATURAL GAS PRODUCED)



1) Source: Rystad Emissions Cube Dashboard, July 2021.

Although progress has been achieved through emission-reduction activities, we recognize reductions in emissions and flaring intensity in 2020 can also be attributed to our strategic production growth rate adjustment (from 15% to 5%) and significant reduction in activity levels in response to the unforeseen decrease in oil demand as a result of the COVID-19 pandemic.

Updated Interim Emissions-intensity Targets

To support our net zero ambition, we have strengthened our GHG-intensity and methane-intensity targets to:

- Reduce our GHG emissions intensity 50% by 2030
- Reduce our methane emissions intensity 75% by 2030

These targets represent emission reductions from our operated assets from a full-year 2019 emissions baseline. Measuring and reporting our emissions on an intensity basis is the best way to demonstrate progress and accountability in the near term given the dynamic nature of upstream oil and gas assets. Pioneer will report our performance progress against these targets annually, consistent with our reporting principles. GHG emissions intensity performance will be based on Scope 1 and Scope 2 GHG emissions divided by gross

oil and gas production [tonnes carbon dioxide equivalent (CO₂e)/thousand barrels of oil equivalent (MBOE)]. Methane emissions intensity performance will be based on methane emissions in terms of CO₂e divided by gross oil and gas production (tonnes CO₂e/MBOE).

Flaring Reduction Targets

In 2020, Pioneer also established two targets specific to production flaring:

- Limit our annual production flaring intensity to less than 1% of our natural gas produced
- Zero routine flaring by 2030, with an aspiration to reach this goal by 2025

Flaring intensity performance will be based on natural gas volumes flared during production operations, divided by gross natural gas production [thousand standard cubic feet (Mscf)/Mscf].

Pioneer has formally endorsed the Zero Routine Flaring by 2030 Initiative and will publicly report our flaring and progress on an annual basis. We have spent the past year establishing processes to enable us to identify, quantify and manage routine and non-routine flaring. We will report our routine and non-routine flaring volumes consistent with the initiative starting in 2023.

GHG Emissions Inventory

GREENHOUSE GASES

Of the six Kyoto Protocol GHG emissions, the GHG emissions most relevant to Pioneer are carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O). These GHG emissions are the basis for our GHG inventory and emission-reduction targets, reported in terms of CO₂e.

DIRECT GHG EMISSIONS (SCOPE 1)

These emissions are from sources that are owned or controlled by Pioneer, for example, emissions from combustion in owned or controlled equipment and emissions from oil and gas production in owned or controlled process equipment. Pioneer's GHG emissions inventory and emissions reduction targets include Scope 1 emissions under our operational control.

ELECTRICITY INDIRECT GHG EMISSIONS (SCOPE 2)

Emissions from the generation of purchased electricity consumed by Pioneer are Scope 2 emissions. Purchased electricity is bought or otherwise brought into the organizational boundary of the company. Scope 2 emissions physically occur at the facility where the electricity is generated. Pioneer GHG emissions inventory and emissions targets include Scope 2 emissions for electricity purchased to power facilities and equipment under our operational control.

SCOPE 1 AND SCOPE 2 REPORTING

As a U.S. onshore company, the entirety of Pioneer's emissions falls within the regulatory jurisdiction of the U.S. Environmental Protection Agency (EPA). Although the EPA GHG Reporting Program is comprehensive for the oil and gas industry, the reporting of certain emissions may not be required. The program prescribes methodologies to quantify GHG emissions for each emission source category, including methane. In our GHG reporting, we provide data on non-reportable emissions, including indirect (Scope 2) emissions. The development of our extended inventory was based on both the U.S. EPA GHG Reporting Program requirements and the IPIECA/

American Petroleum Association (API)/ International Association of Oil and Gas Producers "Petroleum Industry Guidelines for Reporting Greenhouse Gas Emissions."

Lack of standardization in emissions calculation methodologies can lead to variability in emissions inventories reported by oil and gas operators. While we present an extended inventory that is more representative of our actual emissions of 1.74 million metric tonnes CO₂e annually, for comparability purposes, we will continue to provide details regarding our emissions as reported to the EPA in our performance data tables.

We recognize that EPA GHG Reporting Program methodologies are typically based on engineering estimates and emissions factors. To better align actual emissions with those reported through the EPA GHG Reporting Program, Pioneer is engaged in efforts to study and quantify emissions in actual field settings. For years, Pioneer has participated in academic research projects to improve quantification of emissions from various production equipment and activities. Through our internal methane detection program, we are also gathering data to better understand the rates and distribution of fugitive emissions in our operations, which are not quantified in this report. The results of this work could result in changes in the methodology of EPA GHG Reporting and the levels of the GHG and methane reported by the company. More detail on these initiatives can be found in the Quantification, Monitoring, Reporting, and Verification section of our Sustainability Report.

OTHER INDIRECT GHG EMISSIONS (SCOPE 3)

These emissions are a consequence of company activities but occur from sources not owned or controlled by Pioneer. Examples include extraction and production of purchased materials and use of sold oil and gas. We are currently evaluating Scope 3 GHG emissions related to our oil and gas production and recognize that they are an important consideration for many of our stakeholders.



Freshwater Use Reduction Target

The availability of water allows us to complete horizontal wells through hydraulic fracturing, which is critical to Pioneer and the oil and gas industry. Water shortages including physical water scarcity and demand issues in the arid West Texas region where we operate have the potential to significantly affect our operations. Climate change has the potential to exacerbate these challenges.

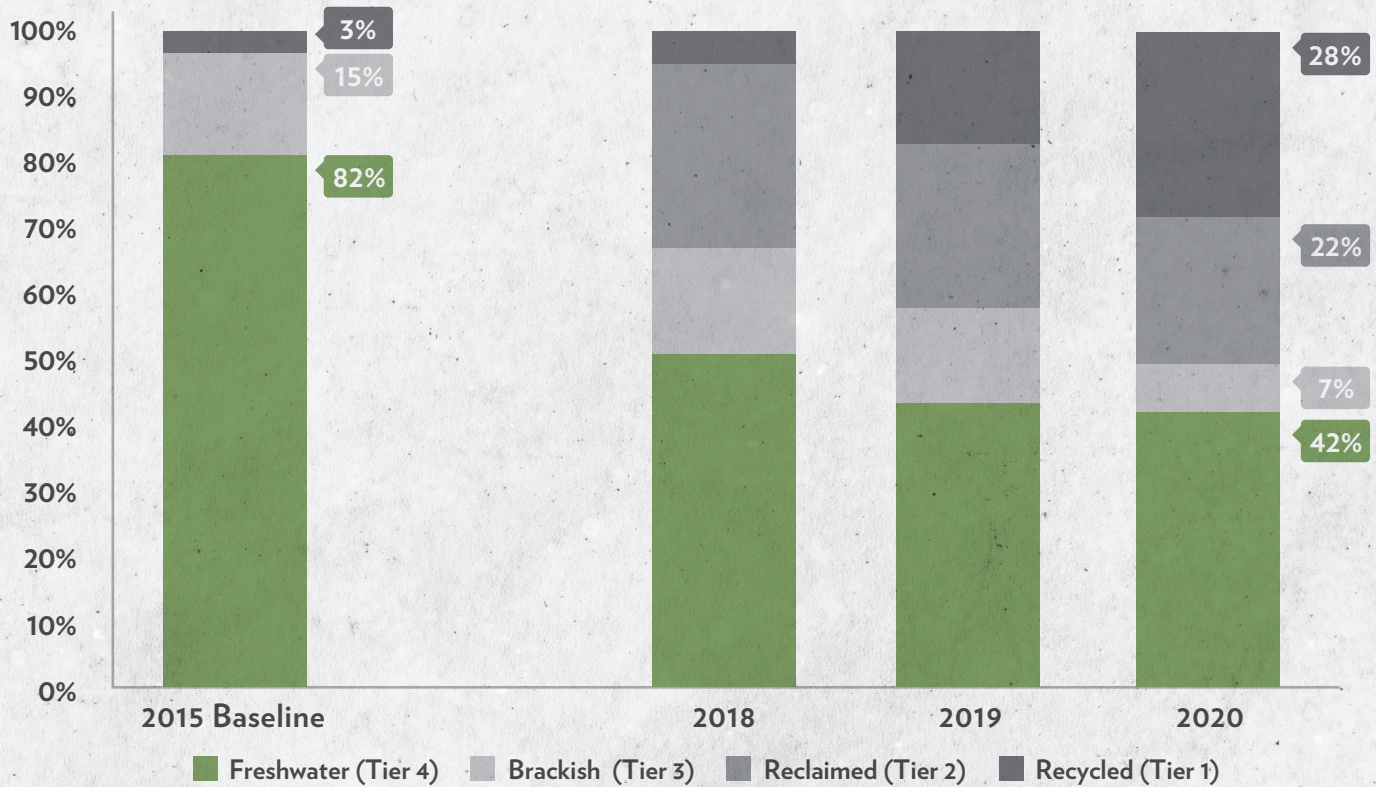
We continue to drive innovation in non-freshwater use, increase mitigation of water-related risk, accelerate management of climate-related risks in our assets and provide transparency to our stakeholders. In recognition of the importance of this issue and Pioneer's long-term commitment to being a leader and steward in the Permian Basin, we aim to:

Reduce freshwater use in our completion operations to less than 25% by 2026.

Our freshwater use reduction target, however, is focused on the use of freshwater within our well-completion activities. We designed our target in this manner because it effectively governs freshwater use that we can control. Best practices require the use of freshwater when drilling through shallow zones to protect groundwater resources. Therefore, Pioneer is limited in its ability to reduce freshwater use in drilling operations. Additional information on our use of freshwater in drilling is provided in our Sustainability Report.

In 2012, we recognized that the increasing demand for limited Permian Basin groundwater resources presented future water-related risks to our operations. We proactively established Pioneer Water Management LLC (PWM), a subsidiary company tasked with providing substantial water management capabilities, improving our water-sourcing operations, and researching regional water resources and treatment technologies.

PIONEER WATER SOURCE PORTFOLIO AS A PERCENT OF TOTAL CONSUMPTION



We have been able to strategically secure exclusive, long-term, non-freshwater sources ahead of our industry peers. Our freshwater reduction target is supported by our action plan, which is summarized below and discussed in detail in our Sustainability Report:

- Support investment in water infrastructure allowing for high utilization of non-freshwater sources including reuse of produced water and reclaimed water from the cities of Odessa and Midland
- Avoid surface water resources in our operations
- Continuously monitor our production and consumption of groundwater
- Maximize recycled, reclaimed and non-freshwater resources in our operations

Progress Toward Our Freshwater Use Targets

The chart above provides the distribution of the four water sources we utilize in our operations. Each type of water is prioritized, with Tier 1 representing the highest sourcing priority after considering our commitments to limited utilization of freshwater, cost and efficiency of operations, and the parameters of the PWM distribution system. The 50% decrease in freshwater consumption since 2015, shown in the chart above, confirms the success and progress of this tiered freshwater strategy.

Midland Water Project

STARTED IN 2018

\$134 million investment

First flow of reclaimed water from Midland to Pioneer began in **July 2021**



Designed to accommodate up to **357,000 barrels** per day of treated municipal wastewater

Securing a large supply of non-freshwater for our operations **is a key component of our strategy to reduce the use of freshwater**



In 2018, Pioneer and the city of Midland initiated construction on an innovative infrastructure project: the upgrade of the city's wastewater treatment facility with the goal of using the resulting reclaimed water in Pioneer's completion operations. Pioneer has successfully completed its \$134 million investment in the city's wastewater treatment plant, providing residents this critical infrastructure upgrade in return for up to two billion barrels of reclaimed water or 28 years of access to reclaimed water, whichever occurs first, before taking into account options to extend. The upgraded facility was designed to accommodate up to 357,000 barrels per day of treated municipal wastewater, providing for population and throughput growth over the life of the treatment facility.

Current daily average wastewater volumes for Midland are approximately 240,000 barrels per day and the first flow of reclaimed water from Midland to Pioneer began in July 2021. These significant reclaimed water volumes are now available for use as needed by Pioneer completion activity. The Midland project will expand Pioneer's exclusive water rights for treated municipal wastewater, joining our existing purchases already established by contract with the city of Odessa. Securing a large supply of non-freshwater for our operations is a key component of our strategy to reduce the use of freshwater.

Freshwater Use Reporting

Pioneer operationally defines freshwater as water sourced from aquifers containing less than 3,000 mg/L total dissolved solids (TDS). As a pure-play Permian Basin operator, much of the region's water available for agricultural and other local consumption, including desalination, is higher than 1,000 mg/L TDS. We have selected this more conservative threshold for freshwater because it is a more relevant standard for the Permian Basin. We intend for this threshold to reduce groundwater withdrawal that competes with local consumption needs and is consistent with the TRRC groundwater protection process. It is important to broaden the definition to include usable-quality water to account for local uses in drought-prone and water-stressed areas, particularly over the long term.



Additional Information and Assurance

Our Annual Report and financial filings include a discussion of material risks and other matters that we believe are material to our investors. The term materiality, as used in this report, is based on a different definition of materiality than used in U.S. securities laws.

Insofar as the determination of materiality for these purposes is based on laws and regulations applicable to securities filings and other investor communications, the topics deemed material in the context of financial reporting may differ from the topics that we determine are material for sustainability reporting purposes.

Cautionary Statement Regarding Forward-looking Information

This report contains forward-looking statement within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements may be identified by words such as “target,” “will,” “plan,” “expect,” “forecast,” “future,” “commit,” “intend,” “potential,” “estimate,” and similar expressions that contemplate future events. Except for historical information contained herein, the statements in this report are forward-looking statements that are made pursuant to the Safe Harbor Provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are subject to a number of risks and uncertainties that may cause Pioneer’s actual results in future periods to differ materially from the forward-looking statements. These risks and uncertainties include, among other things, volatility of commodity prices, the impact of a widespread outbreak of an illness, such as the COVID-19 pandemic, on global and U.S. economic activity; the ability to obtain environmental and other permits and the timing thereof; other government regulation or action; Pioneer’s ability to achieve its emissions reduction and flaring goals; the assumptions underlying forecasts; and environmental and weather risks, including the possible impacts of climate change.

These and other risks are described in Pioneer’s Annual Report on Form 10-K for the year ended December 31, 2020, Quarterly Reports on Form 10-Q filed thereafter and other filings with the U.S. Securities and Exchange Commission. In addition, Pioneer may be subject to currently unforeseen risks that may have a materially adverse effect on it. Accordingly, no assurances can be given that the

actual events and results will not be materially different than the anticipated results described in the forward-looking statements, and readers are cautioned not to place undue reliance on any such statements. Pioneer undertakes no, and expressly disclaims any, duty to publicly update these statements except as required by law. This report contains statements based on hypothetical or severely adverse scenarios and assumptions, and these statements should not necessarily be viewed as being representative of expected risk. While future events discussed in this report may be significant, any significance should not be read as necessarily rising to the level of materiality of the disclosures required under the U.S. federal securities laws.

This report contains statements based on hypothetical or severely adverse scenarios and assumptions, and these statements should not necessarily be viewed as being representative of current or actual risk or forecasts of expected risk. While future events discussed in this report may be significant, any significance should not be read as necessarily rising to the level of materiality of the disclosures required under the U.S. federal securities laws, even if we use the word “material” or “materiality” in the context of such matters.

Assurance

Pioneer conducted an internal audit of this report to determine whether subject matter experts in each department provided adequate supporting documentation and data to substantiate the information disclosed in this report. A final, comprehensive analysis was presented to the ESG Task Force at the end of the full reporting process. The data points shown in the Climate Risk Report were then, with review and guidance from the Board of Directors, approved for publication by the ESG Task Force and Management Committee.



Performance Data

METRIC		2016	2017	2018	2019	2020
GREENHOUSE GAS EMISSIONS	Air Emissions - Pioneer Extended Emissions Inventory¹					
	Scope 1 emissions (metric tonnes CO ₂ e)				2,002,133	1,481,602
	Carbon dioxide (metric tonnes CO ₂ e)				1,345,508	1,133,264
	Methane (metric tonnes CO ₂ e)				656,625	347,126
	Nitrous oxide (metric tonnes CO ₂ e)					1,211
	Scope 1 methane emissions (percent methane)				33	23
	Flared hydrocarbons (metric tonnes CO ₂ e)				156,856	55,654
	Other combustion (metric tonnes CO ₂ e)				1,215,047	1,098,928
	Process emissions (metric tonnes CO ₂ e)				117	218
	Other vented emissions (metric tonnes CO ₂ e)				551,319	257,069
	Fugitive emissions (metric tonnes CO ₂ e)				78,796	69,733
	Scope 2 emissions (metric tonnes CO ₂ e)				272,116	257,930
	Scope 1 and 2 emissions (metric tonnes CO ₂ e)				2,274,248	1,739,531
	Scope 1 and 2 GHG emissions intensity (CO ₂ e tonnes per thousand BOE)				15.2	11.1
	Scope 1 and 2 GHG emissions intensity (CO ₂ e tonnes per million dollars revenue)					261.8
	Methane emissions intensity (CO ₂ e tonnes per thousand BOE)				4.4	2.2
	Methane emissions intensity (CO ₂ e tonnes per million dollars revenue)					54.0
	Air Emissions - As reported to the U.S. EPA²					
	Scope 1 emissions covered under emissions-limiting regulations (percent)				0	0
	Scope 1 emissions - (metric tonnes CO ₂ e)	1,118,197	1,242,402	1,471,280	1,599,622	1,613,241
	Carbon dioxide (metric tonnes CO ₂ e)	683,664	791,309	1,006,208	1,199,779	1,095,293
	Methane (metric tonnes CO ₂ e)	433,306	449,948	463,888	398,379	516,741
	Nitrous oxide (metric tonnes CO ₂ e)	1,227	1,145	1,184	1,464	1,207
	Scope 1 emissions - divested assets (metric tons CO ₂ e)	948,312	919,417	268,792	0	0
	Vapor Recovery and Flaring					
	VRU captured gases (million tonnes CO ₂ e)				1.34	1.45
	Flaring (percent natural gas production)				0.73	0.21
	Leak Detection and Repair (LDAR) (Survey counts approximated)					
	LDAR program surveys (regulatory and voluntary)	41,000	13,000	10,000	10,500	7,805
	LDAR identified leaks - OOOOa		500	900	1,000	914
	LDAR leak repairs - OOOOa		500	900	1,000	914

¹Pioneer Extended Emissions Inventory (Scope 1 and 2) builds upon EPA Subpart W reporting to include vented emissions not subject to Subpart W reporting requirements, company-owned vehicle emissions, and emissions from Scope 2 power purchases. Emissions from storage tanks are calculated per §98.233(j)(1) - Method 1, which simulates emissions based on operating conditions.

²Emissions from storage tanks are calculated per §98.233(j)(2) - Method 2.

METRIC		2016	2017	2018	2019	2020
ENERGY USE	Grid electricity purchased (trillion BTUs)		1.97	2.23	2.22	2.08
	Non-renewable energy (trillion BTUs)		1.61	1.79	1.75	1.55
	Renewable energy (trillion BTUs)		0.36	0.44	0.48	0.53
	Normalized energy use (kWh per USD Revenue)		0.16	0.13	0.13	0.09
	Non-renewable energy (percent)		81.8	80.3	78.7	74.7
	Renewable energy (percent)		18.5	19.8	21.5	25.3
	Diesel fuel consumption (gallons)					33,231,055
	Diesel fuel consumption - Drilling (gallons)					7,298,280
	Diesel fuel consumption - Completions (gallons)					25,013,083
	Diesel fuel consumption - Workover (gallons)					198,370
	Diesel fuel consumption - Fleet vehicles (gallons)					721,322
WATER	Surface water	0	0	0	0	0
	Freshwater withdrawn and consumed	10.5	13.1	12.52	12.03	9.53
	Non-freshwater (consumed and/or withdrawn)	7.22	9.56	12.22	15.82	13.04
	Recycled water - recycled produced water	0.83	0.63	1.26	4.77	6.34
	Reclaimed water - treated municipal water	4.47	6.12	6.95	7.04	5.06
	Brackish water	1.92	2.81	4.01	4.02	1.63
	Freshwater (percent)	59	58	51	43	42
	Non-freshwater (percent)	41	42	49	57	58
	Freshwater intensity (barrels per BOE EUR)	0.29	0.27	0.22	0.21	0.23
	Freshwater intensity (barrels per BOE)	0.85	0.83	0.62	0.51	0.39
	Water intensity (barrels per BOE EUR)	0.49	0.47	0.44	0.49	0.53
	Water intensity (barrels per BOE)	1.43	1.43	1.23	1.17	0.91
	Produced water and flowback generated: discharged (million cubic meters)			0	0	0
	Produced water and flowback generated: recycled (million cubic meters)	0.83	0.63	1.26	4.77	6.34
	Freshwater from regions with High or Extremely High Baseline Water Stress (percent)				54	53