

# ADDRESSING THE IMPACT

Marathon Oil recognizes the impact of greenhouse gas (GHG) and other air emissions on global climate and air quality.

We understand that market changes could result from U.S. policy, global agreements and evolving climate change laws and regulations. At the same time, we recognize the need for reliable, affordable energy and petrochemical feedstock to fuel global economic progress and to meet increasing energy demand across the world.

As part of Marathon Oil's commitment to sustainability and managing climate-related risks, we've established business processes that we continue to evaluate and refine to reduce our emissions and mitigate both current and future energy transition risks to our business. Engaging with external stakeholders to understand their perspectives is a vital component of this effort.

For 2021, we established a quantitative GHG intensity target, representing a reduction of more than 30% relative to 2019, which has been added to the executive compensation STI scorecard. Marathon Oil has disclosed a new medium-term goal to reduce GHG emissions intensity by 50% by 2025 compared to 2019, highlighting our commitment to significant ongoing improvement to environmental performance. Over the course of 2020, Marathon Oil built out processes to monitor progress on this goal. We believe that focusing on our overall GHG intensity provides us the flexibility to use multiple solutions for the largest impact rather than focusing at a constituent level, which may have limited solutions and less overall impact. Learn more about our progress in the Emissions Management section.

The Climate Change section of our Sustainability Report is consistent with the format recommended by the Task Force on Climate-related Financial Disclosures (TCFD).





### 30%

Target to reduce 2021 GHG emissions intensity compared to 2019 baseline

### 50%

Goal to reduce GHG emissions intensity by 2025 compared to 2019 baseline



### **GOVERNANCE: CLIMATE CHANGE**

Our board of directors, senior management and operations-level employees all have a role in identifying, assessing and managing climate-related risk, mitigation and opportunities.

The board has ultimate responsibility for risk management, and their decision-making takes climate-related risks into account. In 2019, we added climate change risk oversight to the charter of the Health, Environmental, Safety and Corporate Responsibility (HES&CR) committee of the board of directors to highlight how seriously we approach robust understanding and evaluation of climate risk. This committee meets at least twice per year to understand and monitor climate-related trends, issues, legislation, policies, practices and concerns.

Our executive vice president of Operations, who reports directly to the CEO, has leadership responsibility for climate-related issues. He provides regular updates to the board regarding performance.

Our vice president of Health, Environment, Safety, Security (HES&S) and Corporate Sustainability, who reports to the executive vice president of Operations, has leadership accountability for driving our corporate sustainability programs. This role provides the strategic focus necessary to align all areas of our corporate ESG strategy and embed sustainability practices into the way we run our business.



#### STRATEGY: IDENTIFYING AND MANAGING RISKS

The Enterprise Risk Management (ERM) and Responsible Operations Management System (ROMS) processes are the primary internal assessment tools we use to identify and communicate climate-related risk.

We use the ERM process to identify and manage the most significant risks facing the company, with the goals of facilitating risk oversight by the board, ensuring enterprise risks are managed effectively and ensuring accountability for risk management. Internal risk assessors present our ERM process outcomes related to climate risk to the HES&CR, Audit and Finance committees to inform the board's oversight responsibilities.

Through our ERM process, our board and management examine a wide range of strategic, reputational, operational and financial risks that could impact the company. The primary potential climate-related risks identified through the ERM process are:

- Market forces that could affect commodity prices, including renewables uptake and pace of energy transition.
- Access to capital markets.
- Evolving U.S. federal and state and global climate change policies, laws and regulations.
- Chronic physical risks (such as persistent drought, increased severity and frequency of wildfires and sea level rise).
- Business interruption and acute physical risks from extreme weather events.
- Value chain disruption.

We continue to evaluate and enhance our risk assessment processes to ensure company leaders have the information they need to manage climate risk.

Our corporate HES&S group monitors performance and provides regular updates on reporting and performance trends. Operational leaders identify, assess and manage GHG emissions and other aspects of climate change risk using ROMS. The ROMS executive steering team and owners of relevant ROMS elements are then accountable for driving performance improvement, including managing climate change risk.

See the Management Systems and Sustainability Oversight sections for a more fulsome discussion.



### Strategy to Mitigate Our Risks

We evaluate our business model by applying our risk assessment tools and measuring alignment with our governance models, and we monitor and mitigate risks to our business strategy related to climate change. We also assess climate-related opportunities to create long-term value for our stakeholders.

We have operationalized key environmental performance indicators that are used to drive performance improvements in the individual assets. In addition, we monitor regulatory changes and risks through our trade organizations, which allows us to adjust business plans and operations to mitigate risks.

CLIMATE-RELATED RISK	MANAGEMENT STRATEGY
Market forces, access to capital markets and renewables penetration	<ul> <li>Active portfolio management and high-quality multi-basin portfolio</li> <li>Disciplined Reinvestment Rate Capital Allocation Framework</li> <li>Maintaining a strong balance sheet</li> <li>Reducing our GHG intensity</li> </ul>
Laws and regulations	<ul><li>GHG emissions management</li><li>Voluntary industry initiatives</li><li>Government engagement</li></ul>
Acute weather events	<ul> <li>Emergency response and business continuity planning</li> </ul>
Chronic weather risks	<ul> <li>Sustainable water sourcing and management</li> </ul>
Value chain disruptions	<ul> <li>Flexible global supply chain management</li> <li>Multi-vendor strategy for critical products and services</li> </ul>



#### **RISKS: MANAGING OUR BUSINESS FOR RESILIENCE TO MARKET FORCES**

Marathon Oil executes our business strategy to be the lowest-cost, highestmargin, U.S.-focused resource play operator, a strategy that seeks to mitigate market risks.

### **Resilience of our Capital Expenditure Program**

Marathon Oil allocates the vast majority of our capital expenditures to short-cycle, unconventional resource plays – consistent with our concentrated and optimized multi-basin portfolio. Due to the production profile for the typical unconventional well, the commodity price during the first few years of production has a much greater effect on project economics than longer-dated commodity prices. The majority of the wells we drill have relatively short payback periods. This mitigates the longer-term commodity price risk related to our capital investment decisions and enhances our capital allocation flexibility and ability to respond to changes in the macro environment.

Our short-term planning horizon is limited to two years, while our medium-term planning horizon is five years, consistent with both the short-cycle nature of our portfolio and SEC rules governing proved reserve bookings. We provide a detailed annual plan and budget generally in the first quarter of every calendar year and have augmented that disclosure recently with a five-year benchmark maintenance scenario that holds oil production flat. The financial returns and competitiveness of our capital investment program are routinely stress-tested across these time horizons with conservative commodity price assumptions - prices that are typically below the lower range of forecasts from investment banks and well-known energy forecasting agencies, including the U.S. Energy Information Administration (EIA) and the International Energy Agency (IEA). Projects must meet specific financial targets and/or strategic objectives to be sanctioned. We also frequently assess our capital investment program and the robustness of our portfolio over a longer-term 10-year time horizon, using similarly conservative commodity price assumptions and investment criteria.

### Longer-term Energy Market Scenarios

Due to the short-cycle nature of our portfolio, our capital allocation flexibility and our limited risk for "stranded assets," we believe scenario analysis beyond 10 years has its limitations. IPIECA's 2019 awareness briefing (*The Role of Scenario Analysis in Climate Reporting*) agrees, pointing out the risks of scenario analysis for E&P companies. The briefing states that "companies are valued on proven reserves, which are usually monetized over a shorter horizon than, for example, the extent of the IEA Sustainable Development Scenario, thus indicating that the risk of 'stranded assets' is small and unlikely to be indicated by such a scenario."



While understanding its limitations, we still find that longer-term scenario analysis is a useful tool to inform our overall corporate strategy, better understand how energy supply and demand dynamics and the market environment may evolve in the coming decades, test the robustness of our strategy and portfolio across different long-term environments and satisfy the interests of our stakeholders.

We monitor a number of longer-term forecasts and scenarios regarding the evolution of oil and gas supply and demand fundamentals, oil and gas commodity prices and the potential for a price on carbon. This includes forecasts and scenarios from widely relied upon energy agencies, including the EIA and IEA, and forecasts from leading investment banks. However, we're price takers not price predictors and test our business model across a broad range of commodity price outcomes while also continuing to drive our enterprise free cash flow breakeven price as low as practical.

While an analysis of these scenarios highlights a wide range of potential outcomes for oil and gas supply and demand fundamentals and commodity prices over the next 20 to 30 years, most of these scenarios and forecasts indicate that oil and gas will continue to comprise a significant share of the global energy mix. For example, within the *IEA's 2020 World Energy Outlook*, the IEA estimates that oil and gas comprised 55% of global energy demand in 2019 (latest data available). Under their Stated Policies Scenario (STEPS), oil and gas demand continues to grow through at least 2040, at which point it's expected to account for 54% of global energy demand. According to the IEA, this scenario reflects all of today's announced policy intentions and targets. Further, the IEA noted, "inventories are high and markets are well supplied in the near term, but the prospects for continued ample supply to meet the projected demand rebound in STEPS over the period to 2030 should not be taken for granted."





Certain carbon-constrained, Paris-aligned longer-term scenarios also indicate that oil and gas is likely to continue to comprise a significant share of the global energy mix. For example, while the IEA's latest Sustainable Development Scenario (SDS) estimates that global oil and gas demand will decline from 2019 levels, oil and gas still accounts for 54% of global energy demand in 2030 and 46% of global energy demand in 2040.

### Assessing Our Portfolio in a Carbon-constrained Future

To test the competitiveness of our portfolio in a more carbon constrained future, we leveraged the SDS from the *IEA's 2020 World Energy Outlook*. The IEA's intent is for the SDS to explore the potential impacts of more far-reaching changes in policies relative to those that have already been announced – even when those policies appear ambitious and aspirational.

According to the IEA, the key outcomes the SDS delivers are drawn from the United Nations Sustainable Development Goals: effective action to combat climate change by holding the rise in global average temperature to levels consistent with the Paris Agreement; universal access to affordable, reliable and modern energy services by 2030; and a substantial reduction in air pollution. Other key modeling assumptions and outputs of the SDS include the following:

- **Global Oil Demand:** From 2019 to 2030, global oil demand declines at a 1.2% compound annual growth rate (CAGR) and from 2019 to 2040 at a 1.9% CAGR. Oil accounted for 31% of global energy demand in 2019. Oil's share of the global energy mix is expected to decline to 30% in 2030 and 23% in 2040.
- **Global Gas Demand:** From 2019 to 2030, global gas demand declines at a 0.1% CAGR and from 2019 to 2040 at a 0.6% CAGR. Gas accounted for 23% of global energy demand in 2019. Gas's share of the global energy mix is expected to rise to 25% in 2030, declining to 23% in 2040.
- **Commodity Prices:** Crude oil prices are forecast to average \$57/bbl in 2025, declining to \$53/bbl in 2040. U.S. natural gas prices are forecast to average \$2.10/MBtu in 2025, declining to \$2.00/MBtu in 2040 (real 2019 dollars).
- **Carbon Price:** A price on carbon is assessed at \$63/tonne by 2025, rising to \$140/tonne in 2040 (real 2019 dollars).









<sup>1</sup> IEA sustainable development 2019 price deck is based on 2018 real prices with no inflation. Similarly, 2020 IEA deck is based on 2019 real prices with no inflation.



In conducting our scenario analysis, we first established a baseline value for our portfolio using a non-escalated commodity price deck of \$50/bbl oil and \$2.50/MBtu natural gas. We assumed no inflation with respect to these commodity price assumptions for the sake of conservatism. We also made no assumptions for a cost of carbon in our baseline assessment as there is currently no cost of carbon for U.S. producers and it's unclear how a price on carbon may ultimately affect the price of commodities. We believe using conservative long-term commodity price assumptions, while excluding a price of carbon, enables us to establish a transparent baseline portfolio value against which we can sensitize the robustness of our portfolio to different market environments.

In conducting our sensitivity analysis, we utilized modeling inputs fully consistent with the IEA's SDS, including projected commodity and carbon price assumptions through 2040. We then assessed the impact to our net present value and resource base by comparing the results from the IEA scenario to results from our baseline scenario. Our analysis indicates that in a more carbon-constrained future, consistent with United Nations Sustainable Development Goals and climate objectives of the Paris Agreement, Marathon Oil remains well-positioned to execute our long-term strategy of delivering solid corporate returns, sustainable free cash flow generation and meaningful return of capital to investors. The SDS scenario has a minor negative impact on the net present value of our future cash flows and our economic resource base in comparison to our baseline case (negative impact well below 10%), due primarily to lower natural gas prices and the escalating cost on carbon. However, the net present value of our future cash flows remains significantly positive and our economic resource base remains robust and competitive. In short, we believe our portfolio is well-positioned and our strategy is appropriate for a more carbon-constrained future. Further, our business model retains the flexibility to appropriately respond to future dramatic changes in the market.





As part of our analysis of longer-term energy market scenarios, we have also reviewed the IEA's recently published report *Net Zero by 2050* (*NZE*), which outlines the conditions for the global energy sector to reach net-zero CO<sub>2</sub> emissions by 2050. Our analysis of this scenario, in combination with our analysis of other long-term scenarios and forecasts, helps to inform our corporate strategy and our approach to mitigating longer-term climate related risks. However, we didn't utilize the NZE as the basis for testing our portfolio as the IEA's approach of back-solving for the desired net-zero outcome in 2050 results in the use of less credible market and behavioral assumptions in light of prevailing energy demand trends, policies and technologies. This underscores the fact that scenarios are not solutions and generally reflect broad based assumptions that rely on many factors, including both policy changes and technical innovation.

### Our Approach to Mitigating Market Risks

As noted, Marathon Oil's corporate strategy is informed by our assessment of the competitive environment for energy and longerterm oil and gas fundamentals. We mitigate risks and uncertainties associated with climate change and market forces, including the potential for lower future commodity prices and the potential for a future cost on carbon emissions, in numerous ways. This includes actively managing our portfolio and maintaining a high-quality multibasin portfolio; sticking to a disciplined capital allocation framework; maintaining a strong balance sheet; and driving significant GHG intensity reductions.

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COMMITTED TO OUR FRAMEWORK	Corporate Returns	>	Disciplined reinvestment in strongest rate-of-return opportunities
	Free Cash Flow	>	Sustainable free cash flow across wide range of commodity prices
	Return of Capital	>	Return meaningful capital to investors
	Differentiated Execution	>	Continuously improve performance, reduce costs and deliver on commitments
	Multi-Basin Portfolio		Capital allocation flexibility, broad market access, supplier diversification, rapid sharing of best practices, platform for talent development
POWERED BY OUR FOUNDATION	Balance Sheet Strength		Continue improving investment grade balance sheet; maintain financial strength and flexibility to execute business plan
	ESG Excellence		Safe operations, strong environmental performance, trusted partner to local communities and best-in-class governance

# Marathon Oil

### Active Portfolio Management and High-Quality, Multi-Basin Portfolio

We have concentrated our asset portfolio to generate a competitive advantage and deliver value to our shareholders. Over the last decade, we've divested higher-cost, higher-risk, lower-margin assets including Canadian oil sands, Libya, the U.K. and Norway North Sea, Kurdistan, Wyoming and conventional offshore exploration. These divestments have lowered our enterprise and regulatory risk, enhanced our financial performance, improved our cost structure, reduced our corporate free cash flow breakeven, and mitigated our longer-term liabilities.

As previously noted, Marathon Oil allocates the majority of our capital to our high-quality, shorter-cycle, U.S. resource plays. Our U.S. resource plays are complemented by our long-life, low-decline integrated gas business in Equatorial Guinea, which is highly cash flow generative with minimal sustaining capex requirements. Our U.S.-focused unconventional portfolio has less regulatory and strategic execution risk in comparison to more globally diversified operations. Our low-cost, high-margin U.S. assets also contribute to our low enterprise breakeven that mitigates our vulnerability to lower commodity prices. Additionally, the short-cycle nature of our portfolio reduces our "stranded asset" risk and enhances our capital allocation flexibility and ability to respond to changes in the macro environment.

Our strategic decision to optimize our portfolio and primarily focus our capital investment in high-quality U.S. resource plays is affirmed by IEA SDS modeling assumptions that testify to the global cost competitiveness and expected resilience of U.S. tight oil production. Under the IEA's SDS, the global supply of tight oil – the majority of which is sourced from the U.S. and the focus of Marathon Oil's production operations – is expected to increase at a 0.6% CAGR from 2019 to 2040. So even though global oil demand is expected to decline through 2040, the supply of tight oil is expected to rise considerably from current levels to meet global demand.

### **Disciplined Capital Allocation Framework**

Marathon Oil's disciplined reinvestment rate capital allocation framework prioritizes strong corporate returns, sustainable free cash flow generation and meaningful return of capital to investors. We believe this capital allocation framework is optimal for a cyclical commodity business and that it appropriately contemplates the longerterm risks and uncertainties associated with climate change and related market forces.



>\$60/bbl WTI	Significant Price Support • Return at least 40% of CFO to equity investors; >\$1B of capital return annually • Retire future debt at maturity • Production growth cap of 5% underscores commitment to discipline and sustainable FCF
\$50 to \$60	Modest Price Support • Return at least 30% of CFO to equity investors; >\$600MM of capital return annually • Retire future debt at maturity • Production growth cap of 5% underscores commitment to discipline and sustainable FCF
	Conservative Planning Basis • Reinvestment rate of -70% or less at \$45/bbl+ WTI • Return at least 30% of CFO to equity investors at \$45/bbl+ WTI and retire future debt at maturity • Maintain sub 1.5x net debt to EBITDAX assuming this price environment • Competitive and sustainable base dividend (-10% of CFO assuming this price environment)
<\$40	Lower Price Environment  • Corporate FCF breakeven below \$35/bbl WTI solidifies resilience  • Competitive and sustainable base dividend

### **Clear Priorities for Capital Allocation**



To ensure we adhere to our disciplined framework, we closely monitor our reinvestment rate, our corporate free cash flow breakeven and the portion of our cash flow from operations that we return to investors. We believe these are tangible metrics upon which investors concerned with longer-term market risk should remain focused.

- Reinvestment Rate: Our reinvestment rate represents the ratio of expected capital spending to cash flow generation and is a core metric within our short-term incentive compensation scorecard. Assuming an oil price of \$45/bbl WTI or higher, we target a reinvestment rate of 70% or less of our cash flow from operations and at \$60/bbl WTI or higher, we expect a reinvestment rate of 60% or less. Our reinvestment rate framework instills discipline and competition into our capital allocation framework that enhances our financial returns, protecting our ability to generate free cash flow throughout the commodity price cycle. Investing with discipline further reduces the risk that we overcapitalize our business into a potentially more difficult market environment.
- Corporate Free Cash Flow Breakeven: Our corporate free cash flow breakeven represents the oil price necessary to generate cash flow from operations to cover our capital spending. Our corporate free cash flow breakeven is a core component of our short-term incentive compensation scorecard. For 2021, we estimate that our breakeven is below \$35/bbl WTI – well below both the current oil price and most third-party commodity price forecasts from investment banks and energy forecasting agencies. Through ongoing cost structure optimization, disciplined capital allocation and a relentless focus on our capital and operating efficiency, our objective is to continue to drive our corporate breakeven lower over time. Our focus is consistent with our objective to be the low-cost operator in our industry, better positioning us to manage through market environments that could be more challenging in the future.
- **Return of Capital:** Returning capital to investors is a critical strategic objective for Marathon Oil. More specifically, our goal is to direct at least 30% of our cash flow from operations to investor-friendly purposes, prioritizing debt reduction, dividends and potential share repurchases. Above \$60/bbl WTI, we would expect that return to investors to be at least 40%. We're on track to exceed this objective in 2021. We believe that significant return of capital helps mitigate the longer-term commodity price and market risks for investors that are exposed to our sector.





### Maintaining a Strong Balance Sheet

Maintaining a strong balance sheet is foundational to executing our strategy and enhancing our resilience to market forces. Our balance sheet is strong, as evidenced by our investment grade credit rating from each of the three primary credit rating agencies. We have a demonstrated track record of conservative financial policy. We plan to maintain our balance sheet strength through our disciplined capital allocation framework and our conservative leverage targets, including a net debt to EBITDA objective of sub-1.5x assuming a \$45/bbl to \$50/bbl WTI oil price. A strong balance sheet would help us execute our strategy in a potentially more challenging market environment.

### **Reducing Our GHG Intensity**

Driving significant and continuous reductions to our GHG emissions intensity is a core part of our strategy to mitigate the longer-term market risks related to climate change. Our GHG reduction initiatives are supported by transparent, quantitative objectives intended to promote accountability and ingenuity throughout our organization. We believe that our 2025 Scope 1 and 2 goal is more ambitious than the emissions reduction trajectory necessary to meet the objectives of the Paris Agreement.

While our target-setting efforts are focused on GHG intensity, we also closely monitor and attempt to reduce our absolute GHG emissions. Our disciplined capital allocation framework, which prioritizes free cash flow generation contributes to lower absolute emissions in comparison to a framework more focused on growing production. To underscore our commitment to capital discipline and free cash flow generation, we have instituted a cap on our annual production growth of 5%, regardless of the strength of the prevailing commodity price environment. In 2021, our total company production is expected to decline modestly in comparison to 2020 with full year average oil productions in 2021 should outpace the expected reduction in our GHG emissions intensity. Overall, we believe the combination of our GHG intensity reduction initiatives and disciplined capital allocation framework mitigate our exposure to longer-term market forces, including a potential cost on carbon.



### **RISKS: REGULATORY, WEATHER AND VALUE CHAIN**

We're subject to numerous legal, regulatory and other requirements intended to uphold the health and safety of people and protect the environment, including those relating to natural gas flaring and greenhouse gas emissions.

We remain focused on complying with or exceeding legal and regulatory requirements, and have incurred and may continue to incur capital, operating, maintenance and remediation expenditures as a result of these laws, regulations and other requirements. We believe that scientific, political and the general public's attention on issues concerning the extent, causes and responsibility for climate change will continue.

In 2016, the United Nations Framework Convention on Climate Change finalized an agreement among 195 nations at the 21st Conference of the Parties in Paris (the Paris Agreement) with an overarching goal of preventing global temperatures from rising more than 2 degrees Celsius above pre-industrial levels. The U.S. officially rejoined the accord in January 2021. In April, President Biden announced a new target for the United States to achieve a 50-52% reduction from 2005 levels in economy-wide net greenhouse gas pollution in 2030.

Although uncertain, these developments could: set limits on emitted greenhouse gases; reduce the demand for crude oil, condensate, natural gas liquids and natural gas; increase costs to operate and maintain our facilities, install new emissions controls or participate in potential GHG or carbon trading or tax programs; and delay obtaining air pollution permits for our new or modified facilities. Marathon Oil monitors and prepares for regulatory changes that could impact our business and has implemented mitigation practices that help ensure resilience to a number of regulatory and legislative scenarios.

Our primary strategies for managing regulatory risk are applying technologies and techniques to reduce emissions; participating in voluntary industry initiatives to reduce emissions; monitoring proposed regulatory or legislative changes; and engaging in the regulatory and legislative process at all levels of government. These are discussed elsewhere in this report.



## Marathon Oil

### Managing Weather-Related Risks

Scientists have concluded that the increase in greenhouse gases in the earth's atmosphere produces climate changes that have significant chronic physical effects.

This includes more frequent and severe droughts and higher sea levels, in addition to acute physical risks like increased frequency and severity of storms and floods. If any of these occur in our operating areas, we could experience safety or environmental impacts, downtime or damaged equipment or other incidents at our sites. These risks are managed locally by our asset teams and our Centralized Emergency Response Team to ensure the most effective mitigation strategies are implemented. Water Stewardship and Emergency Response are discussed elsewhere in this report.

### Managing Value Chain Risk

Our value chain is subject to some of the same climate-related physical risks as Marathon Oil, and we manage these largely through contractual risk allocation and other terms and conditions. We maintain a diverse set of critical suppliers and service providers to ensure that we maintain competitiveness and flexibility. We constantly evaluate ways to be more efficient and nimble in managing our value chain, including through business interruption planning and vertical integration such as self-sourcing specific goods and services. See our Technology and Innovation Highlight for more information on our ability to remotely monitor our assets.