

# 2021 Devon Energy

# Climate Change Assessment Report

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# **Message from the CEO**



**Rick Muncrief** President and CEO

Since our founding in 1971, Devon Energy has been at the forefront of technological innovation in the oil and natural gas industry. Now that Devon and WPX Energy completed our merger in January 2021, we continue to build on that history and advance our business on all fronts. I'm excited to lead this premier company that has resilience rooted in a half-century of achievement.

One of the things I am most proud of at Devon is our intentionality. We strive to approach problem solving in a pragmatic, thoughtful and diligent manner, no matter how small or large the challenge. Climate change is no exception.

Climate change presents a diverse and largely unpredictable set of risks to the world and to our business. The need to limit global warming coexists with the need to supply the world with affordable, accessible, reliable energy, presenting the dual challenge of balancing environmental, and societal goals. We do not take this challenge lightly.

We have pioneered operational practices, been proactive in applying new technology and resilient in adapting to evolving market conditions, regulations and increasing stakeholder expectations. Our work helping to supply reliable, affordable energy enables Devon to create jobs, strengthen our communities, contribute to local, state, federal, and global economies and support federal and global environmental goals and ambitions. We choose to see the energy transition as an innovation and transformational opportunity, and are keen to tackle it alongside our stakeholders, some of whom you will read about in this report.

We have applied our values—integrity, relationships, courage, and results—as a lens on the issue. Our aim is to be a climate-conscious, low-cost, low-carbon energy producer within an orderly energy transition, while delivering strong results and creating shareholder value. In other words, we support and are actively pursuing an approach that is a) realistic, b) appreciates global needs for affordable energy access, and c) does not gloss over the difficulties of achieving climate goals. To support our aim, we have a three-pronged net zero strategy:

- Decrease the carbon intensity of our operations by reducing Scope 1 and 2 GHG emissions to net zero by 2050, supported by annual and interim goals, prioritizing the reduction of flaring and methane emissions
- Disclose our progress and strengthen governance practices around climate change risks and opportunities
- Evaluate opportunities to create value in the transition to ever-cleaner forms of energy, with thoughtful capital allocation

We are also committed to deepening our understanding of climate-related risks and opportunities by utilizing the tools put forth by the Task Force on Climate-Related Financial Disclosure (TCFD), including the scenario analysis and disclosures in this report. The models we have examined support our current thesis: that demand for low-cost, low-carbon oil and natural gas continue well past 2050, even in the IEA Sustainable Development Scenario. Further, Devon's assets are positioned to be resilient in the low-carbon scenarios modeled in this report—a hypothesis that was tested throughout the demand shocks and commodity price volatility that has occurred during the ongoing Covid-19 pandemic.

Finally, we have a track record of continuous improvement of climate-related governance and an ongoing commitment to transparency. We elected to expand the oversight of our Board's Governance Committee to include additional areas of environmental and public policy matters (among other items), reflected in a charter update as well as a new name: the Governance, Environmental, and Public Policy (GEPP) Committee. The GEPP Committee's broader remit includes setting strategic direction on ESG issues and integrating sustainability considerations into the business. We also continue to disclose our progress with a goal of continued alignment with the TCFD recommendations.

We are confident that our business strategy, financial strength, innovative spirit, and commitment to provide low-cost, low-carbon energy the world needs will allow us to succeed over the next 50 years and beyond.

Sincerely,

Kiche Herman

President and CEO



# **About This Report**

Devon and our stakeholders are committed to understanding the potential impacts of climate change on the company's long-range business plans. Since 2018, Devon's risk management includes formal and ongoing consideration of the potential quantifiable effects of climate change on the company's portfolio. This is Devon's third Climate Change Assessment Report and is a direct result of our ongoing commitment to transparency.

This report was prepared by Devon with support from thirdparty consultants. Devon retained ICF<sup>1</sup> to help assess the company's oil and natural gas portfolio's resilience in the face of potential impacts of climate policy on oil, natural gas, and natural gas liquids (NGL) demand, production, and prices. During this assessment, Devon evaluated several possible future climate change scenarios to quantify the potential risks to the company's portfolio and long-range business plan from a possible carbon-constrained future. Devon evaluated pricing scenarios and model results from both ICF and the widelyreferenced International Energy Agency (IEA), including the IEA's 2020 Sustainable Development Scenario, which targets a rise in global temperatures to "well below 2°C" and "in which countries achieving net-zero emissions by 2050 spur the world as a whole to reach it by 2070."

In addition, Devon retained Global Affairs Associates, a ClimeCo Company<sup>2</sup> to enhance the company's alignment to the recommendations of the Task Force on Climate-related Financial Disclosure (TCFD), an international, multi-industryled initiative launched to develop recommendations for

voluntary disclosure of climate-related risk. Consistent with the core elements of the TCFD framework, this report follows the structure outlined in the TCFD recommendations and focuses on governance, strategy, risk management and metrics, and targets while addressing each of the 11 TCFD disclosure recommendations.

This report was prepared in alignment with TCFD guidance in effect prior to October 2021. Devon recognizes that TCFD released revised guidance in October 2021, and we plan to assess how to incorporate the new guidance moving forward.

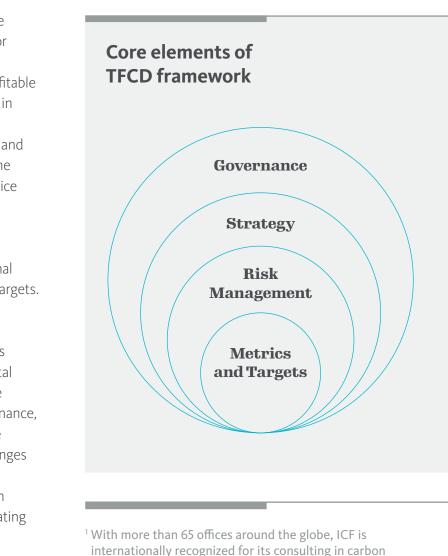
## **Key Conclusions**

- In carbon-constrained future scenarios, demand for oil and natural gas is substantially reduced. However, oil and natural gas remain crucial to meeting global energy demand and North American oil and natural gas production plays a large role in meeting that demand. Low-cost oil and natural gas resources in the basins in which Devon operates are expected to be some of the most resilient in the aggressive low-carbon scenarios modeled in this report.
- Model results indicate that aggressive low-carbon scenarios will reduce oil, natural gas, and NGL prices by 32-48% compared to base case scenarios over the 2023-2050 period; even in such low-carbon scenarios, the model results suggest that Devon's current portfolio is likely to be resilient to these potential price impacts. However, we recognize that more aggressive scenarios continue to be developed, and that these, or scenarios with different assumptions, may have different results.

Based on the comparison of projected regional price impacts with estimated regional breakeven prices for each of Devon's major assets, we conclude that our assets are likely to be well-positioned to remain profitable even in aggressive low-carbon scenarios referenced in this report. Furthermore, the changes in Devon's portfolio—exiting Western Canada and the Barnett and closing the merger with WPX Energy—have made the company more resilient in low oil and natural gas price scenarios.

## **Key Highlights**

- Devon is committed to achieving net zero operational emissions by 2050, supported by concrete interim targets.
- Devon broadened the role of the company's Board Governance Committee in March 2021 to expand its oversight to include additional areas of environmental and public policy matteres (among other items). The Governance Committee was renamed as the Governance, Environmental, and Public Policy (GEPP) Committee and its charter was also updated to reflect such changes and additional oversight. The GEPP Committee's updated charter includes overseeing management in setting strategic direction on ESG issues and integrating sustainability considerations into the business.
- Devon's disclosure practices for the governance, management, and disclosure of climate-related risks and opportunities seek to align with the recommendations of the TCFD, and include continually assessing new guidance as it becomes available.



- internationally recognized for its consulting in carbon accounting, greenhouse gas mitigation, climate change, and resilience planning. ICF was retained as an independent consultant to generate pricing scenarios.
- <sup>2</sup> Global Affairs Associates (GAA), a ClimeCo Company is a boutique consulting firm specialized in sustainability, ESG, and climate reporting and communications.



# **About Devon**

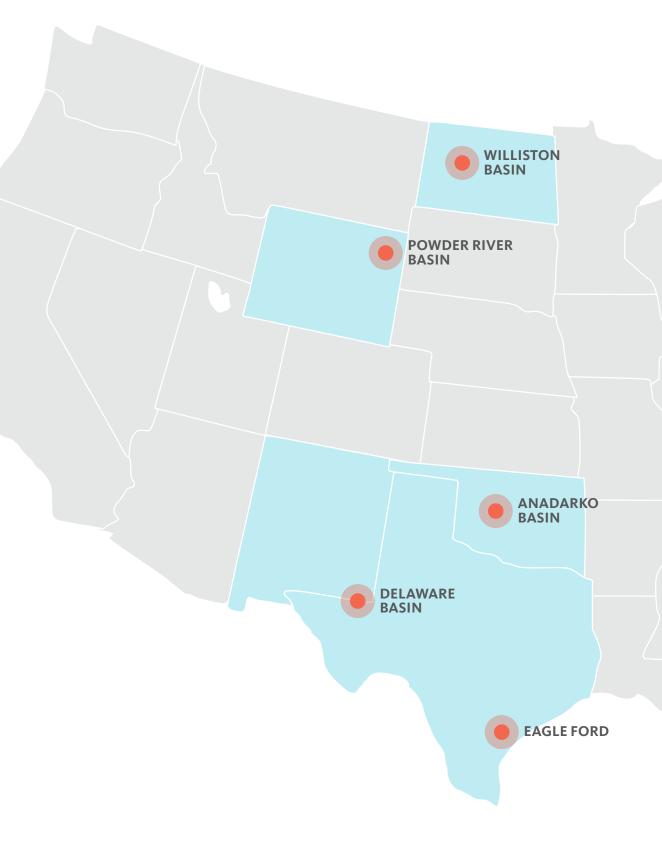
Devon Energy Corp. (NYSE: DVN) is a leading oil and natural gas producer in the U.S. with a premier multi-basin portfolio headlined by a world-class acreage position in the Delaware Basin. Based in Oklahoma City, Devon is among the largest U.S.-based independent producers and is included in the S&P 500 index.

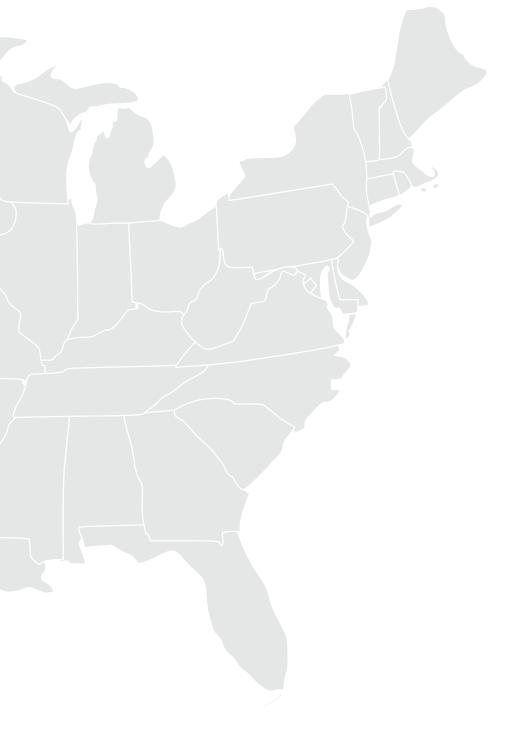
Devon's disciplined cash-return business model is designed to achieve strong returns, generate free cash flow and return capital to shareholders, while focusing on safe and sustainable operations. Devon's focused development plan centers on drilling activity in our core areas of the Delaware Basin of southeast New Mexico and west Texas, the Eagle Ford Shale in south Texas, the Powder River Basin in Wyoming, the Williston Basin in North Dakota, and the Anadarko Basin in western Oklahoma. As of the third quarter of 2021, our production portfolio was 50% oil, 26% natural gas, and 24% natural gas liquids (NGLs) such as propane.

Devon strives for sustainable growth through a disciplined, returns-driven strategy, significant financial strength and liquidity, and an advantaged dividend. Devon's commitment to environmental, social and governance (ESG) excellence supports the company's goals by keeping our strategy focused on managing risk, operating responsibly, and improving continuously.

For more information about Devon, please visit www.devonenergy.com.

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# **Governance and Risk Management**

## **Board Oversight of Climate Risks and Opportunities**

Devon's Board of Directors (Board) has primary responsibility for oversight of the company's risk management efforts, including oversight of our climate risk assessment and strategy. The Board maintains standing committees for specific areas of risk: audit, compensation, governance, and reserves. The work of those committees with respect to climate matters is described at a high level in the following paragraphs, and charters itemizing the duties and responsibilities of those committees are available on our website.

The newly-expanded GEPP Committee oversees additional responsibilities in the areas of environmental and public policy oversight, including overseeing the company's corporate governance; reviewing Devon's EHS efforts, social responsibility and ESG stakeholder engagement; advising the board on significant public policy issues; and overseeing the integration of sustainability into strategic and tactical business activities.

## Climate and ESG Metrics are Actively Linked to Executive and Employee Compensation

As Devon moves to achieve our long-term climate goals, reducing methane is a key short-term priority. The Board has continued to include methane emissions performance as an element of Devon's executive compensation. Other climaterelated ESG measures were also tied to 2020 executive compensation, including developing and implementing an ESG roadmap and publishing an updated Climate Change Assessment report. Devon's corporate scorecard includes annual environmental performance targets that affect every employee's compensation.



The Audit Committee oversees compliance with legal and regulatory requirements and reviews and monitors potential financial risk exposure. The Reserves Committee advises the Board as to whether reserves disclosures are consistent with legal and regulatory requirements. The Compensation Committee is responsible for overseeing compensation metrics relating to ESG and climate risk. The Board and its committees are prepared to respond quickly to new requirements and emerging best practices.

The Board understands that climate change risks are often interrelated with other business risks. In its regular quarterly meetings, the Board reviews environmental, health, safety (EHS) matters brought to its attention and considers issues related to ESG strategy planning and risk management programs, including those pertaining to climate-related risks and opportunities. Devon regularly models regional and macro-level scenarios, such as changes in regulations or market conditions, to test the strength of our portfolio of reserves and resources. On a regular basis, these modeled scenarios inform the strategic decision-making of Devon's Executive Committee and Board, culminating in Devon's annual long-range plan. The Board's oversight of climate-related issues is exemplified by its ongoing commitment to analyze and understand the potential long-term impacts of climate-related risks and opportunities on Devon's business. Beginning in 2018, the Board endorsed the use of scenario analysis as prescribed by TCFD to assess Devon's oil and natural gas portfolio in relation to potential impacts of a possible carbon-constrained future. With the Board's support, Devon continues to assess our portfolio and business strategy using scenario analysis, including the aggressive low-carbon scenarios presented in this report. Following the merger of Devon and WPX in January 2021, the Board recognized the expanded footprint of the company would allow us to scale up our ESG- and climaterelated performance. In June 2021, the Board unanimously endorsed Devon's new, ambitious environmental targets to reduce the carbon intensity of our operations, minimize freshwater use, and engage constructively with our value chain.

## **Public Policy Engagement**

As a participant in local, state, national, and global economies, Devon recognizes our responsibility to advocate for laws and regulations that meet business and societal needs. We take a transparent and comprehensive approach to engaging in public policy, governed by strong oversight. This priority is enhanced by the recent expansion of the Board's GEPP Committee and is reflected in our annual Political Activity and Lobbying Report, which provides a detailed account of direct and indirect expenditures.

With growing interest in the energy transition and the sustainability of the energy industry, public policy discussions about oil and natural gas development and production are evolving rapidly. Devon is committed to having constructive conversations, building relationships, and developing solutions that help the company deliver results while addressing stakeholder concerns. That commitment is grounded in strong oversight through our Board's GEPP Committee. Devon takes a broad and proactive approach to engaging with shareholders and other external stakeholders on climate and ESG issues, frequently taking action to increase transparency and set operational goals as a result. Devon benefits from the ideas, improved communication, and clarity these engagements provide.



## Governance and Risk Management continued

## Management's Role

Devon's leadership team is responsible for managing the company's asset portfolio and associated climate risk management efforts, updating the Board regularly on ESG risks, opportunities, and performance. The company's management of ESG risks and opportunities, including climate-related risks, starts at the top.

Devon's Chief Operating Officer (COO) currently assumes the primary responsibility to assess and manage climate-related risks and opportunities. The COO is responsible for Devon's geosciences, reservoir, production, drilling, completions, facilities, field operations, environmental, health and safety, and ESG functions. This diverse set of responsibilities offers a unique and hands-on perspective to climate-related issues and helps support alignment across the organization to achieve climate-related goals.

Since 2018, the senior-level ESG Steering Committee (SC) has supported Devon's executive leaders to remain focused, informed and engaged on ESG matters that influence the company's business planning, strategy, and operations. The ESG SC helps set and implement strategy relating to ESG matters, including monitoring climate change matters, and overseeing communications with employees, investors, and other stakeholders with respect to ESG matters. The work of the ESG SC is reported to the Board and executive leadership on a regular basis.

Devon's EHS Council is made up of business unit and operations leaders and oversees the company's EHS Management system. To position Devon for long-term success, the council reviews emerging EHS and ESG issues, as well as proposed laws and regulations and their potential financial, operational, and reputational impact on the company. Council

members hold regular roundtable discussions with field production leaders to help them stay current with the rapid evolution of stakeholder expectations around climate change and environmental performance.

The vice president of ESG and EHS, a new role at Devon, elevates the company-wide focus on ESG performance, including air emissions. This leader serves on both the ESG SC and the cross-functional EHS Council, providing continuity and alignment. The EHS Council operationalizes Devon's emissions reduction strategy and works in close coordination with the vice president for ESG and EHS, the ESG SC, and senior leaders for effective implementation of the strategy.

## **Approach to Risk Management**

Devon's Enterprise Risk Management (ERM) programs systematically identify and manage economic, operational, and reputational risks to our business, including climate and other ESG risks, and are essential to our efforts to deliver results and sustain stakeholder trust. Devon's Board oversees the ERM program, regularly assessing business risks and determining whether the company's ERM programs are appropriately designed and implemented to address them. While each board director has experience in risk management, continuing education is furthered through discussion and presentation of information about emerging ESG and climate-related risks by senior management and other subject matter experts. The four standing Board committees consider the risks inherent in their areas of oversight and report regularly to the full Board.

The Devon management team is, in turn, responsible for executing the risk management directives of the Board and its committees, including overseeing and reporting on Devon's day-to-day efforts to manage risk. The management team works with subject matter experts across the company to implement a multi-disciplinary company-wide risk management process.

Since 2018, Devon's risk management has included formal and ongoing consideration of the effects of climate change on the company's portfolio. Devon analyzes emerging climate-related risks and integrates them into the company's risk assessment system as appropriate. Devon also analyzes potential impacts due to natural disasters and short and medium-term weather changes when evaluating and planning future development. This analysis considers the likelihood of those events occurring and how Devon could mitigate the potential impact of those events.

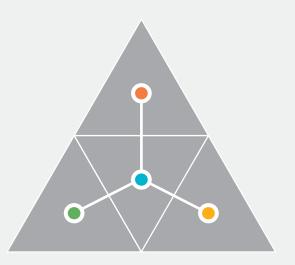
Devon employs our Enterprise Risk Management (ERM) process to identify and manage the company's material risks. The ERM framework helps focus the company on the most salient enterprise-level risks, including EHS risks. EHS-related risks are addressed on a day-to-day basis through existing, documented programs and practices, which are discussed in detail in (i) an annual internal workshop focused on EHS risks, stewardship, and compliance as part of Devon's ERM and (ii) other contexts as circumstances warrant.

Additionally, an ERM annual survey of company leaders is conducted to gauge leaders' views, with various categories of risk scored for their financial impact, likelihood, time frame, and how well the company is prepared to deal with them.

Climate change risks are integrated into relevant business risk categories and considered in connection with the review of the ERM-identified risks, including EHS risks. Climate changerelated risks are analyzed under the same risk assessment process as other business risks, based on the likelihood of their occurrence and their economic and non-economic impacts. Business risks are evaluated using Devon's corporate risk matrix, which identifies and evaluates environmental risks as a risk category.

## **Devon's ERM framework**

Our risk management process enabled us to prepare for and respond quickly to the COVID-19 pandemic and subsequent economic crisis, while executing our business strategy and successfully completing the merger of Devon and WPX.



- Board oversight Periodic reporting to the board, executive committee and management
- Risk workshops Frequent risk discussions

Enterprise risk inventory Documentation covering each risk category including risk-mitigation activities

Annual ERM survey Annual survey of board, executive committee, management and subject matter experts



# **Business Strategy**

Devon's vision is to be the premier independent oil and natural gas company in North America, producing affordable and accessible energy that the world needs while finding ways to produce and deliver it more responsibly.

Since our founding 50 years ago, we have pioneered operational practices, been proactive in applying technology and resilient in adapting to evolving market conditions, regulations and increasing stakeholder expectations. Our work helping to supply reliable, affordable energy enables Devon to create jobs, strengthen our communities, and contribute to local, state, federal and global economies. We do this while actively mitigating our impacts to address concerns about climate change and other issues.

Devon strives for sustainable growth through a disciplined, returns-driven strategy, significant financial strength and liquidity, and an advantaged dividend. Our commitment to ESG excellence—including climate-related performance supports the company's goals by keeping our strategy focused on managing risk, operating responsibly, and improving continuously.

Devon's business model is designed to emphasize capital efficiencies, achieve strong returns, and deliver consistently competitive shareholder returns among our peer group.

The company's strategic approach is based on five core elements:

- Disciplined growth strategy
- Reduced reinvestment rates
- Maintain low leverage
- Prioritize cash return
- Pursue ESG excellence

## **Strategic Planning Time Horizons**

## Short-term budgeting and planning cycle:

Devon maintains a detailed schedule of operational activity on a well-by-well basis on a rolling two-year time horizon with active involvement from our leadership team. This robust, short-term planning capability enables us to forecast drilling, completion, production and infrastructure requirements and performance, as well as to optimize operational execution and capital efficiencies. Focused planning allows Devon to remain nimble and responsive to evolving market conditions, regulatory developments, weather events and takeaway or supply chain constraints, among other considerations.



Strategic long-range plan:

Devon regularly models numerous regional and macro-level scenarios—including acquisitions, divestitures and changes in regulations and market conditions - to test the strength of our portfolio and resources. Each year, the modeled scenarios inform the strategic decision-making of Devon's executive committee and board of directors that factors into Devon's long-range plan.

## Long-term fundamentals and portfolio assessment:

As described in detail in this report, Devon models and assesses the potential impacts to our portfolio and reserves under various long-term market scenarios, including carbon constrained scenarios. We consider base case scenarios for the oil and natural gas market from leading external experts and compare each base case to an alternate carbon-constrained future scenario, in which demand for oil and natural gas is substantially reduced.



## Business Strategy continued

## **Our Business Strategy in the Context** of Energy Transition

As discussed in detail throughout this report, even in possible carbon-constrained scenarios, oil and natural gas production remains a crucial component for fulfilling global energy demand and North American oil and natural gas production play a large role in meeting that demand.

Devon executes our strategic plans based on rigorous analysis of the global outlook for energy and the potential for new regulations while recognizing and giving increasing consideration to climate change-related factors in our future business strategy and portfolio decisions.

The company is committed to ambitious GHG emissions reduction and deliberately sets up systems and processes to participate in the opportunities related to the energy transition. Devon strives to be a responsible, low-carbon energy provider while ensuring that our business is economically competitive and resilient.

**Climate Ambition: Devon will be a** climate-conscious, low-cost, lowcarbon energy producer contributing to an orderly energy transition.

## Decarbonize

Decrease the carbon intensity of our operations by reducing Scope 1 and Scope 2 GHG emissions to net zero by 2050, prioritizing the reduction of flaring and methane emissions

Following the merger with WPX, in June 2021 Devon reinforced our commitment to proactively manage climate-related risks and opportunities by establishing several environmental performance targets to limit GHG and methane emissions in our operations. These operational emissions performance targets are in line with leading industry practices and stakeholder priorities. These targets, endorsed by the Board of Directors, are the following:

- Achieve net zero GHG emissions for Scope 1 and 2 by 2050
- Reduce Scope 1 and 2 GHG emissions intensity by 50% by 2030 (from a 2019 baseline)
- Reduce methane emissions intensity by 65% by 2030 (from a 2019 baseline)
- Achieve flaring intensity of 0.5% or lower by 2025 and eliminate routine flaring by 2030.

In addition to these emissions-specific targets, we made the following commitments to further our pursuit of ESG excellence:

- Continue to advance water recycling rate and continue to use 90% or more non-freshwater for completions activities in the most active operating areas within the Delaware Basin
- Engage value chain in assessment of performance in key ESG areas

As we strive to meet or beat these targets, Devon will continue to apply a wide range of advanced technologies and best practices, in tandem with increasing efficiencies, and is committed to providing transparent updates on our progress.

Devon is focused on emissions at the point of production, where we can most directly and meaningfully effect emissions reductions. We continue to evaluate ways in which we can reduce our overall carbon footprint and strive to better understand our emissions sources beyond the point of production, prioritizing the impacts over which we have the most control.

## Disclose

The merger between Devon and WPX offered opportunities to scale up ESG-related performance and Devon has moved quickly to elevate oversight and integration of new ESG targets and goals into strategic planning. Devon's ambitious new climate-related targets now directly inform how we allocate capital, employ new technologies, optimize production from our assets, and broadly engage with our stakeholders. The company has taken the following actions:

- and public policy oversight

## Diversify

with thoughtful capital allocation

In line with our ambition to provide energy and maintain stakeholder trust within an orderly energy transition, Devon is evaluating opportunities that complement core business needs of finding and producing oil and natural gas and reducing GHG emissions. In identifying technology and best practices to reduce GHG emissions, Devon seeks to also identify opportunities related to producing energy in the transition to a lower-carbon economy and longer-term needs.

Setting up Systems to Pursue Opportunities: The New Ventures Team Devon's New Ventures team, established in 2021, is exploring energy transition opportunities complementary to our core business, including investment in strategic export opportunities to enhance the ultimate value of our production, electrification (including renewable-source generation), produced water management, hydrogen development, carbon capture utilization and storage, and liquefied natural gas opportunities, among others. The team will not only help guide Devon's climate-related risk management and emission reduction efforts, but will also pursue climate-related opportunities presented by a lower-carbon future.

## Disclose our progress and strengthen governance practice around climate change risk

Expanded the responsibilities of the former Governance Committee to include environmental

Elevated the importance of ESG by creating the new position of vice president of ESG and EHS

Engaged on ESG issues, including climate, with approximately 100 institutional investors representing more than 46% of outstanding shares

Continued Devon's track record of transparency on climate-related reporting through published reports and responses to voluntary surveys

## **Evaluate opportunities to create value in the transition to ever-cleaner forms of energy,**



# **Climate Change Resilience Analysis**

## **Methodology and Analysis**

This report considers base case scenarios from both ICF and the IEA for the oil and natural gas market and compares each base case scenario<sup>1</sup> to an alternate carbon-constrained future scenario, in which demand for oil and natural gas is substantially reduced. Each scenario has been analyzed for this report by the consulting firm, ICF, with modeling conducted for oil, natural gas, and propane (the latter as a proxy for NGLs). The first scenario is based on ICF's assumptions, and the second is based on widely-referenced projections by the IEA. Because the two scenarios differ in their baseline assumptions, analyzing both of them provides a level of robustness against alternative future scenarios. To model the impacts of a carbon-constrained future, the analysis applies, under both scenarios, IEA's assumptions about demand for oil and natural gas under aggressive carbon-reduction policies. The carbon-constrained scenarios include emissions reductions on the level required to achieve the goals of the Paris Agreement and align with an emissions pathway "fully aligned with the Paris Agreement by holding the rise in global temperatures to 'well below 2°C ... and pursuing efforts to limit [it] to 1.5°C."<sup>2</sup> IEA has asserted that its Sustainable Development Scenario is fully aligned with the Paris Agreement. For more detail on methodology, please refer to the appendix of this report.

This section of the report provides the results of an analysis of the potential impacts to Devon's oil and natural gas reserves and resources under a scenario of reduction in demand due to various factors including carbon restrictions and related regulations or commitments adopted by governments consistent with a path to global average temperature increase well below 2 degrees Celsius (i.e., a low-demand and low-price environment).

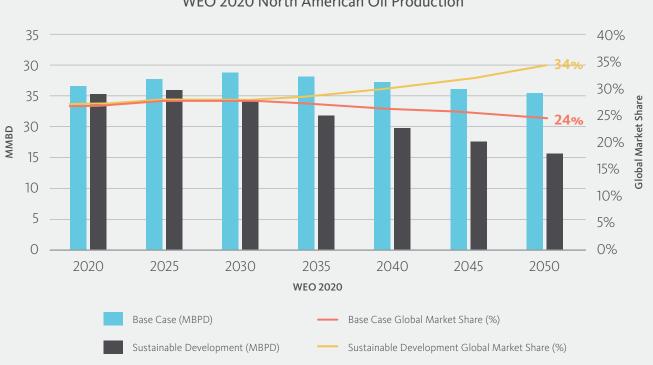
In the carbon-constrained scenarios assessed, demand for oil and natural gas is substantially reduced. However, even in such carbon-constrained scenarios, oil and natural gas remain a crucial component for fulfilling global energy demand and North American oil and natural gas production plays a proportionally larger role in meeting that demand. Accordingly, Devon remains confident that our asset portfolio is aligned to (i) remain economically profitable in a range of future climate change scenarios and (ii) provide oil and natural gas in an environmentally responsible way.

## A Continued Role for North American Oil

Under the assumption of the assessed decarbonization policy, forecasters still project a central role for oil and natural gas as part of the global energy mix. In the IEA Sustainable Development Scenario, oil still supplies 16% of world primary energy demand in 2050 while natural gas supplies 20%. In such a scenario, oil and natural gas sourced in North America plays a large role in meeting remaining global demand. Figure 1 shows an extrapolation of the IEA's 2020 World Energy Outlook (WEO) projections for North American oil production through 2050 and the proportion of global oil demand that is met by that production. Notably, in the IEA Sustainable Development Scenario used for this updated analysis, North American oil production meets one third of global oil demand. The 2020 WEO assumes that there is a larger resource base for U.S. shale oil producers and provides a large range of potential production in 2030 from those producers—9-13 million barrels per day (MMBD)—that will depend on oil prices and investment.<sup>3</sup> As a result, in a high oil price environment the 2020 WEO forecasts that there could be 2 MMBD of additional U.S. production in 2030 in the IEA Stated Policies (Base) Scenario. 2 MMBD of additional U.S. production would lead to 7% higher North American oil

production in the IEA Stated Policies Scenario and 8% higher in the IEA Sustainable Development Scenario in 2030. The 2020 WEO was published in October 2020 and global oil prices rose above the near-term forecasted price levels in that report by the second half of 2021 as global demand recovered from the ongoing COVID-19 pandemic, suggesting that the high end of the WEO U.S. production forecast range is feasible in either a base case or sustainable development scenario.

Figure 1





<sup>1</sup> The IEA World Energy Outlook State Policies scenario is considered the IEA base case for the purposes of this analysis since it includes current policy as well and policy intentions and targets globally. The scenario also assumes that significant risks to public health as a result of the COVID-19 pandemic were brought under control over the course of 2021, allowing for a steady recovery in economic activity.

<sup>2</sup> IEA World Energy Outlook 2020, pg. 415.

<sup>3</sup> IEA World Energy Outlook 2020, pg. 261-263.

## Projected North American Oil Production and Share of Global Oil Demand, IEA Stated Policies (Base) Scenario and IEA Sustainable Development Scenario (2020)

## WEO 2020 North American Oil Production



# **Analytical Approach and Results of Assessment**

## Base Case Scenarios ICF Base Case

This scenario represents ICF's standard baseline energy market scenario. Its assumptions fall in line with many other projections from industry consultants and banks. It assumes continued growth in demand for natural gas in North America (8% growth between 2023 and 2050), including liquefied natural gas (LNG) exports and pipeline exports to Mexico. Global oil market growth is assumed from the IEA forecast. Regarding clean energy targets and carbon pricing, ICF's Base Case accounts for U.S. and Canada territorial, state, and local Renewable Portfolio Standard targets and other legislation aimed at reducing greenhouse gas emissions. The Base Case also assumes a regional, probability-weighted CO<sub>2</sub> price for the power sector with a national carbon price that begins in 2023.<sup>4</sup> At these levels, the carbon prices further exhibit the advantages of natural gas over coal as a source of non-intermittent power in the U.S. In ICF's Base Case, natural gas demand from the power sector increases until 2035 as demand pivots from coal to gas and natural gas complements the deployment of renewable power generation by providing a flexible source of power.

The ICF Base Case applies ICF-derived natural gas-price elasticities and IEA oil-price elasticities over time. It projects an average 2023-2050 WTI oil price of \$57 per barrel (\$/ Bbl) and an average Henry Hub natural gas price of \$2.94 per MMBtu (\$/MMBtu) over the same period.<sup>5</sup> ICF believes this long-term price forecast remains reasonable despite the increase in prices in the second half of 2021. Furthermore, because the projections for this report begin in 2023, the largest impacts from the price shocks are not included in the forecast period.

## ICF Base CaseU.S. Power Sector CO, Prices (2019\$/U.S. Ton)

Figure 2

Region	2025	2040
California	20	41
Regional Greenhouse Gas Initiative (RGGI)	8	22
All Others	3	22

## IEA Stated Policies Scenario

The IEA Stated Policies Scenario projects global energy market trends based on currently enacted policies and the likely impacts of officially announced new policies that will affect the energy sector. This analysis uses the IEA Stated Policies Scenario as a base case for the IEA projections.<sup>6</sup> The IEA Stated Policies Scenario projects an average 2023-2050 importer cost of crude of \$81/Bbl (which ICF converted into an average WTI oil price of \$75/Bbl) and an average Henry Hub natural gas price of \$3.93/MMBtu over the same period.

In comparison with the ICF Base Case scenario, the higher prices in the IEA Stated Policies Scenario imply a less robust resource base and higher costs for oil and natural gas supply development. Nevertheless, between 2023 and 2050, domestic and export natural gas market growth in North America has a similar growth rate in the IEA Stated Policies Scenario (11%) as the ICF Base Case scenario (8%). In 2050, the size of the domestic natural gas market for the U.S. is similar in the IEA Stated Policies Scenario (85 bcf/d) and the ICF Base Case (87 bcf/d). Both 2050 forecasts are notably smaller than the U.S. EIA Annual Energy Outlook 2021 Reference Case (95 bcf/d). While average global oil demand in the IEA Stated Policies Scenario is not down significantly in the 2020 WEO compared to the 2019 WEO (it is down 2.5% between 2025 and 2040), oil prices are down significantly (15%). According to the 2020 WEO, this pricing "reflects an assumption that in this scenario major conventional resource-holders act to prevent prices from reaching levels that trigger either a return to very rapid growth in US tight oil production or that provoke a faster substitution away from oil by consumers." However, the 2020 WEO also acknowledges that a "recovery in oil demand would create much greater risks of price volatility." This was already experienced in 2021 as oil prices went above \$80/Bbl due to a quick recovery in global oil demand.

	<sup>4</sup> ICF's CO <sub>2</sub> price streams are probability-weighted forecasts based on four different cases: a No CO <sub>2</sub> Case with no carbon pricing program at the federal level, a Regulatory Case which reflects carbon prices that are representative of a regulatory approach similar in stringency to President Obama's Clean Power Plan, a 50% Reduction Case assumes prices consistent with a national cap and trade program that begins in 2022 and targets a 50% percent national reduction by 2050, and a Legislative Case is representative of carbon pricing proposals from the 116th Congress.
ies	<sup>5</sup> All prices in this report are given in real 2019 dollars so the presented prices do not include inflation. [ICF assumes an inflation rate of 2.1% per year.]
	<sup>6</sup> While the published IEA scenarios only project to 2040, ICF has extrapolated them out to 2050.
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## **Carbon-Contrained Scenarios**

## ICF Sustainable Development Case

This analysis included a low-carbon scenario to model the market impacts of aggressive carbon reductions from the ICF Base Case. To estimate the reduction in demand for oil and natural gas, the ICF Sustainable Development Case takes the percentage change in demand from IEA's Stated Policies Scenario to its Sustainable Development Scenario (described below) and applies this same demand-reduction percentage to ICF's baseline assumptions. The ICF Sustainable Development Case uses an IEA-derived oil-price elasticity of demand and an ICF-derived natural gas-price elasticity of demand. This report refers to ICF's low-carbon scenario as the ICF Sustainable Development Case, given its basis in IEA's Sustainable Development Scenario.

## IEA Sustainable Development Scenario

ICF analyzed the price impacts of IEA's Sustainable Development Scenario, the primary carbon-reduction scenario in IEA's 2020 WEO. In the IEA Sustainable Development Scenario, markets are constrained by policies that achieve three objectives:

- An early peak and rapid subsequent reductions in emissions, in line with achieving the goals of the Paris Agreement (United Nations Sustainable Development Goal [SDG] 13).
- Universal access to modern energy by 2030, including electricity and clean cooking (SDG 7).
- A dramatic reduction in energy-related air pollution and the associated impacts on public health (SDG 3.9).

This scenario is best interpreted as a pathway that puts in place sufficient conditions to limit the global average temperature increase to less than 2 degrees Celsius above pre-industrial levels while targeting lower temperature increases.<sup>7</sup> The trajectory for emissions in the IEA Sustainable Development Scenario is consistent with reaching global net zero CO<sub>2</sub> emissions in 2070. This gives a 50% chance of a 1.65 degrees Celsius stabilization. The primary policy mechanisms that are used in the IEA Sustainable Development Scenario for achieving carbon emission reductions are clean energy targets and carbon taxes. The IEA Stated Policies Scenario only includes national carbon pricing schemes in thirty countries. In contrast, the IEA Sustainable Development Scenario includes a carbon price of \$140/U.S. Ton in 2040 in advanced economies and of \$125/U.S. Ton in selected developing economies such as Brazil, China, Russia, and South Africa.

It is important to note that limiting global temperature rise to 2 degrees Celsius or less is dependent on global greenhouse gas emissions trends through 2100, while the IEA Sustainable Development Scenario only provides forecast data through 2040. Because of this, ICF assumed for this report that the trends in declining oil and natural gas demand will continue through 2050 and further declines in demand may be necessary after 2050 as well.

# IEA WEO 2020 CO2 prices in by scenario (2019\$/U.S. Ton) Figure 3 Region Sector Stated Policies Canada Power, indust Chile Power China Power, indust European Union Power, indust Korea Power, indust South Africa Power, indust Advanced economies (including the U.S.) Power, indust Selected developing economies Power, indust

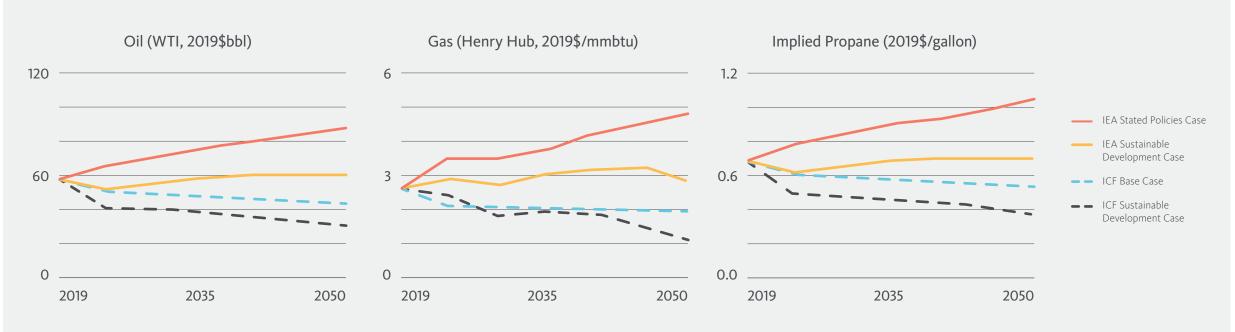
<sup>7</sup> IEA World Energy Outlook 2020, pg. 77.

Sector	2025	2040
Power, industry, aviation, other	34	38
Power	8	20
Power, industry, aviation	17	35
Power, industry, aviation	34	52
Power, industry	34	52
Power, industry	10	24
Power, industry, aviation	63	140
Power, industry, aviation	43	125

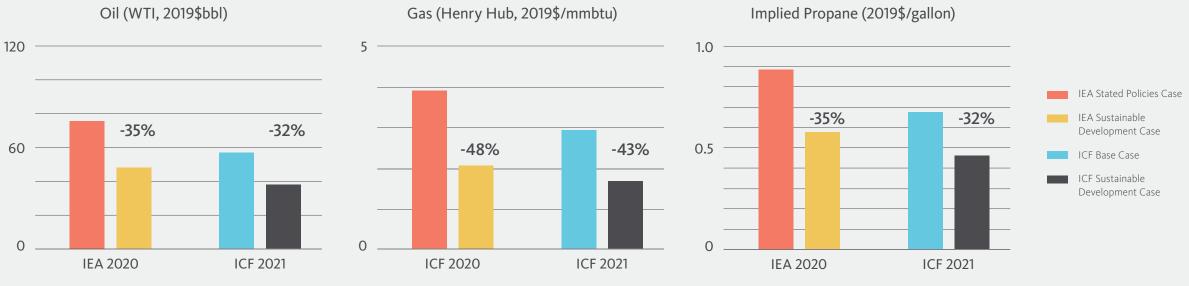


## **Assessment Results**

ICF's assessment of climate impacts across these four scenarios found that aggressive carbonrestriction policies result in significantly reduced prices for oil, natural gas, and NGLs. Figure 4 shows the projected price trajectories for each product in each of the modeled scenarios.



Change in Projected Prices by Scenario (2023-2050 average, 2019\$); Shows the average price for each commodity over the 2023-2050 period in each scenario, and the change between the base case and the climate scenarios Figure 5



Projected Price Trajectories for Oil, Natural Gas, and Propane in Base Case and Sustainable Development Scenarios Figure 4



## **Regional Price Differentials and Breakeven Analysis**

In order to project asset-specific impacts of various potential price futures, ICF projected the regional price impacts of each modeled scenario. ICF also conducted an analysis of breakeven prices for Devon's major assets based on published third-party breakeven figures.

## ICF Regional Oil Prices

Average 2023-2050 regional oil prices in the ICF Sustainable Development Case range from \$36/Bbl in the Powder River Basin and Eagle Ford to \$39/Bbl in Cushing (Figure 6). Regional price levels were estimated by using historical price differentials between each region. The 2013, 2015-2017, and 2020-2021 average basis<sup>8</sup> between the WTI Cushing price and each regional hub has been applied to the WTI price forecast. Average 2023-2050 regional oil prices in the ICF Base Case range from \$54/Bbl in the Permian and Eagle Ford to \$57/Bbl in Cushing. Basis differentials have been separately estimated for the ICF Sustainable Development Case. In that case, the 2014 and 2018-2019 average basis between the WTI Cushing price and each regional hub has been applied to the WTI price forecast.

## **IEA Regional Oil Prices**

The IEA Stated Policies Scenario projects higher oil prices compared with the ICF Base Case. Average 2023-2050 regional oil prices in the IEA Stated Policies Scenario range from \$71/Bbl in the Permian to \$75/Bbl in Cushing (Figure 7). The same methodology that was used for calculating the regional basis for the ICF cases has been used for the IEA scenarios. Average regional oil prices in the IEA Sustainable Development Scenario are about 35% lower than the prices in the IEA Stated Policies Scenario.

As in the ICF cases, the market hub prices at different locations have been estimated using basis differentials derived from historical trends, since the IEA does not provide prices for different locations throughout North America.

<sup>8</sup> Oil price differentials from 2013, 2015-2017, and 2020-2021 between WTI Cushing and each region were used because those years reflect periods of time with declining oil prices and lower pipeline utilization levels. While the average price differentials are within \$1/Bbl for both 2014 and 2018-2019 and 2013, 2015-2017, and 2020-2021, they are smaller during 2013, 2015-2017, and 2020-2021 for the Permian, Eagle Ford, and Williston and larger for the Powder River basin, reflecting the competitiveness of each basin.

<sup>9</sup>The historical price differential between WTI Cushing and the Guernsey price hub was used to forecast the regional oil price for the Powder River Basin. Guernsey, located in eastern Wyoming, is the most active oil trading hub in the Rockies.

## ICF Regional Oil Prices, Average 2023-2050, 2019\$/Bbl Figure 6

	ICF Base Case	ICF Sustainable Development	\$ Change	% Change
WTI Cushing	\$57	\$39	(\$18)	-35%
Permian	\$54	\$39	(\$15)	-32%
Eagle Ford	\$54	\$36	(\$18)	-36%
Powder River <sup>9</sup>	\$55	\$36	(\$18)	-37%
Williston	\$55	\$38	(\$17)	-35%

## IEA Regional Oil Prices, Average 2023-2050, 2019\$/Bbl Figure 7

	IEA Stated Policies	IEA Sustainable Development	\$ Change	% Change
WTI Cushing	\$75	\$48	(\$26)	-35%
Permian	\$71	\$48	(\$23)	-32%
Eagle Ford	\$72	\$46	(\$26)	-36%
Powder River	\$72	\$46	(\$26)	-37%
Williston	\$73	\$47	(\$26)	-35%



## **Breakeven Oil Prices**

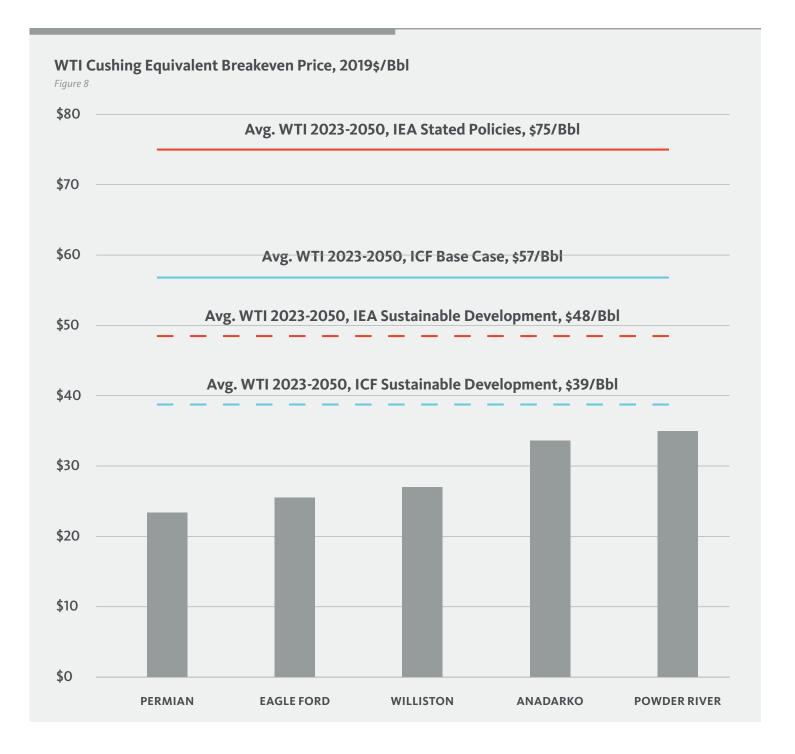
The analysis shown in Figure 8 shows WTI Cushing equivalent breakeven prices (vertical bars) for the region in which Devon's oil assets are located. Because Devon's internal calculations of asset-specific prices are confidential, breakeven oil prices for the Williston (Bakken), Eagle Ford, Anadarko, Permian, and Powder River Basin oil wells are based on Enverus oil price breakeven analysis.<sup>10</sup> Enverus is a reputable, experienced source for WTI equivalent breakeven prices; Devon and ICF consider the methodology that Enverus' analysts and ProdCast tool used in calculating breakeven oil prices to be reasonable for the regions in which Devon's oil assets are located.<sup>11</sup> The Enverus breakeven prices that ICF analyzed were half-cycle breakeven oil prices—the constant price needed to recover capital expenditures (excluding sunk capital), operating costs, royalties, and taxes and earn an acceptable return on investment—for the plays in which Devon operates. ICF used Enverus' Tier 1 breakeven prices for Devon's assets, which represent the best third of Devon's acreage based on its initial production rates. These were arrived at by assuming a \$70/Bbl WTI price, a \$4.00/MMBtu Henry Hub price, and 20% minimum acceptable rate of return.

Since the 2020 analysis, Devon merged with WPX, which operated in the Williston and Permian basins. In 2019, WPX produced 96.0 thousand barrels of oil equivalent (Mboe) per day in its Permian basin wells and 70.9 Mboe per day in its Williston basin wells. The Permian has the lowest breakeven prices in Devon's production portfolio and the new Williston assets have breakeven prices that are close to the average breakeven price for Devon's assets. Overall, these assets help Devon's portfolio to be more resilient in low oil price scenarios. Figure 8 suggests that all of Devon's oil assets are expected to yield high economic returns in the \$57/Bbl oil price environment in the ICF Base Case and much higher returns in the \$75/Bbl oil price environment in the IEA Stated Policies Scenario. The \$48/Bbl oil price environment in the IEA Sustainable Development Scenario is still higher than any of the oil assets' breakeven prices and, therefore, is expected to yield positive economic returns. Even at much lower WTI oil price projections in the ICF Sustainable Development Case, \$39/Bbl, all the oil assets are expected to be economic with oil prices at or above the average price for 2023-2050. Consistent with historical experiences, breakeven prices have the potential to decline over time as drilling and operations techniques and technology improve. There is a limit to how much the breakeven price can decline due to production efficiencies, but that limit has likely not been reached in the United States.

<sup>10</sup> Enverus. "WTI Break-Even Price & Tier." Operator Leaderboard Report from the Enverus ProdCast – 2Q2021. October 2021.

<sup>11</sup> Devon's company-wide all-in sustaining cash costs were reported to be \$30/Bbl in its Q3 2021 earnings presentation. A different methodology for calculating Devon's breakeven price was used for that analysis but it yielded similar results to Enverus' analysis. https://s2.q4cdn.com/462548525/files/ doc\_financials/quarterly/2021/q3/Q3-2021-DVN-Earnings-Presentation.pdf

<sup>12</sup> If the IEA or ICF natural gas price forecasts, which project lower prices than Enverus' \$4/MMBtu Henry Hub assumption, were used to calculate the oil breakeven prices, the breakevens would be slightly higher.





## **Regional Price Differentials and Breakeven Analysis** ICF Regional Natural Gas Prices

ICF's Gas Market Model (GMM) calculated the natural gas hub prices at the different locations relevant to Devon's production. Gathering and processing charges have been subtracted from those prices to derive wellhead prices at each of those locations. Basis differentials have been separately estimated from the GMM for a lower growth case that is consistent with the IEA Sustainable Development Scenario and then applied to estimate prices at different locations.

Average 2023-2050 regional natural gas prices in the ICF Sustainable Development Case range from \$1.03/MMBtu at the Anadarko Wellhead to about \$1.68/MMBtu at Henry Hub or on average about 46% lower than regional prices in the ICF Base Case (Figure 9).

## IEA Regional Natural Gas Prices

IEA has projected natural gas prices at Henry Hub for its Stated Policies Scenario and its Sustainable Development Scenario. ICF has estimated market hub prices at different locations using basis differentials derived from ICF's GMM since IEA does not provide prices for different locations throughout North America. Wellhead prices have been estimated by subtracting gathering and processing charges at the relevant hubs.

The IEA Stated Policies Scenario projects higher natural gas prices compared to the ICF Base Case. Average 2023-2050 regional natural gas prices in the IEA Stated Policies Scenario range from \$3.09/MMBtu at the Anadarko Wellhead to \$3.92/ MMBtu at Henry Hub (Figure 10). Average regional natural gas prices in the IEA Sustainable Development Scenario are about 52% lower than the prices in the IEA Stated Policies Scenario.

## **Breakeven Natural Gas Prices**

As shown in Figure 9 and Figure 10, natural gas prices are expected to be significantly lower in the sustainable development scenarios. ICF did not conduct a breakeven analysis of the natural gas prices, because the majority of the natural gas that Devon produces is associated with our oil production, and thus provides income in addition to the revenue from selling oil. Therefore, the resiliency of Devon's portfolio is expected to be primarily driven by oil prices and not by natural gas prices. The natural gas prices in the IEA's and ICF's Sustainable Development Scenarios are at levels that would make it difficult for most gas-directed drilling to be profitable with current drilling technology. Low natural gas prices could induce greater demand for natural gas, however, and provide an additional source of income for oil producers. Consistent with the breakeven prices for oil, breakeven prices for natural gas also have the potential to decline over time as drilling techniques and technology improve. Consequently, even though most of Devon's current portfolio is focused on oil production, there is potential for natural gas to provide incremental income for oil-directed drilling and, furthermore, changes in gas prices are unlikely to impact the results of the breakeven analysis.

## ICF Natural Gas Prices, Average 2023-2050, 2019\$/MMBtu Figure 9

	ICF Base Case	ICF Susatinable Development Case	\$ Change	% Change
Henry Hub	\$2.94	\$1.68	-\$1.26	-43%
Delaware Wellhead	\$2.17	\$1.23	-\$0.94	-43%
Eagle Ford Wellhead	\$2.27	\$1.23	-\$1.04	-46%
Anadarko Wellhead	\$2.11	\$1.03	-\$1.08	-51%
<b>Rockies Wellhead</b>	\$2.34	\$1.13	-\$1.21	-52%
Williston Wellhead	\$2.28	\$1.28	-\$1.00	-44%

## IEA Natural Gas Prices, Average 2023-2050, 2019\$/MMBtu

Figure 10

	IEA Stated Policies
Henry Hub	\$3.92
Delaware Wellhead	\$3.14
Eagle Ford Wellhead	\$3.24
Anadarko Wellhead	\$3.09
<b>Rockies Wellhead</b>	\$3.31
Williston Wellhead	\$3.26

ICF Susatinable Development Case	\$ Change	% Change
\$2.05	-\$1.86	-48%
\$1.55	-\$1.59	-51%
\$1.60	-\$1.64	-51%
\$1.30	-\$1.79	-58%
\$1.40	-\$1.91	-58%
\$1.65	-\$1.61	-49%



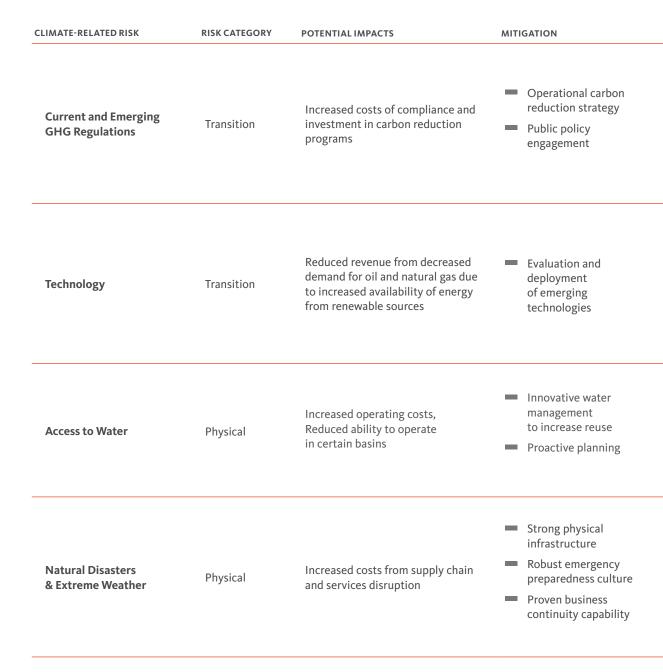
## Risks

There is an increasing level of awareness and understanding about the potential risks to business from climate change. The risks to different types of businesses may be varied, including impacts to business operations, capital investments, long-range planning and strategy, and worker health and safety. The TCFD defines two categories of climate-related risks: physical and transition. Physical risks refer to those risks that are associated with physical impacts from climate change; transition risks are related to the transition to a lower-carbon economy. Aligned with our stakeholders, Devon is committed to understanding the potential impacts of climate change and a possible carbon-constrained future on our long-range business plans.

## **Risk Time Horizons**

Devon considers risks as far into the future as is practicable given variability in economic, regulatory, and technological circumstances. Devon categorizes short-term risks to our business in time frames shorter than 12 months. Market conditions change often, and to be flexible and responsive to those changes, Devon must be prepared to consider risks on shorter time frames. Typically, Devon categorizes risks to our business as medium-term between 1 and 3 years. While Devon may recognize and analyze risks over a longer period of time, it typically categorizes risks out to a 5-year window.

The TCFD recommends that businesses assess potential risks related to the transition to a lower carbon economy and those posed by the physical impacts of climate change. Understanding the potential political, legal, technological, market, and reputational risks of the transition to a lower-carbon economy is important to Devon's business. This report highlights four thematic risk themes, drawing on the company's existing disclosures. Risks and uncertainties are described in more detail in the "Risk Factors" section of our most recent Form 10-K and in our other filings with the U.S. Securities and Exchange Commission (the "SEC").



SPECIFIC EXAMPLES	ADDITIONAL RESOURCES
<ul> <li>Net zero Scope 1 and 2 targets and interim targets</li> <li>Methane detection program</li> <li>VP dedicated to public policy, including climate policy</li> </ul>	<ul><li>Annual Report</li><li>Sustainability Report</li><li>CDP Climate Response</li></ul>
<ul> <li>Advanced analytics and innovation</li> <li>New Ventures team</li> </ul>	<ul><li>Annual Report</li><li>Sustainability Report</li><li>CDP Climate Response</li></ul>
<ul><li>Delaware Basin water reuse</li><li>Freshwater targets</li></ul>	<ul><li>Annual Report</li><li>CDP Water Response</li><li>Sustainability Report</li></ul>
<ul> <li>Performance during winter storm Uri, COVID-19 pandemic</li> <li>2021 leadership role in Oil and Natural Gas Sector Coordination Council</li> </ul>	<ul><li>Annual Report</li><li>Sustainability Report</li><li>CDP Climate Response</li></ul>



## **Risk: Current and Emerging GHG Regulations**

Continuing and increasing political and social attention to the issue of climate change has resulted in legislative, regulatory, and other initiatives, including international agreements, to reduce greenhouse gas emissions, such as carbon dioxide and methane. Policymakers and regulators at both the U.S. federal and state levels have already imposed, or stated intentions to impose, laws and regulations designed to quantify and limit the emission of greenhouse gases. For example, both the Environmental Protection Agency and Bureau of Land Management have issued regulations for the control of methane emissions, which also include leak detection and repair requirements, for the oil and natural gas industry. Although the methane-specific requirements had been repealed by the previous administration, similar or more stringent requirements have already been imposed, or proposed, by the Biden Administration. However, Devon does not oppose all such regulation and has publicly supported federal methane initiatives (see Public Policy Engagement in next section).

With respect to more comprehensive regulation, President Biden has highlighted addressing climate change as a priority of his administration, and he previously released an energy plan calling for a number of sweeping changes to address climate change, including, among other measures, a national mobilization effort to achieve net-zero emissions for the U.S. economy by 2050, through increased use of renewable power, stricter fuel-efficiency standards and support for zeroemission vehicles.

While the full impact of these efforts is uncertain at this time, the adoption and implementation of these or other initiatives could result in the restriction or cancellation of oil and natural gas activities, greater costs of compliance or consumption (thereby reducing demand for our products) or an impairment in our ability to continue our operations in an economic manner.

## Mitigation: Operational Carbon Reduction Strategy, Public Policy Engagement

Devon believes a meaningful reduction in GHG and methane emissions is important to managing the risks and opportunities associated with climate change, including the ability to proactively address current and emerging regulations. From 2018 to 2020, we reduced our Scope 1 and 2 GHG emissions by 16% and methane emissions by 51% on an absolute basis – and we are committed to delivering further reductions as highlighted in the Targets section below.

Our operational carbon reduction strategy, detailed above (see Strategy section), is both a risk mitigation tactic and a commitment to participate in the innovation challenge of getting to net zero. Devon is focused on our core operations where we can make the most immediate and impactful difference, and our long-term targets are reinforced by near-term goals.

## Aggressive GHG Emissions Reduction

Devon's continuous improvement culture has prompted us to develop a detailed understanding of our emissions sources. This makes it possible to address our emissions at the source through a variety of mitigation strategies, including:

- Reducing flared volumes across our entire portfolio of producing assets
- Building out Delaware Basin midstream assets to alleviate capacity constraints that exacerbate flaring
- Expanding and enhancing our leak detection and repair (LDAR) program to find and fix equipment leaks
- Evaluating and implementing emerging methane detection and quantification technologies

- Installing air-driven pneumatic pumps and controllers in our production operations
- Reducing combustion emissions from drilling, completions and production by increasing the use of engines powered by electricity and alternative fuels
- Minimizing venting and flaring from storage tanks
- Collaborating with industry, nonprofits and government agencies

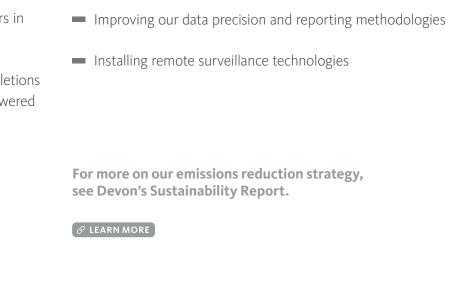
## Identifying and deploying step-change leak detection technologies

Advanced methane detection and quantification technologies are evolving rapidly and will be a key component of our strategy for broader emissions reductions and transparent reporting. Devon has a cross functional team that evaluates emerging technologies that have the potential to be effective at not only finding leaks more timely and over broader areas, but also assessing the magnitude of the leaks, allowing for faster detection, mitigation and quantification. The team is investigating opportunities for advanced optical gas imaging, continuous on-site monitoring, and remote detection using facility flyovers and satellites.

Devon is currently conducting multiple pilot projects, including laser-based continuous monitoring with LongPath Technologies, sensor-based continuous monitoring through our collaboration in Project Falcon, aircraft-based flyovers with Bridger Photonics and others. Devon recently established a test-bed facility in the Anadarko Basin to test and evaluate multiple technologies at a single facility to further assess the capabilities of the various detection technologies, the type and volume of emissions detectable, and potential use cases going forward.

## Toward measurable, transparent methane emissions reductions

Devon collaborates with industry peers and a diverse group of stakeholders, including government agencies and environmental groups, to understand and find solutions to reduce air emissions. For example, in 2021, Devon became a founding partner of the Gas Technology Institute (GTI) Veritas: Differentiated Gas Measurement and Verification Initiative to accelerate actions that reduce methane leakage across the natural gas value chain. The effort brings together scientists, academics, environmental organizations, certification organizations, and industry participants to demonstrate emissions reductions in a consistent, credible, and transparent way. The initiative aims to develop the necessary protocols to calculate measurement-informed methane emissions performance.





## Public Policy Engagement

With growing interest in the energy transition and the sustainability of our industry, public policy discussions about oil and natural gas development and production are evolving rapidly.

At the board level, the Governance, Environmental, and Public Policy (GEPP) Committee reviews our advocacy efforts and assists with evaluating political, legislative and regulatory developments that could affect Devon. Our vice president of public and government affairs, who reports to the executive vice president and general counsel and is a member of the ESG Steering Committee, leads our efforts to advocate for Devon's business interests, including those related to climate change.

Important decisions about energy, the environment and the economy require accurate information and thoughtful deliberation across diverse viewpoints. We are committed to having constructive conversations, building relationships and developing solutions—with a broad range of stakeholders —that help us deliver results, meet business and societal needs, address stakeholder concerns, and encourage sound public policy. For example, we have worked with stakeholders ranging from New Mexico state regulators to environmental groups such as the Environmental Defense Fund on methane regulations and flaring.

We strive to take a balanced approach on priority public policy issues such as those designed to address climate change. We publicly supported the ambitions of the Biden Administration to chart a path toward a durable framework for regulating methane at the federal level that encourages innovation and operational flexibility and we continue to engage constructively with the Environmental Protection Agency as the agency promulgates revised rules to strengthen the regulation of methane in our industry.





## **Risk: Technology**

Devon recognizes that new technologies developed for the purpose of transitioning to a lower-carbon economy can introduce new uncertainties and risks to our business. For example, various public and private initiatives subsidize the development and adoption of alternative energy sources and technologies to promote a lower-carbon economy, including by mandating the use of specific fuels or technologies. These initiatives may reduce the competitiveness of carbonbased fuels, such as oil and natural gas. Devon continuously evaluates emerging technologies and their potential impacts on shaping the choice of products that our customers will make in the future.

## **Mitigation: Evaluation and Deployment of Emerging** Technologies

Risks can also present opportunities, and Devon has set up the systems necessary to capitalize on technology-related opportunities. Devon supports continuing investments in innovation, research, and development of technical solutions that yield steady improvements in how the company manages GHG emissions associated with the production of oil and natural gas. With a consistent focus on accelerating low-carbon solutions. Devon will continue to create new opportunities for further emissions reductions, improving our competitiveness and positioning us to deliver strong returns in a potentially carbon-constrained future.

## Advanced Analytics and Innovation

Devon incorporates technology, tools and techniques that enable us to produce oil and natural gas in an environmentally responsible and cost-efficient way. As a long-time industry innovator, we develop, deploy and investigate advanced technologies to improve environmental performance and optimize production. These include methods to detect equipment methane leaks, assess flare performance, identify beneficial uses of produced water outside of our industry and identify small fluid spills. We invest in a dedicated technology team and embed technology professionals in our business units to align solutions to business needs. For example, our data science analytics team developed custom artificial intelligence models that evaluate multiple camera images of wellsites every hour to determine if the flaring equipment is functioning properly. If issues are detected, we can alert or dispatch an operator to take action. We have patents pending for the unique camera technology. Devon also holds multiple patents related to drilling and completions operations, including the breakthrough in fracture diagnostics called sealed wellbore pressure monitoring.

## New Ventures team

Devon's New Ventures team is exploring investments, technologies, and partnerships complementary to our core business that will not only help guide our emissions reduction efforts but will also capitalize on opportunities presented by a lower-carbon future. The team is developing strategies to enhance the ultimate value of the products we sell through investment in strategic export opportunities. The team is also exploring opportunities in electrification (including renewable-source generation), hydrogen development, carbon capture utilization and storage (CCUS), liquefied natural gas, produced water management, and others. For example, Devon is developing a 5-megawatt solar array in the Delaware Basin, which is expected to come online in 2022, to help power our nearby oil and natural gas production operations.

## **Case Study: Partnering for innovation**

Devon has invested in Altira Group LLC, a venture capital firm that specializes in funding new technologies for crude oil and natural gas innovation, including emission reduction and energy storage. Through this strategic partnership, Devon piloted an integrated energy storage technology provided by FlexGen, one of Altira's portfolio companies. FlexGen's Energy Storage Systems (ESS's) enables the economic integration (hybridization) of energy storage with power generation assets. By utilizing power storage at the well site, companies are able to reduce diesel usage, thereby reducing emissions.



## **Risk: Access to Water**

Devon's oil and natural gas extraction operations depend upon reliable access to, and the ability to dispose of, water used or produced in drilling and completions operations. Regulatory restrictions in our ability to either source or dispose of water may result in higher operating costs. In recent years, various federal agencies have asserted regulatory authority over certain aspects of the hydraulic fracturing process. For more on water risk, see Devon's Annual Report and CDP Water response.

In addition to risks driven by regulations around water use and disposal, Devon recognizes the need to mitigate physical risks associated with regional water stress. Using the World Resource Institute's Aqueduct Water Risk Atlas and its corresponding definition of baseline water stress, approximately 8% of Devon- operated wells as of December 31, 2020 were located in "high" or "extremely high" areas of baseline water stress.

For more on our water management strategy, see Devon's Sustainability Report.

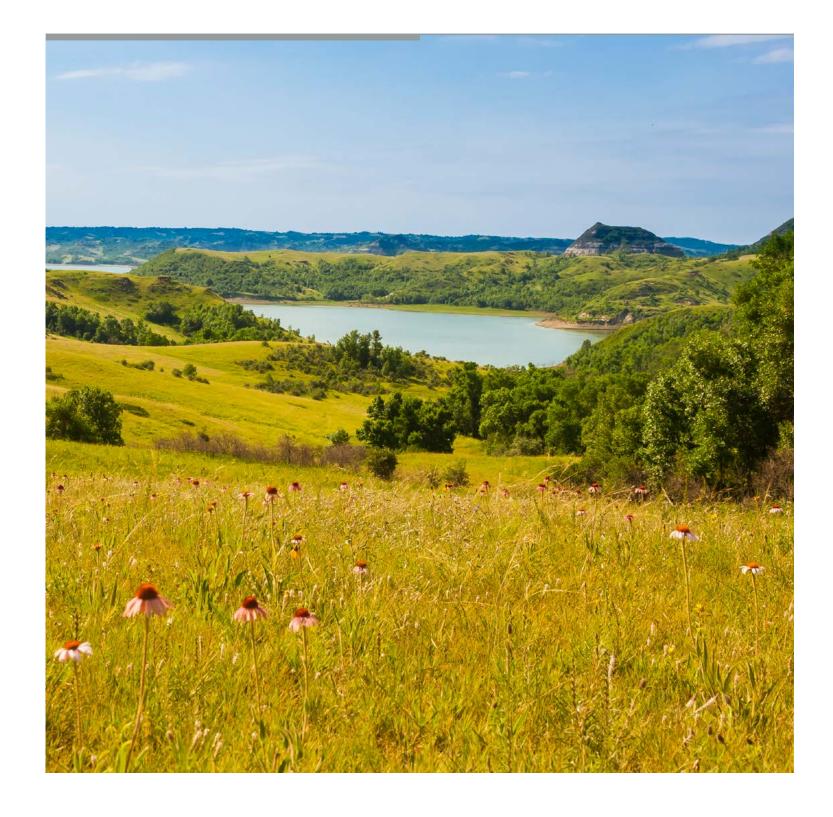
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## Mitigation: Innovative Water Management, Proactive Planning

By working to identify and develop alternative sources of water for operational activities, Devon seeks to reduce our dependence on fresh water and improve our ability to respond in a scenario where fresh water or disposal availability is constrained. Devon collaborates with government, industry, and community stakeholders to find innovative ways to conserve water in our drilling and completions operations companywide.

To minimize freshwater use in areas of drilling and production activity, Devon employs economically and operationally feasible freshwater alternatives wherever possible, and has multiple water treatment facilities throughout the Delaware Basin. Every gallon of produced, recycled, brackish, or non-fresh water that Devon uses in our operations reduces our consumption of fresh water. Since 2015, Devon has reused more than 150 million barrels of water from our water treatment facilities. In 2020, Devon decreased total water use 29% and increased the volume of recycled water consumed by 10% compared to 2019. In 2021, Devon set a target to advance water recycling activities and continue using 90% or more non-fresh water for completions in our most active Delaware basin operating areas.

In addition to water management, Devon also takes a proactive approach to planning. In all our project designs, Devon considers access to and the cost of water, alongside the costs of methane and GHG management. Such costs are incorporated into the characterizations of an asset, which may then inform the overall allocation of capital to an area. If costs are too burdensome, the company may consider directing capital to other assets. This proactive approach helps Devon mitigate both the physical and transition risks related to water access. For more on Devon's water programs, see our Sustainability Report and CDP Water response.





## **Risk: Natural Disasters and Extreme Weather**

Devon analyzes potential impacts due to natural disasters and short and medium-term weather changes when evaluating and planning future development. This analysis considers the likelihood of those events occurring and how Devon could mitigate the potential impact of those events. Oil and natural gas extraction operations have been successful in some of the most extreme environments across the planet, and in the areas where Devon operates and plans to operate, we are confident in our ability to continue to operate during periods of extreme weather or natural disasters. Currently, and in the short, medium, and long-term time frames, Devon does not foresee risks associated with acute or chronic physical changes due to climate change impacting our business any more or less than the status quo. In part, this is because the status quo includes extreme weather events and natural disasters. Devon has intentionally built a robust emergency preparedness program and culture, which continues to prove itself as it is tested over time.

## **Mitigation: Robust Emergency Preparedness, Proven Business Continuity Capability**

Devon's capabilities-based planning and centralized emergency response and recovery efforts are led by a corporate emergency management function that reports to Devon's security department, which follows the Federal Emergency Management Agency's (FEMA) National Incident Management System (NIMS), a nationwide approach to enable the whole community to work together to manage threats and hazards.

Unlike threat-based planning, capabilities-based planning can be implemented regardless of the type of threat. Devon believes that capabilities-based planning has been the lynchpin for success in maintaining business continuity through a variety of difficult emergencies, including Winter Storm Uri which caused widespread disruptions in Texas and Oklahoma in 2021, the ongoing COVID-19 pandemic and numerous Gulf Coast hurricanes. Devon learns and improves from each response. Moreover, the centralized nature of Devon's emergency response system ensures that the program and response are consistent across the company and cover all assets, regardless of whether an asset is considered to be in a hazard-prone area or not.

Years in the making, emergency preparedness and response are now a fundamental part of Devon's culture. Consistent training and regular scenario-based exercises reinforce this culture. For example, Devon completes a hurricane scenario exercise annually prior to each hurricane season, and reviews severe weather/tornadic activity systems each spring. When a Devon employee enters the Incident Command Center, they can sit down in their seat and plug into the process immediately without direction because roles and responsibilities are clearly defined and well-practiced.

Devon's investment in building a culture around the Incident Command System demonstrates how Devon is building climate resilience into our operations. Based on the success of this system to-date, physical risks should not currently represent a salient threat to Devon's operations or business continuity. Creating a consistent foundation supported by incident training, operational drills, and full scale-exercises will ensure the continuing readiness of mitigation measure.



## **Case Study: Nurturing Connections** to Support Ongoing Readiness

Devon actively participates at the local, state, and federal level to maintain proficiency and contribute to readiness and resilience for the company and our stakeholders. Devon regularly engages with law enforcement, fire departments, emergency management, and emergency medical services. During an energy emergency, Devon participated in establishing Oklahoma's energy assurance plan to assist the state. At the federal level, Devon follows the U.S. Department of Homeland Security Exercise and Evaluation Program, which allows us to provide community partners with documentation that validates their participation for federal funding and medical facility accreditation requirements. To advocate for broader emergency management capabilities, Devon's head of emergency management programs served as chair of the Oil and Natural Gas Subsector Coordinating Council in 2020, which works closely with the U.S. Departments of Energy and Homeland Security on physical and cybersecurity preparedness.



# **Metrics and Targets**

## Metrics

Devon reports GHG emissions from fuel combustion, flaring, fugitive emissions, venting and storage losses (Scope1) and electricity consumption (Scope 2) for assets under our operational control. We collect data on GHGs (carbon dioxide (CO<sub>2</sub>), methane and nitrous oxide) and submit annual GHG emissions according to the requirements of the U.S. Environmental Protection Agency (EPA) Greenhouse Gas Reporting Program.

We also report indirect emissions from the use of sold products (Scope 3) on an equity basis from sources not owned or controlled by Devon. Scope 3 GHG emissions include indirect emissions resulting from the consumption and use of crude oil and natural gas produced by Devon.

## Through focused effort in 2020, Devon continued our record of progress in lowering GHG emissions:

- Reduced Scope 1 and 2 GHG emissions 14% and methane emissions by 47% in 2020 compared to 2019.
- Reduced Scope 1 and 2 GHG emissions intensity 13% and methane emissions intensity by 47% in 2020 compared to 2019.
- Reduced flared volume intensity by 33% in 2020 compared to 2019.

## **Environment Performance Metrics**<sup>1</sup>

\*Unless otherwise noted, all data presented is pro forma (Devon + WPX) for U.S. operated assets.

	2018	2019	2020
Direct GHG Emissions (Scope 1)(million tonnes CO <sub>2</sub> e) <sup>2</sup>	4.72	4.65	3.91
By Constituent			
Carbon Dioxide (million tonnes CO <sub>2</sub> e)	3.65	3.66	3.39
Methane (million tonnes CO <sub>2</sub> e)	1.07	0.99	0.52
Nitrous Oxide (million tonnes CO <sub>2</sub> e)	0.003	0.003	0.002
By Source			
Flaring/Venting (million tonnes CO <sub>2</sub> e)	3.14	2.61	1.92
Combustion (million tonnes CO <sub>2</sub> e)	1.37	1.84	1.95
Other (million tonnes CO <sub>2</sub> e)	0.21	0.19	0.04
Indirect GHG Emissions from Electricity Use (Scope 2) (million tonnes CO <sub>2</sub> e) <sup>3</sup>	0.33	0.27	0.32
Direct and Indirect GHG Emissions (Scope 1 and 2) (million tonnes CO <sub>2</sub> e) <sup>2,3</sup>	5.05	4.91	4.23
Direct GHG Emissions Intensity (Scope 1) (tCO <sub>2</sub> e/MBoe) <sup>2</sup>	20.19	17.22	14.61
Direct and Indirect GHG Emissions Intensity (Scope 1 and 2) (tCO <sub>2</sub> e/MBoe) <sup>2</sup>	21.60	18.20	15.81
Indirect GHG Emissions from Use of Sold Products (Scope 3) (million tonnes CO <sub>2</sub> e) <sup>4,5</sup>	43	48	49
We report indirect emissions from the use of sold products on an equity basis from sources not owned or controlled by De- that Scope 3 emissions estimates are subject to uncertainty, inconsistency, and duplication as further described in the Air E legacy Devon's estimated Scope 3 emissions increased, driven by an increase in net equity production.			),

Methane Emissions Intensity (Scope 1) (tCO <sub>2</sub> e/MBoe) <sup>2</sup>	4.58	3.65	1.94
Methane Emissions Intensity - Production Segment (Scope 1) (% of natural gas produced) <sup>6</sup>	0.36%	0.31%	0.19%
Flaring Intensity (% of natural gas produced) 7	2.13%	2.21%	1.48%
Energy Used - Fuel and Electricity Use (trillion BTU) <sup>3</sup>	28.98	32.87	31.36

Note: Scope 3 Emissions

To estimate our Scope 3 emissions, Devon relies upon IPIECA's 2016 guidance document, Estimating Petroleum Industry Value Chain (Scope 3) Greenhouse Gas Emissions. According to the IPIECA guidance, category 11 "Use of Sold Products" is generally the largest contributor of Scope 3 emissions for a fuel-producing company and can account for more than 80% of a company's total Scope 3 emissions. We report "Use of Sold Products" by calculating combustion emissions for our oil, natural gas and marketed natural gas liquids products.

It is important to note that Scope 3 emissions estimates are subject to uncertainty, inconsistency and duplication due to the reporting of assets outside the control of the reporting company and various reporting methodologies. In addition, two or more companies will account for the same emissions within their Scope 1, 2 or 3 emission inventories (as further described in the IPIECA guidance document).

<sup>1</sup> The environment metrics have been calculated using the best available data at the time of publication. Historical metrics are subject to change as we continuously seek to improve our data management practices, data sources, and calculation methodologies in order to provide the highest level of transparency, consistency and accuracy. We report environment metrics on an operated basis, unless otherwise noted.

- <sup>2</sup> We include all reportable emissions under EPA's Greenhouse Gas Reporting Program (GHGRP) for Devon operated facilities, as well as non-reportable emissions from our production assets and, beginning in reporting year 2019, gathering and boosting assets. We calculate emission intensities using gross production as reported under the EPA GHGRP for all reporting segments.
- <sup>3</sup> We calculate our reported emissions using EPA fuel and electricity emissions factors.
- <sup>4</sup> We report indirect emissions from the use of sold products (Scope 3) on an equity basis from sources not owned or controlled by Devon. To estimate our Scope 3 emissions, we rely upon IPIECA's 2016 guidance document Estimating Petroleum Industry Value Chain (Scope 3) Greenhouse Gas Emissions. Per the IPIECA guidance, we report category 11 "Use of Sold Products" by calculating combustion emissions for our oil, natural gas and marketed natural gas liquids products using emission factors obtained from the EPA and net equity production reported in Devon's 2020 Annual Report on Form 10-K.
- <sup>5</sup> Performance is limited to legacy Devon performance only using net equity production reported in Devon's 2020 Annual Report on Form 10-K.
- <sup>6</sup>Our methane emissions intensity rate calculation includes all natural gas produced at Devon operated facilities and all methane emissions from Devon operated facilities associated with the production of oil and natural gas. Click here to see Devon's calculation methodology for methane emissions intensity. Click here to see AECOM verification of calculation methodology
- <sup>7</sup> Our flaring intensity rate calculation includes high-pressure flared volumes associated with the production of oil and natural gas.



## Metrics and Targets continued

## Targets

Devon has established aggressive environmental performance targets focused on reducing the carbon intensity of our operations, minimizing freshwater use and engaging constructively with our value chain. These targets reflect our dedication and commitment to achieving meaningful emissions reductions while pursuing our ultimate goal of net zero GHG emissions.

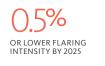


Devon's history of using advanced technologies to improve efficiencies across the business will be key to delivering on our ambition of achieving net zero GHG emissions for Scope 1 and 2 by 2050.



**REDUCTION IN METHANE** EMISSIONS INTENSITY BY 2030

Devon's emission reduction strategy will involve a range of actions including expanding our leak detection and repair program; implementing advanced leak detection technologies; reducing the volume of natural gas that is flared; electrifying facilities to reduce the use of natural gas and diesel consumed onsite, including transitioning from gas-driven to air-driven pneumatic controllers; exploring opportunities to use renewable-source generation at our facilities; and optimizing facility design to minimize leaks and eliminate common equipment failures.



We are establishing a two-pronged approach to improve our flaring performance — targeting a flaring intensity of 0.5% of gross natural gas produced by 2025 and eliminating routine flaring, as defined by the World Bank, by 2030.

**ELIMINATE** ROUTINE FLARING BY 2030

We expect to drive results by continuing to engage in pre-production planning, optimize facility design and operating conditions, assess and deploy beneficial reuse technologies, and collaborate with service providers to prevent and mitigate midstream and downstream constraints.



FOR COMPLETIONS IN MOST ACTIVE DELAWARE BASIN **OPERATING AREAS** 

To minimize freshwater use, the company employs economically and operationally feasible freshwater alternatives wherever possible and has a dozen water recycling facilities throughout the Delaware Basin.



By 2023, Devon contractors, who perform work on the company's locations, will begin undergoing annual evaluations to assess their ESG performance in key areas.

## How we calculate our GHG and methane emissions intensity rates

We calculate our direct (Scope 1) GHG and methane emissions by We calculate our indirect (Scope 2) GHG emissions for electricity including all emissions reported to the Environmental Protection Agency consumption using EPA fuel and electricity emissions factors for assets (EPA) pursuant to the Greenhouse Gas Reporting Program (GHGRP) for under our operational control. production and gathering and boosting assets under our operational control, as well as emissions subject to the GHGRP that fall below the basin-level reporting threshold.

GHG	_	SCOPE 1 & 2 GHG EMISSIONS (tonnes CO <sub>2</sub> e)
Emissions Intensity	=	GROSS OPERATED PRODUCTION
		AS REPORTED TO THE EPA (MBoe)

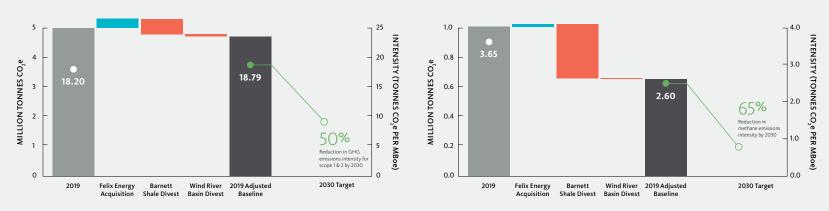
## Our baseline recalculation methodology

Devon's commitment to reduce our Scope 1 and 2 GHG emissions that result in a change to the emissions baseline of 5% or higher intensity by 50% and methane emissions intensity by 65% by 2030 on an absolute or intensity basis. Trigger events include structural will be calculated from a 2019 baseline. changes; source ownership or control changes; changes to reporting boundaries, quantification methodologies or data improvements; or This baseline serves as a hypothetical reference point for what the discovery of errors.

emissions intensity would have been in the absence of emissions Our 2019 baseline has been recalculated to reflect the divestiture of the reduction efforts over time. To comparably track progress toward the targets, adjustments to the emissions baseline may be necessary to Barnett Shale in 2020, divestiture of the Wind River Basin in 2021, and reflect structural, organizational, or reporting changes that may occur acquisition of Felix Energy in 2020. over time. For example, an acquisition or divestiture could significantly impact our emissions performance and impair comparability from the We believe our recalculation methodology affirms our commitment emissions baseline. to structurally drive down emissions, rather than divesting assets

as a means to achieve our ambitious emissions reduction targets. We relied upon guidance from the Greenhouse Gas Protocol and We are committed to the ongoing review and assessment of the IPIECA in establishing our baseline recalculation methodology. Our appropriateness of our emission reduction target levels and will baseline will be adjusted if impacted by one or more trigger events adjust as needed.

## **GHG Emissions**

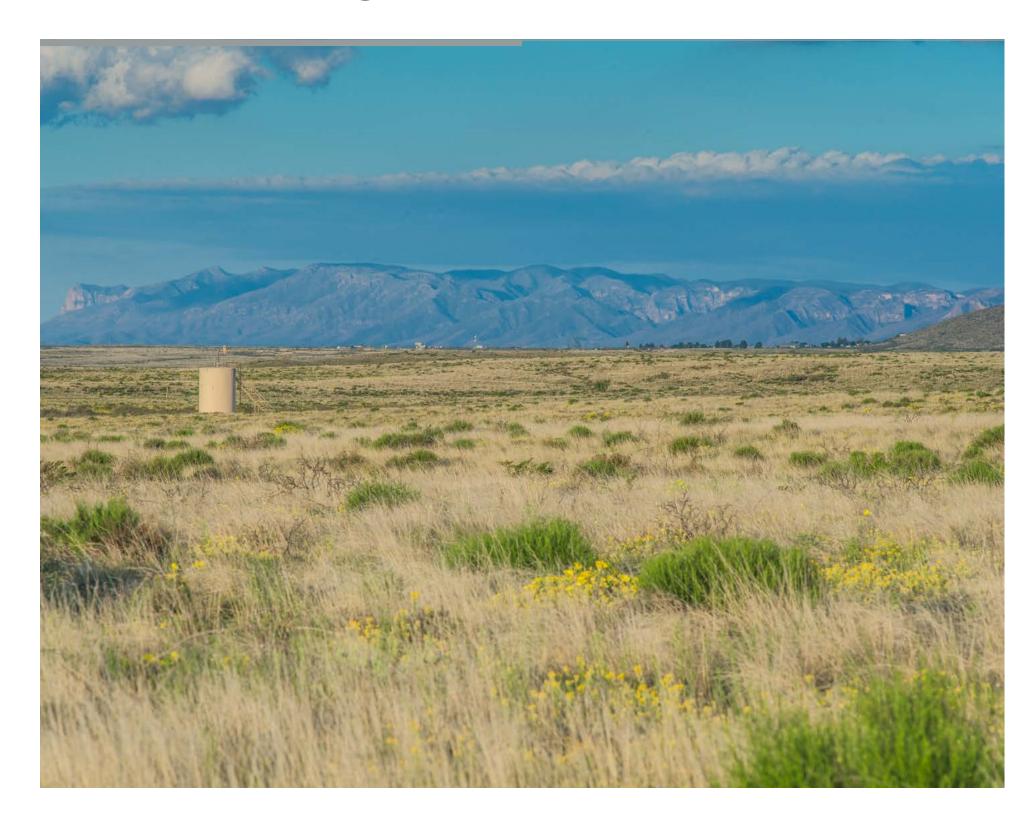


Methane		METHANE EMISSIONS (tonnes CO <sub>2</sub> e)
Emissions	=	
Intensity		<b>GROSS OPERATED PRODUCTION</b>
incensicy		AS REPORTED TO THE EPA (MBOR)

## **Methane Emissions**



# **TFCD Summary Table**



## **TCFD**

The TCFD seeks to develop recommendations for voluntary climate-related financial disclosures as a tool for investors and other stakeholders to assess risks associated with climate change. This is Devon's third Climate Change Assessment Report and is a direct result of our ongoing commitment to transparency.

CORE ELEMENT

### Governance

Disclose the organization's governance around climate -related risks and opportunitie

## Strategy

Disclose the actual and potenti impacts of climate-related risks opportunities on the organizati businesses, strategy, and finance planning where such informati is material.

## **Risk Management**

Disclose how the organization identifies, assesses, and manage climate-related risks.

## **Metrics and Targets**

Disclose the metrics and targe used to assess and manage relevant climate-related risks and opportunities where such information is material.

## Recommendations of the Task Force on Climaterelated Financial Disclosures (June 2017)



	TCFD DISCLOSURE	REFERENCE
	a) Describe the board's oversight of climate- related risks and opportunities.	Climate Change Assessment Report (CCAR), CDP Climate Response, Proxy Statement, Sustainability Report (SR)-CEO Letter SR-Message from Our Board, SR-Report Summary, SR-Environment Overview, SR-Governance Overview, SR-Corporate Governance, SR-Enterprise Risk Management, SR-Shareholder Engagement
ies.	<ul> <li>b) Describe management's role in assessing and managing climate-related risks and opportunities.</li> </ul>	CCAR, CDP Climate Response, SR-Report Summary, SR-Environment Overview, SR-Climate Change, SR- Governance Overview, SR-Corporate Governance, SR- Enterprise Risk Management, SR-Shareholder Engagement
ntial sks and ation's ancial	<ul> <li>a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.</li> </ul>	CCAR, CDP Climate Response, Form 10-K, SR-Climate Change,SR-Air Emissions, SR-Water Management
	<ul> <li>b) Describe the impact of climate- related risks and opportunities on the organization's businesses, strategy, and financial planning.</li> </ul>	CCAR, CDP Climate Response, Form 10-K, SR-Climate Change, SR-Air Emissions, SR-Water Management
	c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	CCAR, CDP Climate Response, SR-Climate Change
n ages —	<ul> <li>a) Describe the organization's processes for identifying and assessing climate- related risks.</li> </ul>	CCAR, CDP Climate Response, SR-Climate Change, SR- Enterprise Risk Management
	<ul> <li>b) Describe the organization's processes for managing climate-related risks.</li> </ul>	CCAR, CDP Climate Response, SR-Climate Change, SR- Enterprise Risk Management, SR-Shareholder Engagement
	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	CCAR, CDP Climate Response, SR-Climate Change, SR- Enterprise Risk Management
gets s	<ul> <li>a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.</li> </ul>	CCAR, CDP Climate Response, CDP Water Response, SR-Report Summary, SR-Environment Overview, SR-Air Emissions, SR-Water Management, SR-Spill Prevention, SR-Performance Metrics
	b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	CCAR, CDP Climate Response, SR-Report Summary, SR-Environment Overview, SR-Air Emissions, SR-Performance Metrics
	<ul> <li>c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.</li> </ul>	CCAR, CDP Climate Response, CDP Water Response, SR-Report Summary, SR-Performance Targets, SR-Climate Change, SR-Air Emissions



# **Methodological Appendix**

## This section details the methodology that ICF used to generate its price forecasts and to adapt and further analyze price forecasts from IEA.

## **ICF Oil Prices**

ICF's oil prices have been estimated using a combination of near-term futures prices and a long-term assessment of oil market fundamentals. For 2021, WTI futures were used to forecast oil prices. For 2022 through 2026, a blend of futures prices and ICF's fundamentals forecast is used. For the longterm, ICF assumes an equilibrium marginal production cost of \$60/Bbl. That \$60/Bbl Refiner Acquisition Cost of Crude Oil (RACC) has been converted to a WTI Cushing price for this analysis. In this report, estimated prices rely on ICF's Q3 2021 Base Case Projection.

Oil prices for the ICF Sustainable Development Case have been estimated by applying a derived price elasticity<sup>12</sup> for oil to the demand change between the IEA Stated Policies Scenario and the IEA Sustainable Development Scenario. For example, in 2030, IEA forecasted a 16% reduction in demand and a 27% reduction in price for the WEO 2020 Sustainable Development Scenario compared to the IEA Stated Policies Scenario. In this example, ICF used the resulting 0.61 price elasticity of demand for 2030 to determine the expected price change that would result if the same demand change that occurred between the IEA scenarios occurred between the ICF Base Case and the ICF Sustainable Development Case in the year 2030.

The IEA price elasticity is about 0.60 in the near term and 0.85 in the long term. The average elasticity over the entire 2023-2050 projection period is about 0.78.

## **IEA Oil Prices**

For both its Stated Policies Scenario and the Sustainable Development Scenario, IEA provided an average worldwide oil importer price through 2040. ICF extrapolated the price to 2050 and converted the worldwide oil importer price to a WTI price forecast by carrying forward the 2019 difference between the IEA importer average price and the 2019 average WTI price. This difference was about \$4/Bbl.

## **ICF Natural Gas Prices**

ICF's natural gas prices have been estimated using ICF's GMM, a model widely used to project natural gas supply, demand, and prices for the North American natural gas market. Estimated prices rely on ICF's Q3 2021 Base Case Projection. The GMM solves for hub prices through 2050 at the different locations relevant to Devon's production. Gathering and processing charges have been subtracted from those prices to derive wellhead prices at each of those locations.

The ICF Q3 2021 Base Case projects associated natural gas<sup>13</sup> supply growth from tight oil plays (such as the Permian in west Texas and New Mexico) due to a rise in oil prices and also growth from Marcellus, Utica and Haynesville gassy shale plays. This natural gas supply growth places a downward pressure on natural gas prices in the short term and results in lower Henry Hub prices, below \$3.50/MMBtu, on average, through 2050.

Natural gas prices for the ICF Sustainable Development Case were estimated by applying an ICF-derived price elasticity for natural gas to the demand change between the IEA Stated Policies Scenario and the IEA Sustainable Development Scenario. ICF's long-term natural gas price elasticity is about 0.6 (Figure 12).

## IEA Natural Gas Prices

IEA has projected natural gas prices at Henry Hub for the IEA Stated Policies Scenario and the IEA Sustainable Development Scenario through 2040. ICF has extrapolated these projections through 2050. IEA's price elasticity of demand is 0.3 in the near term but increases to 1.1 in the long term (Figure 12).

## ICF and IEA Implied Propane Prices

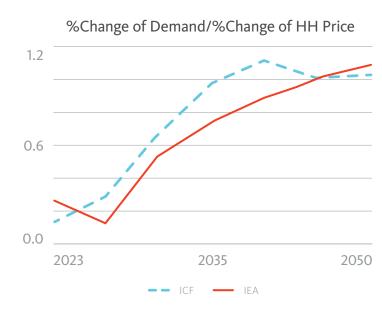
ICF has estimated propane prices by using the historical relationship between the WTI Cushing oil price and the Mont Belvieu propane price. ICF halved the oil price and then converted the per barrel price into a per gallon price in order to forecast propane prices.







Figure 12



- <sup>12</sup> Oil price elasticity of demand measures the responsiveness of oil demand with the change in oil price. The elasticity is calculated by dividing the percentage change in oil demand by the percentage change in oil price. Natural gas price elasticity of demand is calculated with the same methodology as oil price elasticity of demand using IEA's natural gas price and demand forecast.
- <sup>13</sup> Associated gas or associated dissolved gas refers to natural gas that is produced along with crude oil from oil wells.



# Disclaimer

## List of Acronyms

API - American Petroleum Institute AXPC - American Exploration and Production Council Bbl - Barrels of oil CCAR - Climate Change Assessment Report CDP - formerly Carbon Disclosure Project, now CDP CO<sub>2</sub> - Carbon dioxide CH4 - Methane EHS - Environmental, Health, and Safety EPA - Environmental Protection Agency ERM - Enterprise Risk Management ESG - Environment, Social, Governance EWI - Energy Water Initiative FEMA - Federal Emergency Management Agency GHGs - Greenhouse gases GMM - Gas Market Model (ICF) ISS - Institutional Shareholder Services LDAR - Leak detection and repair LNG - Liquefied natural gas IEA - International Energy Agency IPCC - Intergovernmental Panel on Climate Change IPIECA - formerly International Petroleum Industry Environmental Conservation Association, now IPIECA MMBD - Million barrels per day MBOE - Thousands of barrels of oil equivalent MMBtu - Million British thermal units MSCI - Morgan Stanley Capital International  $N_2O$  - Nitrous oxide NGL - Natural gas liquids NIMS - National Incident Management System TCFD - Task Force on Climate-related Financial Disclosure VOCs - Volatile organic compounds WEO - World Energy Outlook (IEA annual report) WTI - West Texas Intermediate (benchmark oil price)

This report contains information, terms, and standards from third parties, such as ICF, the TCFD, and the IEA. The contents of this report are intended as guidance only and may not be comprehensive in scope or coverage, including as to such third parties. Devon does not intend to and is not endorsing or adopting phrases, specific terms, or recommendations from the third parties. Devon does not make any express or implied representations or warranties and shall not assume any liability whatsoever for providing guidance or using the third-party information, or for any errors, mistakes, or omissions in this report. This report considers a number of different scenarios. These scenarios are not intended to be predictions of what is likely to happen or what Devon believes is likely to happen. Instead, the scenarios are meant to examine the potential effects of several regulatory, economic, and societal conditions; they do not provide a comprehensive description of all possible future outcomes and there can be no assurance that the scenarios presented in this report are a reliable indicator of the actual impact of climate change on Devon's portfolio.

The concept of materiality used in this report is not intended to correspond to the concept of materiality associated with the disclosures required by the U.S. Securities and Exchange Commission (the "SEC"), even though we may use the words "material" or "materiality." Please refer to our 2020 Annual Report on Form 10-K and our other filings with the SEC for information about the SEC-material risks and uncertainties to our business and operations, and our industry in general. This report covers our owned and operated businesses and does not address the performance or operations of our suppliers, contractors, and partners unless otherwise noted. As used in this report, the term "Devon" and such terms as "the company," "their," "our," "its," "we", and "us" may refer to our ultimate parent company (Devon Energy Corporation), one or more of Devon's consolidated subsidiaries, or to all of them taken as a whole.

This report includes "forward-looking statements" as defined by the SEC. Such statements relate to the manner in which Devon intends to conduct certain of its activities. based on management's current plans and expectations. Such statements are not promises or guarantees of future conduct or policy and are subject to a number of assumptions, risks and uncertainties, many of which are beyond our control and may be difficult or impossible to identify in advance. These statements, including those regarding Devon's actual activities and the development, implementation or continuation of any program, target or initiative discussed in this report, may differ materially in the future. The forward-looking statements in this report are made as of the date of submittal of our responses to this report, even if subsequently made available by Devon on its website or otherwise. Devon does not undertake and expressly disclaims any obligation to update the forwardlooking statements as a result of new information, future events. or otherwise.

Forward-looking statements are often identified by use of the words "will," "may," "should," "could," "expects," "forecasts," "projections," "estimates," "plans," "expectations, "targets," "opportunities," "potential," "outlook" and other similar terminology; however, all statements other than statements of historical fact should be considered forward-looking statements. Such statements concerning future performance are subject to a variety of risks and uncertainties that could cause Devon's actual results to differ materially and adversely from the forward-looking statements contained herein. Factors that could cause these differences include, among others price volatility, inflation or lack of availability of goods and services, environmental risks, drilling risks, political changes, energy and fuel prices, the uncertainty inherent in estimating future oil and gas production or reserves, socio-demographic and economic trends, technological innovations, climate-related conditions and weather events, legislative and regulatory

changes, our ability to gather and verify data regarding environmental impacts, our ability to successfully implement various initiatives throughout Devon under expected time frames, the compliance of various third parties with our policies and procedures and legal requirements, our dependency on certain third parties to perform, and other unforeseen events or conditions. Certain material risks and uncertainties are described in more detail in the "Risk Factors" section of our most recent Form 10-K and in our other filings with the SEC. The forward-looking statements provided in this report are based on management's examination of historical operating trends, the information which was used to prepare reserve reports and other data in Devon's possession or available from third parties. Devon cautions that its future oil, natural gas and NGL production, revenues and expenses are subject to all of the risks and uncertainties normally incident to the exploration for and development, production and sale of oil, natural gas and NGLs. Readers should not place undue reliance on Devon's forward-looking statements. Moreover, we note that the forecasts and scenarios included in this Report are subject to additional layers of uncertainty due to the extensive timelines involved and the levels of estimation and extrapolation necessary to produce data, and therefore are likely to change, potentially materially, in the future. Given the inherent uncertainty of the estimates, assumptions and timelines associated with the matters discussed in this Report. we may not be able to anticipate in advance whether or the degree to which we will or will not be able to meet our plans, targets or goals.