

# Managing Climate-Related Risks

Adaptive strategy for the  
energy transition

2020

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## CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This report includes forward-looking statements as defined under the federal securities laws. Forward-looking statements relate to future events and anticipated results of operations, business strategies, and other aspects of our operations or operating results. Words and phrases such as “anticipate,” “estimate,” “believe,” “budget,” “continue,” “could,” “intend,” “may,” “plan,” “potential,” “predict,” “seek,” “should,” “will,” “would,” “expect,” “objective,” “projection,” “forecast,” “goal,” “guidance,” “outlook,” “effort,” “target” and other similar words can be used to identify forward-looking statements. However, the absence of these words does not mean that the statements are not forward-looking. Where, in any forward-looking statement, the company expresses an expectation or belief as to future results, such expectation or belief is expressed in good faith and believed to be reasonable at the time such forward-looking statement is made. However, these statements are not guarantees of future performance and involve certain risks, uncertainties and other factors beyond our control. Therefore, actual outcomes and results may differ materially from what is expressed or forecast in the forward-looking statements. Factors that could cause actual results or events to differ materially from what is presented include the impact of public health crises, including pandemics (such as COVID-19) and epidemics and any related company or government policies or actions; global and regional changes in the demand, supply, prices, differentials or other market conditions affecting oil and gas, including changes resulting from a public health crisis or from the imposition or lifting of crude oil production quotas or other actions that might be imposed by OPEC and other producing countries and the resulting company or third-party actions in response to such changes; changes in commodity prices, including a prolonged decline in these prices relative to historical or future expected levels; changes in expected levels of oil and gas reserves or production; potential failures or delays in achieving expected reserve or production levels from existing and future oil and gas developments, including due to operating hazards, drilling risks or unsuccessful exploratory activities; unexpected cost increases or technical difficulties in constructing, maintaining or modifying company facilities; legislative and regulatory initiatives addressing global climate change or other environmental concerns; investment in and development of competing or alternative energy sources; disruptions or interruptions impacting the transportation for our oil and gas production; international monetary conditions and exchange rate fluctuations; changes in international trade relationships, including the imposition of trade restrictions or tariffs on any materials or products (such as aluminum and steel) used in the operation of our business; our ability to collect payments when due under our settlement agreement with PDVSA; our ability to collect payments from the government of Venezuela as ordered by the ICISID; our ability to liquidate the common stock issued to us by Cenovus Energy Inc. at prices we deem acceptable, or at all; our ability to complete our announced or any future dispositions or acquisitions on time, if at all; the possibility that regulatory approvals for our announced or any future dispositions or acquisitions will not be received on a timely basis, if at all, or that such approvals may require modification to the terms of the transactions or our remaining business; business disruptions during or following our announced or any future dispositions or acquisitions, including the diversion of management time and attention; the ability to deploy net proceeds from our announced or any future dispositions in the manner and timeframe we anticipate, if at all; potential liability for remedial actions under existing or future environmental regulations; potential liability resulting from pending or future litigation, including litigation related to our transaction with Concho Resources Inc. (Concho); the impact of competition and consolidation in the oil and gas industry; limited access to capital or significantly higher cost of capital related to illiquidity or uncertainty in the domestic or international financial markets; general domestic and international economic and political conditions; the ability to successfully integrate the operations of Concho with our operations and achieve the anticipated benefits from the transaction; unanticipated difficulties or expenditures relating to the Concho transaction; changes in fiscal regime or tax, environmental and other laws applicable to our business; and disruptions resulting from extraordinary weather events, civil unrest, war, terrorism or a cyber attack; and other economic, business, competitive and/or regulatory factors affecting our business generally as set forth in our filings with the Securities and Exchange Commission. Unless legally required, ConocoPhillips expressly disclaims any obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise.

**Cautionary Note to U.S. Investors** – The SEC permits oil and gas companies, in their filings with the SEC, to disclose only proved, probable and possible reserves. We may use the term “resource” in this report that the SEC’s guidelines prohibit us from including in filings with the SEC. U.S. investors are urged to consider closely the oil and gas disclosures in our Form 10-K and other reports and filings with the SEC. Copies are available from the SEC and from the ConocoPhillips website.

# 2020 Performance Highlights

- Adopted a Paris-aligned climate-related risk framework with an ambition to become a net-zero company for operational (scope 1 and 2) emissions by 2050.
- Increased operational greenhouse gas emissions intensity reduction target to 35-45% by 2030.
- Endorsed the World Bank Zero Routine Flaring by 2030 initiative, with an ambition to meet the goal by 2025.
- Added continuous methane monitoring devices to our operations, with an initial focus on our larger Lower 48 production facilities.
- Advocated for a U.S. carbon price to address end-use (scope 3) emissions through our membership in the Climate Leadership Council.
- Established a low carbon technology group to evaluate opportunities and technologies that can closely integrate with our global operations, markets and competencies.



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# Governance Framework

We have a comprehensive climate-related risk governance framework that extends from the board of directors, through executive and senior management to the working levels in each of our business units.

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## Board Oversight

The ConocoPhillips **Board of Directors** oversees our position on climate change and related strategic planning and risk management policies and procedures, including those for managing climate-related risks and opportunities. In particular, the board reviews:

- Climate change position statements
- Sustainable development risk management processes.
- Enterprise risk management policy and output.
- Corporate strategy and climate risk strategy.
- Climate-related risk scenarios.
- GHG emissions intensity target and progress.

The board delegates certain elements of climate oversight functions to one or more of the five standing **committees**: Executive, Audit and Finance, Human Resources and Compensation, Directors' Affairs, and Public Policy. Each committee, other than the Executive Committee, is made up of independent directors and convenes at least quarterly. Issues considered by the committees are, as appropriate, regularly reported to the full board.

"The board recognizes that adopting a proactive posture on environmental, social and governance (ESG) performance and deliberately managing climate-related risk are vital for ConocoPhillips, and we actively oversee the company's enterprise-wide approach to consistently assess and manage risks as well as opportunities."

— **BOARD PUBLIC POLICY COMMITTEE CHAIR, JODY FREEMAN**



The **Audit and Finance Committee** (AFC) mandate includes enterprise risk management (ERM). The AFC facilitates appropriate coordination among the committees to ensure that our risk management processes, including those related to climate change, are functioning properly with necessary steps taken to foster a culture of prudent decision-making throughout the company. The AFC receives annual updates on how enterprise risk is being addressed, mitigated and managed across the company, including climate-related considerations that influence market, reputational, operational and political risks within the ERM system.

The **Public Policy Committee** (PPC) is responsible for identifying, evaluating and monitoring climate-related trends and risks that could affect business activities and performance. In 2020, the PPC was briefed on the following climate-related topics:

- Progress of the climate risk strategy.
- Lower 48 flaring and methane emissions update.
- Climate-related risk strategic update.
- ESG trends in the financial sector.
- ESG engagement strategy.
- Governance on public policy positions.
- Alignment with trade associations.

Other board committees also address climate-related issues. The **Human Resources and Compensation Committee** oversees executive compensation and performance-based components, including sustainability performance. Annual incentive programs promote achievement of strategic milestones and objectives that address stakeholder issues essential to sustaining excellence in environmental and social performance. [Read more](#) about the skills and qualifications of our board members.

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## Executive Management

The Executive Leadership Team (ELT) manages climate-related risks and opportunities and assists the businesses in implementing climate-related plans. This includes:

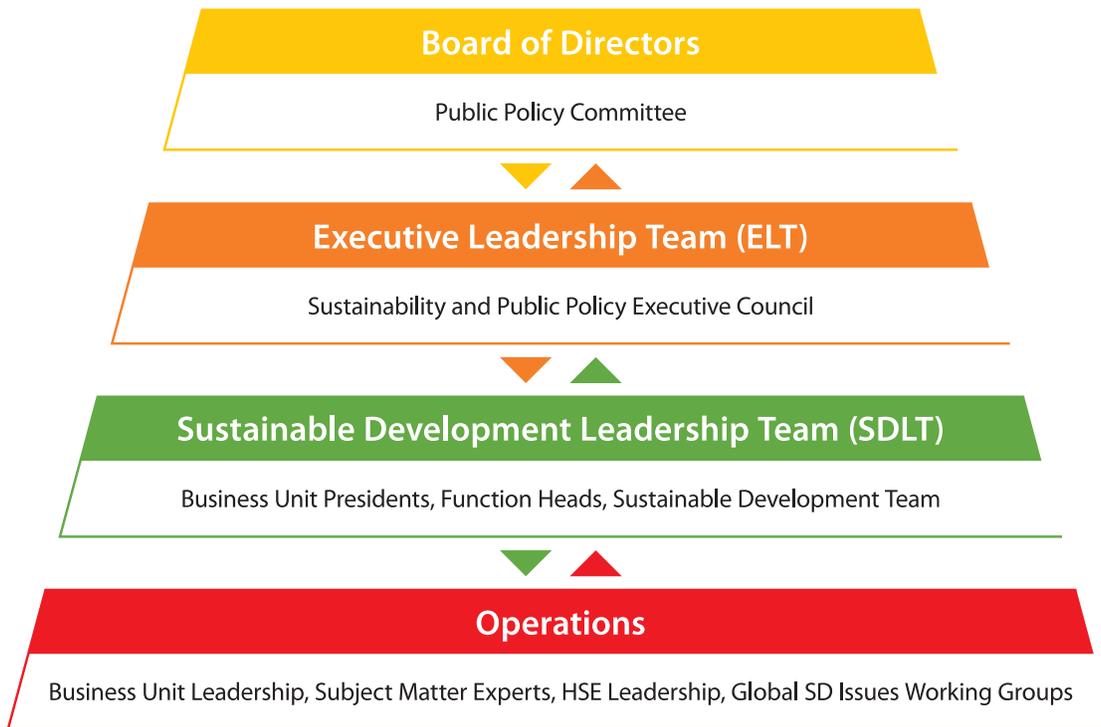
- Reviewing and approving greenhouse gas (GHG) pricing forecasts for inclusion in our long-range planning and project authorization reviews.
- Approving climate-related Variable Compensation Incentive Plan milestones.
- Reviewing the GHG emissions long-range plan and peer analysis.

In 2020, the chief operating officer (COO) who reported directly to the chief executive officer, served as the ELT's climate change champion, with overall accountability for corporate planning and development, including corporate strategy and long-range planning. The COO along with the senior vice president (SVP), Government Affairs and three regional presidents were briefed five times during the year on emerging climate-related issues, strategic priorities and the Climate Risk Strategy in order to understand their implications and represent them to the full ELT. The regional presidents oversee global operations and environmental performance, including setting business unit goals for GHG emissions, implementing action plans and reporting GHG emissions. Examples of issues reviewed by these executives during 2020 include:

- Setting aggressive Paris-aligned GHG emissions intensity target metrics for use in decision support.
- GHG emissions intensity target progress.
- Marginal Abatement Cost Curve opportunities review and project approval.
- Marginal Abatement Cost Curve funding review and approval.
- Internal climate-related education and communications.
- GHG long-range plan and business unit GHG targets.
- Internal GHG prices for the 2021 corporate Long-Range Plan.
- Climate change position statement revision.
- Climate risk strategy review and focus areas for 2021.

The SVP, Strategy and Technology, who reports to the chief executive officer and has overall accountability for corporate planning and development, including corporate strategy and long-range planning, has become the ELT's climate change champion in 2021. In addition, the Sustainability and Public Policy Executive Council, a subcommittee of the Executive Leadership Team, will take over global oversight of existing and emerging sustainable development and public policy risks and trends including climate change. The SVP, Government Affairs continues to be responsible for positions and engagement with government on climate-related public policy. [Read more](#) about our governance structure.

Climate-related risks are communicated and integrated into strategy through the SD risk management process and Enterprise Risk Management system. Climate-related risks from the corporate SD Risk Register are mapped to relevant enterprise risks. Owners of these enterprise risks, who are ELT members or senior managers, are briefed on the risks and our mitigation activities. Enterprise risks are then presented to the Audit and Finance Committee of the board. The climate-related risk category is managed by the SD team and the SVP, Strategy and Technology and SVP, Government Affairs are jointly accountable for this risk.



*Note: Each layer represents a Governance level and the corresponding membership entity/support.*

**Read how** climate-related performance is a component of executive compensation.

# Organizational Management

## Sustainable Development Leadership Team

The Sustainable Development Leadership Team (SDLT) is comprised of global business unit presidents and functional department heads supported by the Sustainable Development Team. Chaired by the vice president, Sustainable Development, the SDLT provides consultation and approval for SD focus areas, goals, priorities, action plans and results. Strategic planning, goal setting, implementation, performance and reporting for climate-related risk are reviewed by the SDLT.

## Sustainable Development Team

The SD team is responsible for informing the ELT and board of long-term climate-related risks and opportunities for our business and ensuring that these issues are integrated appropriately into strategic decisions. This includes leading the Climate Change Issues Working Group (CCIWG). The SD group reports to the senior vice president, Strategy and Technology, who reports to the chief executive officer. The vice president, Sustainable Development, chairs the SDLT and leads the standing SD agenda item for the PPC.

The SD team works closely with the Environmental Assurance group within HSE to provide environmental metrics for public disclosure. The groups collaborate to ensure that the requisite climate risk tools, processes and procedures are developed and integrated into the company's HSE Management System.

# Operations

Each ConocoPhillips business unit is responsible for identifying and monitoring near- and medium-term climate-related risks and opportunities, and integrating sustainability issues, as appropriate, into day-to-day operations, project development and decision-making. They are held accountable through an annual goal-setting process that includes the Climate Change Action Plan to mitigate risks and a GHG emissions target, and they report progress to the ELT.

Subject matter experts from the business units are members of the CCIWG. This internal global cross-functional group meets quarterly to discuss the external context for climate-related risk, including:

- Legislative and regulatory actions.
- Trade association activities.
- Internal activities to address climate-related risks and opportunities, including energy efficiency and emissions reduction projects.
- Developments in emissions reduction technology.
- The outlook for GHG prices that might impact our operations.
- Climate-related long-range planning issues.

The objective is to share key climate-related risk learnings across the company, identify issues and work to resolve them as they arise. The working group also provides input from subject matter experts on processes, procedures and issues prior to review by the SDLT.

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# Key Processes

Climate-related considerations are integrated into the key business planning processes for the company:

- Scenario planning
- Corporate strategy
- Long-range plan
- SD risk management process
- Enterprise risk management

Our SD risk management process, risk register and Climate Change Action Plan are used to track performance and guide goal setting. Line-of-sight goals for business units and key functions are shown as specific action items within the action plan. Progress against the plan is reported through our governance structure to the ELT and board of directors.

## Management System Approach to Climate-Related Risk



# Strategy

Our objective is to manage climate-related risk, optimize opportunities and equip the company to respond to uncertainties, including government policies, evolving investor sentiment around the world, technologies for emissions reduction and alternative energy technologies.

“In October 2020 we became the first U.S.-based oil and gas company to adopt a Paris-aligned climate risk strategy. Our objective is the sustainable success of our business through the energy transition.”

— CHAIRMAN AND CEO RYAN LANCE



As the energy transition continues to evolve, the strategy must be robust across a range of potential future outcomes. The strategy is comprised of four pillars:

## Targets

Our framework consists of a hierarchy of targets - from a long-term ambition that sets the direction and aim of the strategy, to a medium-term performance target for GHG emissions intensity, to shorter-term targets for flaring and methane intensity reductions. These performance targets are supported by lower level internal business unit goals to enable the company to achieve the company-wide targets.

## Technology choices

We continue to expand our Marginal Abatement Cost Curve process to provide a broader range of opportunities for emissions reduction technology. In 2020, we also established an internal low carbon technology group to evaluate opportunities and technologies that can closely integrate with our global operations, markets and competencies. The team is focused on a range of options from emissions reduction solutions for existing operations and developing an offset strategy, to assessing renewable and battery storage as well as considering emerging opportunities including carbon capture utilization and storage and the hydrogen economy. We will disclose additional information on this team's efforts as it moves forward with its evaluations and related business investments. [Read more](#) about our energy transition and climate risk strategy.

## Portfolio choices

We are integrating climate-related risk into our portfolio decision-making by incorporating carbon pricing into our economics for project approval and by addressing the risk of stranded assets by prioritizing major projects with a fully burdened cost of supply less than \$40 WTI per barrel of oil equivalent (BOE).

## External engagement

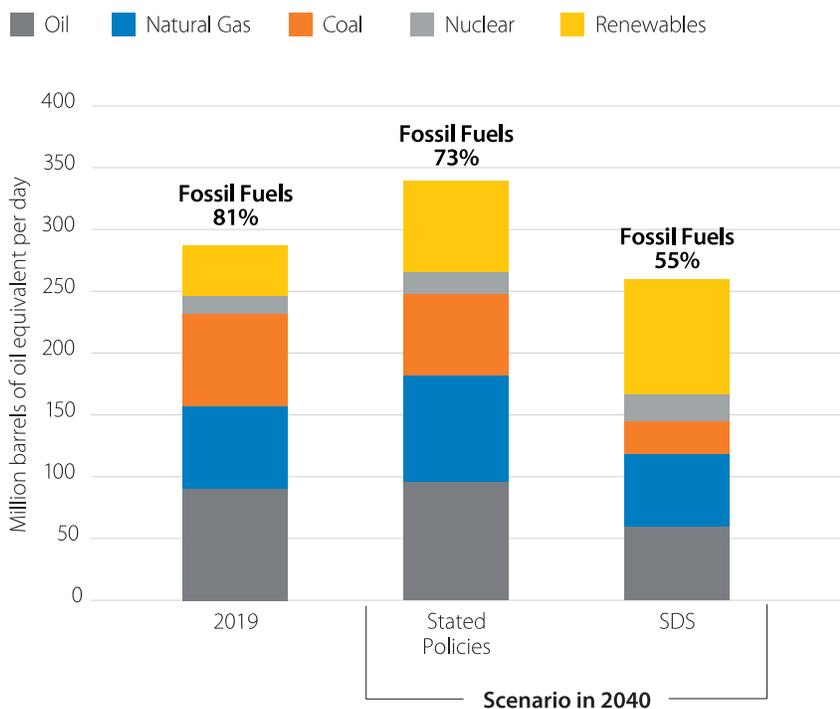
Our external engagement is intended to understand the point of view of stakeholders and further the evolution of climate-related frameworks, metrics and public policy. In 2020, this included:

- Participating in climate-related initiatives like the World Bank Zero Routine Flaring by 2030, which we endorsed.
- Being a leading voice in the Climate Leadership Council to advocate for a price on carbon in the U.S.
- Working with our trade associations to ensure alignment with our climate change position.
- Discussing the Net-Zero Benchmark Assessment with the Climate Action 100+.

# Energy Outlook

In its 2020 World Energy Outlook, the **International Energy Agency (IEA)** illustrated two different energy mix scenarios in 2040. Compared to 2019, total energy demand increases in IEA's Stated Policies scenario by over 18% and declines by around 10% in the below 2-degree Celsius Sustainable Development Scenario (SDS). Demand for natural gas and oil has different outcomes across the IEA scenarios. Demand grows relative to 2019 in the Stated Policies scenario but declines in the SDS. Even in the SDS scenario, 2040 oil demand remains at 60MMBBL/day and natural gas at 59MMBOE/day and, despite a reallocation of capital to renewables, significant investment in upstream natural gas and oil is still required. IEA estimates this to be \$407 billion each year from 2020 to 2040 globally and \$121 billion per year from 2030 to 2040 in North America — a total of approximately \$8.5 trillion globally and \$2.5 trillion in North America for the period 2020 to 2040.

## 2040 IEA World Energy Outlook Scenarios



Source: © OECD/IEA 2020 World Energy Outlook, IEA Publishing. License: [www.iea.org](http://www.iea.org)

Achieving the IEA's SDS (below 2-degree Celsius) scenario requires significant progress on several fronts:

- Improving energy efficiency of power generation, transportation and industrial processes.
- Reducing emissions from fossil fuels or capturing and storing or utilizing those emissions.
- Increasing the amount of non-carbon energy, such as renewables and nuclear power.

Changes in the energy system take time, as energy infrastructure components have long asset lives and change would have to go beyond replacing the power generation and distribution systems to include replacing automobile, truck, ship and aircraft fleets or retrofitting them to meet tougher specifications. Increasing renewable power utilization would also require significant improvement in the daily reliability of wind- and solar-powered electricity generation, or a significant improvement in energy storage that would reduce the amount of backup fossil fuel-fired electricity generation needed.

These widely varying factors are the reason scenario planning is important. There is not just one pathway to a low carbon future; there are numerous ways in which government action and technology development could interact with consumer behavior to bring about a lower-carbon future. Performance on climate-related risk is driven by the strength of strategic planning, including the use of widely varying scenarios, as well as the financial strength and asset flexibility to manage across a range of possibilities.

# Scenario Planning

The scenarios we have developed describe possible pathways leading to a particular outcome. They are hypothetical constructs and are not meant to be used as predictions of what is likely or forecasts of what we think is going to happen. Scenarios are not intended to represent a full description of the future, but rather to highlight central elements of a possible future and to draw attention to the key factors that will drive future developments. We use scenarios in our strategic planning process to:

- Gain better understanding of external factors that impact our business to assist in the identification of major risks and inform mitigating actions.
- Test the robustness of our strategy across different business environments.
- Communicate risks appropriately.
- Inform how we position our business, as technologies and markets evolve, to capitalize on opportunities that meet risk and return criteria.



Using scenarios enables us to understand a range of risks around potential commodity market prices associated with various greenhouse gas (GHG) reduction scenarios. To assist our capital allocation decisions, we can test our current portfolio of assets and investment opportunities against these future possibilities and identify where weaknesses may exist.

We rarely make any decision based on a single source of information, but use a range of analyses, input and information when developing our strategy. The detail of our scenarios gives insight into the analysis we use to inform our strategic decision-making and provides stakeholders and shareholders a measure of confidence that we are both preparing for reductions in greenhouse gases consistent with the Paris Climate Agreement and developing resilient strategies that reflect the complex and uncertain range of energy futures.

We utilize four main energy transition scenarios: Current Trends, Moderate Transition, Accelerated Transition and Global Carbon Price. The scenarios were constructed using our global energy model and regional differences were included to reflect areas of the world that may take a different pace or direction. While these scenarios extend to 2050, well beyond our operational planning period, they give insights on trends that could have an implication for near- and medium-term decisions and enable the creation or preservation of future options.

Each scenario models the full energy system including oil, natural gas, solar, wind, nuclear and storage, as well as their related GHG emissions and pricing policies. Each of these plausible pathways is designed to stretch our thinking about potential rates of new technology adoption, policy development and consumer behavior. We believe that three of the four scenarios result in global emissions trajectories that may be capable of being Paris-aligned. Only the Global Carbon Price scenario is likely to achieve this without the need for significant negative emissions technology beyond 2050.

The scenarios describe four pathways out of the myriad that are possible, given the uncertainty surrounding the development of future energy markets out to 2050. They do not, and cannot, describe all possible future outcomes. As such, there is no assurance that the scenarios presented in this report are a reliable indicator of the actual impact of climate change on ConocoPhillips' portfolio or business.

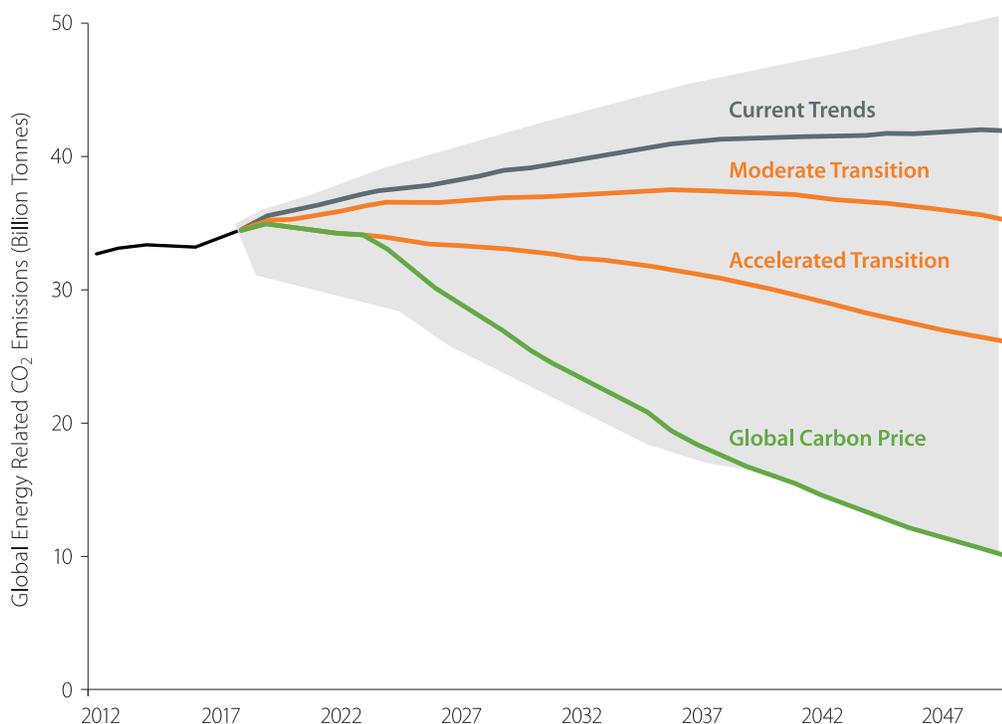
Constructing four very different scenarios means that analyzing and modeling potential outcomes is not the end of the process, as we also need to understand the probability of the world moving toward a specific scenario. We monitor crucial signposts that can indicate the direction and pace of scenario changes. The objective is to connect our scenarios with our climate risk strategy in a way that enables comprehensive strategic decision making. By measuring changes in the key signposts, we aim to track the pace

and direction of the energy transition and identify potential leading indicators of change in the demand for hydrocarbons. In this way we aim to establish not just which scenario we are moving towards, but also identify emerging disruptive scenarios. This analysis is presented to executive management and the board of directors to assist in strategic decision making.

The thoughtful application of scenarios in strategic planning is core to a company's ability to navigate future uncertainty and is a practical way of conveying this information in a decision-useful manner. The key to scenario planning is the use of a wide-enough range so that uncertainty can be characterized, rather than trying to correctly guess specific future variables or parameters. Different low carbon scenarios that depict a wide range of future possibilities should be used to facilitate strategic planning, not as reference scenarios to compare companies. For example, addressing market price uncertainty has led us to significantly change our portfolio, capital flexibility and cost structure over a short period of time. This illustrates how misleading it can be to compare companies based on a static view of a current portfolio that will continue to change to either a single or even a range of "reference" scenarios of the thousands that are possible.

## Scenario Descriptions<sup>1</sup>

### ConocoPhillips' Energy Transition Scenarios



Source: Various ConocoPhillips estimates and third-party independently published projections. ConocoPhillips estimates are based on industry consultants and publicly available data. Gray area indicates the range of third-party projections.

### Current Trends Scenario

This scenario is built on the assumption that current trends continue. Government policies for carbon emissions remain globally uncoordinated. Technologies evolve at a gradual pace and current modes of transportation and power generation remain the lowest cost, most efficient avenues for energy consumption and generation. Carbon taxes are introduced at a moderate rate in Organisation for Economic Co-operation and Development (OECD) countries, rising to only \$30/tonne of CO<sub>2</sub> equivalent (CO<sub>2</sub>e) in 2050. It is assumed that non-OECD countries have not implemented carbon pricing<sup>1</sup> by 2050 in this scenario. Consequently, fossil fuels continue to deliver roughly 75% of global energy needs in 2050, and energy related carbon emissions continue to increase.

Supported by healthy economic growth, the global oil market grows by 25%, reaching 125 million barrels per day (MMBD) in 2050. Transportation's share of total oil demand expands from 60% today to 65% in 2050. The automotive sector continues to evolve gradually, and the global share of electric vehicle sales increases from 1 – 2% today to 40% in 2050. The global average internal combustion engine efficiency modestly improves, and petroleum remains the most prevalent fuel for all modes of transportation. Production from all regions and resource types are developed.

The natural gas market expands at a faster rate than oil over the long term. By 2050, natural gas demand is 75% larger than today, reaching just under 700 billion cubic feet per day (BCF/D) as growing economies utilize natural gas in all sectors. The volume of natural gas consumed in power generation more than doubles. The focal point of demand shifts away from North America and Europe towards Asia.

## Moderate Transition Scenario

This scenario assumes moderate advances in carbon pricing policies and alternative energy technologies, with incremental shifts in consumer preferences for lower carbon products. Fossil fuels remain at roughly 75% of the primary energy mix in 2050. Carbon taxes go into effect across OECD countries during the mid-2020s and are \$25/tonne CO<sub>2</sub>e (TeCO<sub>2</sub>e) in 2030, rising to \$60 in 2050. It is assumed that China implements its proposed national carbon pricing policy at 50% of the OECD carbon fee and that no other non-OECD countries implement a carbon pricing policy prior to 2050. Global energy-related carbon emissions stabilize by 2050.

Global oil demand peaks in 2040 and then declines very slowly. Average internal combustion engine efficiency improves by one-third. Electric vehicle penetration is slow in the early years but accelerates in the 2030s and 2040s, reaching 60% of the passenger auto fleet in 2050 (compared to 1% in 2019). Regional policies also influence the outcome for electrification in transportation. Global oil production benefits from technology advances which improve productivity and enable global demand to be satisfied. U.S. crude oil production grows through 2030 then falls as incremental productivity improvements slow and high-quality acreage is exhausted.

The global gas market expands by 55% by 2050. The primary driver for natural gas demand growth is power generation. Natural gas consumed in power generation increases from 140 BCF/D in 2018 to 250 in 2050. Improvements in energy storage enable wind and solar to be available throughout the day, increasing their contribution to power generation eightfold. As in the Current Trends scenario, global demand shifts east to Asia, the Middle East and the Commonwealth of Independent States (CIS). Global supplies remain heavily weighted to North America. U.S. shale gas and Permian associated gas drive North American growth until the 2030s, after which Canada leads North America's production growth.

## Accelerated Transition Scenario

This is a scenario with more aggressive changes in technologies, consumer preferences and government policies relative to Moderate Transition. Technology is vital to limiting growth in energy demand, while the population and economy expand. Social trends that are prevalent today in specific regions or municipalities spread because technological advances make these choices universally economic. For example, individual auto ownership gives way to shared mobility. Mass transit and ridesharing are accessible and cost effective for more people in more regions. Consumers shift purchases toward products and services that are viewed as environmentally responsible, and society demands more transparent environmental stewardship from the businesses they patronize. Governments target aggressive policies toward GHG emissions, fossil fuel production and consumption. Carbon pricing<sup>1</sup> goes into effect across OECD countries during the mid-2020s and is \$30 per TeCO<sub>2</sub>e in 2030, rising to \$80 in 2050. Again, China implements its proposed carbon pricing policy at 50% of the OECD price. Other non-OECD countries impose a very low \$5 per TeCO<sub>2</sub>e price by 2030.

Global oil markets reach a peak by 2025 and remain near that level until tapering more quickly after 2035. The combination of internal combustion engine efficiencies and faster adoption of electric vehicles, which reach 75% of new passenger vehicle sales by 2050, reduces oil demand in the transportation sector. Oil demand from the industrial sector grows for plastics and chemicals.

The global natural gas market grows at an average annual rate of 0.6% into the 2040s, peaking at just under 450 BCF/D in 2045 before starting a gentle decline. Natural gas remains a prominent fuel in electricity generation but starts to yield market share to wind and solar in the latter years of the scenario. By the late 2040s, energy storage technology allows renewables to contribute a larger share of power generation. North America's gas production increases 15% over today's level, plateauing in about 2040, before declining.

## Global Carbon Price Scenario

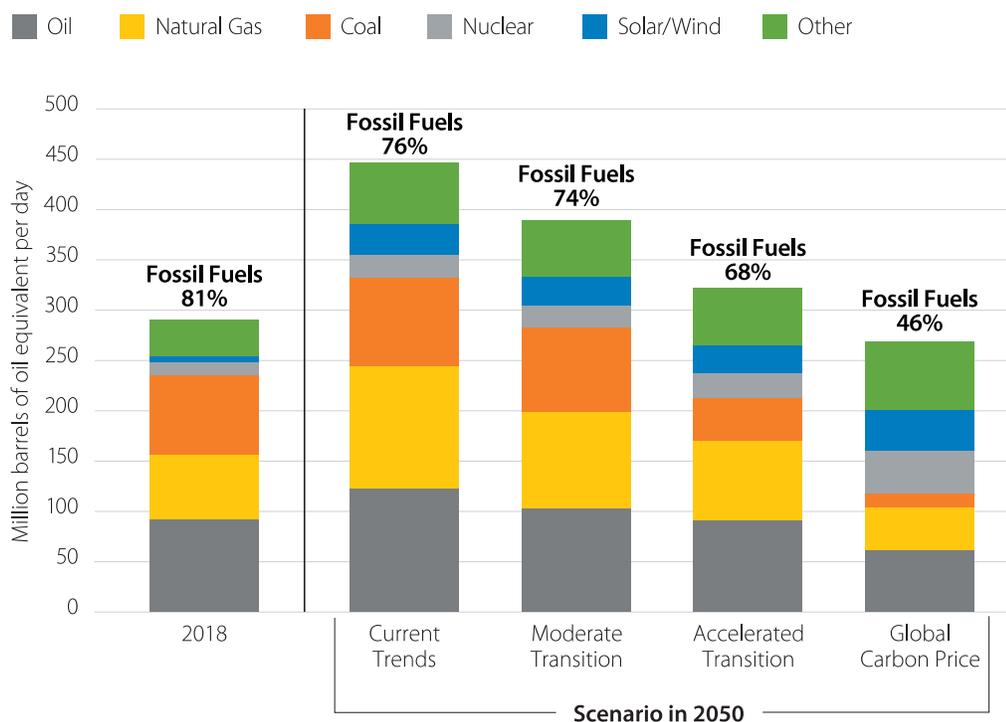
This scenario assumes technology breakthroughs, major social movements to reduce fossil fuel consumption and rapid global policy coordination to price GHG emissions at a level that materially reduces fossil fuel use and emissions. It also assumes that OECD countries and China implement a pricing<sup>1</sup> mechanism by 2025 rising from \$50/TeCO<sub>2</sub>e in 2030 to \$120 by 2050. Other non-OECD nations follow by imposing prices of \$10/TeCO<sub>2</sub>e in 2030 rising to \$50 by 2050. The scenario assumes significant technological advances which reduce battery, wind and solar generation costs, improve fuel efficiencies for internal combustion

engines (80% more fuel efficient by 2050), improve energy efficiency in buildings and lighting, and other advances impacting energy production, delivery and consumption. Technology and efficiencies allow total energy demand in 2050 to be 5% below today's level with 55% of energy provided by non-fossil fuels.

The global oil market peaks in 2023, before significantly declining thereafter. Energy storage improvements lead to 80% of new passenger automobile sales being electric in 2050. Consequently, transportation sector demand falls to 22% of total oil demand. Industrial demand becomes the largest proportionate sector at 45% as petroleum derived chemicals and plastics remain vital to many sectors. Oil supply dynamics evolve as most production occurs in OPEC countries and Russia and geopolitics play an even larger role in oil prices and the supply and price of oil.

Like oil, the natural gas market peaks in 2023. Natural gas generates only 8% of global electricity in 2050, while wind and solar grow to produce 55% of electricity in 2050. Global gas demand shifts to emerging markets in Asia, the Middle East, CIS and Africa. Only 20% of global gas demand remains in North America and Europe. The market also becomes more reliant on OPEC and Russia for supply as North American gas output declines.

### ConocoPhillips Scenarios Energy Mix



Our scenarios indicate a wide range of oil and natural gas prices. We take this future price uncertainty into account in our strategy by only sanctioning projects with a fully burdened cost of supply which is less than \$40 per barrel (WTI) in 2019 dollars. Of the 15 billion barrels of resources with a cost of supply below \$40 per barrel held in our portfolio, 13.5 billion had a cost of supply below \$35 per barrel in 2020 (does not include Concho resource additions).

None of the scenarios include a significant contribution to emissions reductions from carbon capture and storage.

The scenarios are designed to address transitional risks. A separate scenario process addresses physical climate-related risk using consultant scenarios based on the Intergovernmental Panel on Climate Change (IPCC) modeling.

## Key Strategic Linkages to our Scenario Planning

Our corporate strategy reflects several findings from our scenario analyses. We have acted to:

- Use a fully burdened cost of supply, including cost of carbon where legislation exists, as an important metric in our project authorization process. In 2020, we had a resource base of 15 billion barrels of oil equivalent with less than a \$40 per barrel cost of supply and an average cost of supply of less than \$30 per barrel. Our strategic objective is to provide resilience in lower price environments, with any oil price above our cost of supply generating an after-tax fully burdened rate of return greater than 10%.
- Prepare for diverse policy environments by maintaining a less than \$40 per barrel of oil equivalent sustaining price that will generate the cash to fund capital expenditure to keep production flat over time and generate a dividend to shareholders.
- Maintain diversification in our portfolio to be able to balance our production and capital expenditures as commodity prices become more volatile.
- Provide competitive distributions from cash flows to investors.
- Identify and fund emissions reduction projects to reduce the impact of any future regulations, or the introduction of carbon prices or taxes, and help maintain a low life-cycle cost of supply. We have upgraded the use of a marginal abatement cost curve (MACC) in long-range planning to identify the most cost-effective emissions reduction opportunities available to the company globally. These process upgrades have resulted in more efficient collection, recording, sharing and funding of emissions reduction projects.
- Introduce a proxy cost of carbon into qualifying project economics to help us be more resilient to climate-related risk in the short-to-medium-term and provide the flexibility to remain resilient in the long-term.
- Focus near-term technology investments on reducing both costs and emissions where feasible.
- Monitor for potential disruptive technologies that might impact the market for natural gas or oil, enabling us to take advantage of our capital flexibility and reduce our exposure to lower commodity prices at an early point in time.
- Focus on the carbon and cost competitive supply of natural gas and oil while continuing to utilize our scenario planning system to monitor and assess additional business opportunities within the evolving energy transition.
- Monitor global regulatory and legislative developments and engage in development of pragmatic policies aligned with the climate policy principles outlined in our [Global Climate Change Position](#).

### Note

<sup>1</sup> All carbon taxes are in 2019 dollars.

# Short, Medium and Long-Term Risks

As described in the [Risk Management section](#), we evaluate and track our climate-related risk through our SD Risk Register and Climate Change Action Plan. Those risks broadly fall into four categories:

- Greenhouse gas (GHG) related policy.
- Emissions and emissions management.
- Climate-related disclosure and reporting.
- Physical climate-related impacts.

The time horizons we use for climate-related issues are based on the time taken for the risks to manifest themselves, our planning time horizons and the time required to realize the majority of the net present value of our projects.



## Short-Term Risks

Our short-term time horizon is one to five years, during which we can complete short-cycle drilling campaigns and small projects. Our GHG forecasting and financial planning processes are used to determine risks and opportunities that could have a material financial impact for that period. Our short-term climate-related risks are generally government policy-related and managed at the business unit level through policy advocacy and technology to reduce emissions.

Regulations to address climate-related risk, including GHG emissions, are a short-term risk for several of our businesses. For example, regulations issued by the Alberta government under the Emissions Management and Climate Resilience Act require any facility existing in 2016, with emissions equal to or greater than 100,000 metric tons of carbon dioxide or equivalent per year, to reduce the net emissions intensity, with reduction increases over time. The cost of compliance and investment in emissions intensity reduction technologies influence investment decisions for the Canada business unit, where we are purchasing carbon offsets while evaluating and developing technology opportunities to reduce emissions for existing and new facilities. A good example of technology development is our piloting and roll-out of non-condensable gas co-injection at our oil sands operations, which have improved steam-to-oil ratios by 20-30% in 2019, thereby decreasing GHG intensity.

GHG or carbon prices are another near-term risk in some jurisdictions where we operate. For example, in our Norway business unit, we are managing carbon price risk with specific actions to study emissions reduction opportunities, and we also evaluate project economics with full Norwegian carbon tax and European Union emissions allowance costs.

While a price on carbon in the U.S. will increase our costs and decrease demand for our product, we support a well-designed pricing regime on carbon emissions as the most effective tool to reduce greenhouse gas emissions across the economy. By putting a price on carbon, the U.S. would also maintain the energy advantage it currently has while at the same time building credibility with OECD countries and incentivizing other countries to also price carbon. We are a Founding Member of the Climate Leadership Council (CLC), a collaboration of business and environmental interests working to develop a carbon dividend plan for the U.S. The plan has four key pillars: a gradually increasing price on carbon, a carbon dividend, border carbon adjustments and regulatory simplification. [Read more](#) about the carbon dividend plan.

## Medium-Term Risks

Our medium-term time horizon is six to 10 years, during which we can complete most major projects and revise our portfolio significantly if required. Our GHG forecasting and financial planning processes are used to determine the risks and opportunities that could have a material financial impact for that period. Medium-term risks take longer to impact our business and may include emerging policy that is not yet fully defined. These risks are managed by business unit planning, but if significant, may also be managed by corporate strategies and company-wide risk assessments.

Offset requirements have been identified as both a medium-term risk and as an opportunity for some business units where carbon offsets can be used for compliance with an emissions reduction program.

Chronic physical changes are a medium-term risk for some of our operations. Temperature extremes could impact facilities located in Arctic regions if warmer temperatures reduce the length of the ice road season and restrict well and facility construction times. Mitigation measures could include utilizing gravel road connections to reduce reliance on ice roads, pre-packing to extend the start of ice road season and constructing roads that prevent permafrost thawing.

## Long-Term Risks

Our long-term time horizon is 11 years and beyond. Generally, long-term risks are managed by our scenario analysis and climate risk strategy, as they include long-term government policy, technology trends and consumer preferences that affect supply and demand. They may also include risks that align with long-term physical climate scenarios.

We recognize that our GHG intensity will be compared against peers, so we track this as a competitive risk at the corporate level. Investors, the financial sector and other stakeholders compare companies based on climate-related performance, and GHG intensity is a key indicator. For this reason, our GHG intensity target aligns with the long-term time horizon to ensure we manage the risk appropriately. It also demonstrates our goal to be a leader in managing climate-related risk.

Both chronic and acute physical climate risks are a long-term risk for our business. In some parts of the U.S. we have identified potential storm severity as a risk for future operations, based on previous storms and flooding. Science suggests that future extreme weather events may become more intense or more frequent, thus placing at risk our operations in coastal regions and areas susceptible to typhoons or hurricanes. We have a crisis management system in place to manage that risk before, during and after a storm event.

Read more about our [Risk Register and Climate Change Action Plan](#).

# Climate Change Action Plan

Our Climate Change Action Plan addresses the significant or high risks from our Sustainable Development (SD) Risk Register and includes milestones over a number of years. Actions within the plan address individual risks identified by our business units or global/regional risks identified by our central corporate staff. For example, both chronic and physical climate-related impacts are more likely to apply to a single business unit, given the specific local nature of the risk and geographical location of our assets.

## Climate Change Action Plan

Risks	2020 Mitigation Actions and Milestones
<b>GHG Policy</b>	
GHG regulations, including carbon taxes	<ul style="list-style-type: none"> <li>Review global emerging issues with Sustainability and Public Policy Executive Council on a regular basis.</li> <li>Work with Climate Leadership Council and API Climate Working Group to develop U.S. carbon tax framework.</li> <li>Focus on operational efficiency globally to reduce GHG intensity.</li> <li>Integrate global Marginal Abatement Cost Curve with corporate technology group plans and pilots.</li> <li>Consider options and technologies to manage GHG emissions from high native CO<sub>2</sub> natural gas fields at the initial feasibility stage.</li> <li>Carry out global implementation plan for revised climate risk strategy including developing operational emissions reduction projects to achieve new targets; advocating for a carbon price through the Climate Leadership Council; and adding additional projects to the Marginal Abatement Cost Curve.</li> </ul>
GHG Offset requirements	<ul style="list-style-type: none"> <li>Establish global corporate position and strategy on carbon offsets purchases.</li> </ul>
<b>Emissions and Emissions Management</b>	
Air emissions regulations	<ul style="list-style-type: none"> <li>Develop long-term alternatives and evaluate new technologies to dispose of CO<sub>2</sub> at gas processing plants.</li> <li>Develop U.S. flare reduction plans including revising commercial agreements to incorporate flare reduction incentives.</li> <li>Evaluate mobile gas capture technologies.</li> </ul>
<b>Physical Climate-Related Impacts</b>	
	<ul style="list-style-type: none"> <li>Increase application of mitigation measures (fresh water use minimization) in project design phase. Investigate alternative sources for water (e.g. pipelines, desalination, etc.). Consider rotation of fresh water source. Develop global physical risk assessment guidelines for business units and continue with ongoing review cycle.</li> <li>Continue assessment of risk of permafrost thaw for new construction and implementation of mitigation measures. Investigate cost-effective approaches for monitoring permafrost thaw and thaw degree days.</li> <li>Execute emergency response plan exercise for wildfire threats.</li> </ul>

Note: Actions relate to specific business units unless indicated as "global."

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# Impact on Business and Strategy

Climate-related risks have the potential to impact our business in several ways. Our SD risk management processes identify those risks and assess the potential size, scope and prioritization of each. We have aligned a description of these impacts with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).



## Products and Services

Compliance with policy changes that create a GHG tax, fee, emissions trading scheme or GHG reductions could significantly increase product costs for consumers and reduce demand for natural gas- and oil-derived products. Demand could also be eroded by conservation plans and efforts undertaken in response to global climate-related risk, including plans developed in connection with the Paris Agreement. Many governments also provide, or may in the future provide, tax advantages and other subsidies to support the use and development of alternative energy technologies that could impact demand for our products. However, there are also opportunities associated with increased demand for lower-carbon energy sources such as natural gas to displace coal in power generation and in combination with carbon capture and storage in the production of hydrogen for industrial use.

Our scenario analysis indicates that as the energy sector transitions, it will be important to be competitive on both cost of supply and GHG emission intensity. We have adjusted our portfolio to concentrate on lower-cost production and have divested some of our higher-emissions-intensity natural gas and oil sands fields. We have also set a GHG emissions intensity reduction target for our scope 1 and scope 2 emissions.

## Supply Chain and/or Value Chain

We **engage with suppliers** on the environmental and social aspects of their operations and supply chains through each step of the procurement process, from supplier prequalification through supplier performance evaluation. This includes communicating our expectations and priorities and identifying opportunities for improvement and collaboration related to climate issues, including energy use, GHG management and environmental supply chain risks. We also engage through membership in several trade associations, such as IPIECA, that address climate-related issues through working groups and task forces that include downstream businesses as well as suppliers. We continue to monitor climate-related risks and opportunities related to our supply chain and value chain and believe that maintaining a global network of businesses and suppliers will mitigate physical climate-related risks.

## Adaptation and Mitigation Activities

While our business operations are designed and operated to accommodate a range of potential climate conditions, significant changes, such as more-frequent severe weather in the markets we serve or the areas where our assets are located, could cause increased expenses and impact to our operations. The costs associated with interrupted operations will depend on the duration and severity of any physical event and the damage and remedial work to be carried out. Financial implications could include business interruption, damage or loss of production uptime and delayed access to resources and markets. For example, a three-day shutdown of all U.S. Gulf Coast production would cause \$19 million in lost revenue, based on the 2020 average production and our average worldwide realized price of \$32.15 per barrel of oil equivalent (BOE). It is unlikely all our Gulf Coast area production would be affected, as our operations are located across a wide span of the coast including inland and offshore assets.

Business-resiliency planning is a process that helps us prepare to mitigate potential physical risks of a changing climate in a cost-effective manner. During Hurricane Harvey in 2017, we put our hurricane and crisis response training and business continuity plans into action in the United States. Prior to Harvey's landfall, Lower 48 employees safely shut down and secured Eagle Ford

production and associated facilities. Personnel were evacuated from our Magnolia platform in the Gulf of Mexico, though production remained online. Once the storm passed, production in the Eagle Ford resumed within several days, despite unprecedented conditions and infrastructure constraints in the area.

In Alaska, we updated our Foundational Design Specification to increase the embedment depths for vertical support members and piles to align with predicted soil temperature trends. This revision updates the specification based on temperature trends and geothermal modeling predictions from 2020 through 2070.

We conduct workshops on resiliency risks in key business units to establish future mitigations for potential physical changes to the operating environment. Business units in Texas, Alaska, Canada and Australia have participated in this process and integrated the results into their goals. Workshops were not conducted in 2020 due to COVID-19.

## Research and Development

Technology will play a major role in addressing GHG emissions, whether through reducing fugitive emissions or lowering the energy intensity of our operations or value chain. In Canada we are sponsoring the NRG COSIA Carbon XPRIZE to incentivize and accelerate development of technologies that convert carbon dioxide into valuable products.

Our annual MACC process identifies and prioritizes our emissions-reduction opportunities from operations based on the cost per tonne of carbon dioxide equivalent abated. This data helps identify projects that might become viable in the future through further research, development and deployment. As a result of this work, we have focused our near-term technology investments on reducing both costs and emissions where feasible, such as improving the steam-to-oil ratio in the oil sands. Part of a new research and development effort is a multilateral well technology pilot, which enables the drilling of multiple lateral sections without the need for additional above ground capital or additional steam injection, thereby reducing emissions intensity and operating costs.

Over the past three years we have spent more than \$380 million on research and development, equipment, products and services which have reduced our GHG emissions. Large-scale commercial deployment projects include:

- Eliminating the majority of methane emissions by using air, rather than natural gas, to drive equipment at our Montney development in Canada.
- Reducing emissions by electrifying plant and pad equipment in Alaska.
- Installing vapor recovery systems to capture methane emissions in Lower 48.

### Investments Which Reduced GHG Emissions

Technology Area	Stage of Development	2018, 2019, 2020 Investments
Energy Efficiency	Applied research and development	\$4 million
	Pilot demonstration	\$46 million
	Small-scale commercial deployment	\$1 million
	Large-scale commercial deployment	\$203 million
Methane Detection and Reduction	Applied research and development	\$3 million
	Small-scale commercial deployment	\$10 million
	Large-scale commercial deployment	\$5 million
Other Emissions Reductions	Small-scale commercial deployment	\$2 million
	Large-scale commercial deployment	\$111 million

# Operations

We have acted to mitigate our GHG emissions for many years. Our first Climate Change Action Plan was introduced in 2008, and since then we have voluntarily reduced our annual global GHG emissions compared to business as usual. In 2017, we introduced a GHG emissions intensity target to incentivize reductions in our production operations as well as project design, exploration and portfolio decisions. To date, this has resulted in a reduction of both our emissions intensity and our absolute emissions. Most of the reduction projects carried out since 2008 have paid for themselves through increased sales of natural gas. Around two-thirds of the projects relate to the reduced emissions of methane from reduced venting, updated plunger lifts or replacing pneumatic controllers.

To continue those reductions, we have set up regional teams in North America, Australia, Southeast Asia and Europe to use the MACC process to identify energy efficiency projects for consideration in the Long-Range Plan. By evaluating our day-to-day decisions regarding flaring, drilling, completions and equipment use we have gained a sharper focus on energy consumption, along with increased revenue, reduced energy costs, reduced emissions and an improved overall cost of supply.

[Read more](#) about our MACC process.

We are one of more than 80 companies participating in [The Environmental Partnership](#), a coalition of natural gas and oil companies focused on accelerating environmental performance improvements from operations across the United States. The partnership prioritizes managing methane emissions and aligns with our focus on emissions reductions and high environmental standards.

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# Financial Planning

We take climate-related issues into account in our financial planning in several ways. In the short-to-medium term, we use a range of commodity prices derived from our scenario work. In the longer term our scenarios provide insight into the possibilities for future supply, demand and price of key commodities. This helps us understand a range of risk around commodity prices, and the potential price risk associated with various GHG reduction scenarios. History has shown an interdependency between commodity prices and operating and capital costs. In the past, lower commodity prices have driven down operating and capital costs, whereas the opposite has been true when commodity prices have risen. We have aligned a description of the potential impacts on financial planning with the recommendations of the TCFD.

## Operating Costs and Revenues

New or changing climate-related policy can impact our costs, demand for fossil fuels, the cost and availability of capital and exposure to litigation. The long-term impact on our financial performance, either positive or negative, will depend on several factors, including:

- Extent and timing of policy.
- Implementation detail such as cap-and-trade or an emissions tax or fee system.
- GHG reductions required.
- Level of carbon price.
- Price, availability and allowability of offsets.
- Amount and allocation of allowances.
- Technological and scientific developments leading to new products or services.
- Potential physical climate effects, such as increased severe-weather events, changes in sea levels and changes in temperature.
- Extent to which increased compliance costs are reflected in the prices of our products and services.

The long-term financial impact from GHG regulations is impossible to predict accurately, but we expect the geographical reach of regulations and their associated costs to increase over time. We model such increases and test our portfolio in our long-term transitional scenarios.

## Capital Expenditures and Capital Allocation

We test our current portfolio of assets and investment opportunities against the future prices generated from our **corporate scenarios** and identify where weaknesses may exist, assisting with our capital allocation. As a result of our strategy and scenario work, we have focused capital on lower cost-of-supply resources, reducing our investments in oil sands and exiting deep water while increasing our investments in unconventional oil projects.

## Acquisitions and Divestments

Business development decisions consider the impact to our portfolio from the financial, operational and sustainability perspectives. In our long-range planning process, we run sensitivities on our GHG emissions intensity based on possible acquisitions, divestments and project decisions. We focus on cost of supply to account for lower and more volatile product prices and possible introduction of carbon taxes. In recent years, we have divested higher emissions intensity assets, such as oil sands and some older gas fields.

## Access to Capital

In addition to cost of supply and carbon, we also strive to compete more effectively by earning the confidence and trust of the communities in which we operate, as well as our equity and debt holders. We consider how our relative environmental, social and governance performance could affect our standing with investors and the financial sector, including banks and credit-rating agencies. Our engagement with investors has focused on climate-related risks in many one-on-one meetings and periodic conferences, such as with the **Interfaith Center on Corporate Responsibility**. We have also engaged on climate-related issues and sustainability risks with institutions such as Moody's and Standard & Poor's. An important priority in our corporate strategy has been to pay down debt and target an "A" credit rating to maintain, facilitate and ensure access to capital through commodity price cycles.

## Carbon Asset Risk

Scenario analysis and our climate risk strategy help build optionality into our strategic plans to reduce the risk of stranded assets. Key elements of our climate-related risk management process include: considering a range of possible future carbon-constraint scenarios; developing strategic alternatives to manage shareholder value in a future with uncertain carbon constraints; testing strategies and asset portfolios in various scenarios; developing actionable insights, and incorporating risk mitigation actions into the Long-Range Plan and Climate Change Action Plan.

We have taken action to reduce our cost of supply and are the only oil and natural gas company to transparently disclose the full cost of supply of our resource base. Combined with our belief that we have the lowest sustaining capital required to maintain flat production among our peers, this demonstrates a competitive advantage in reducing carbon asset risk. The **cost of supply** of our resource base supports our assertion that resources with the lowest cost of supply are most likely to be developed in scenarios with lower demand, such as the IEA's Sustainable Development Scenario.

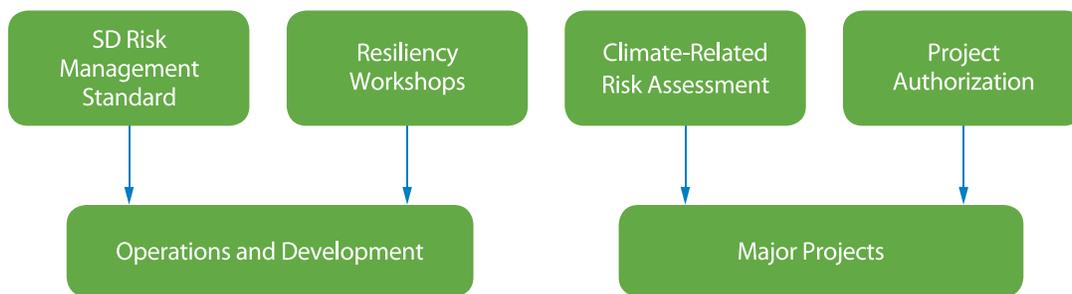
All U.S. publicly traded companies must adhere to a consistent set of regulations that enable investors to evaluate and compare investment choices. We fully comply with rules and regulations, including for reporting natural gas and oil reserves. In order to meet the Securities and Exchange Commission requirement that reserve estimates be based on current economic conditions, our reported reserves are determined by applying a carbon tax only for jurisdictions with existing carbon tax requirements. We have also increased our disclosure over the years to offer investors and stakeholders additional insights into the processes and procedures we use to manage climate-related risks, including carbon asset risk.

# Risk Management

We utilize an integrated management system approach to identify, assess, characterize and manage climate-related risks. This system links directly to the enterprise risk management (ERM) process, which includes an annual risk review by executive leadership and the board of directors.

## Assessing Climate-Related Risks

The diagram below illustrates how we assess climate-related physical and transition risk for operations, developments and new major projects.



To understand long-term risk and mitigation options, we utilize four scenarios. Depending on the deployment of carbon capture and storage and negative emissions technologies beyond 2050, we believe three of the scenarios may be capable of achieving an emissions trajectory consistent with the aims of the Paris Agreement. This scenario approach helps us evaluate distinct outcomes related to the potential timing and intensity of government climate change policy development, the pace of alternative energy technology development and trends in consumer behavior. This information is then used to shape our analysis and consideration of various outcomes for policy, technology and market risk. [Read more](#) about our use of scenarios.

We periodically review emerging climate-related risks with our Executive Leadership Team as part of our scenario monitoring system. A cross-functional team enters events into a centralized database that is reviewed regularly for indications that risks are changing or developing. We use this “early warning” system to inform our strategies in a timely manner so that we can identify and implement effective mitigation measures. The scenario monitoring system helps us understand the pace and direction of the energy transition. For example, if regulations and technology were moving more quickly than in our scenarios, this would indicate that we might be moving to a 1.5-degree scenario similar to the range identified in the IPCC “1.5 degree” report, and we would take action accordingly. In our resiliency workshops, we use externally produced scenarios that describe the range of possible future physical risk.

### Annual Assessment

As part of the annual risk management process mandated by our SD Risk Management Standard, we examine operated assets and major projects against the physical, social and political settings of our operations. Subject matter experts in each business unit (BU) and project identify and describe climate-related risks.

Each risk is then assessed using a matrix that evaluates both its likelihood and consequence. Risks rated significant or high are included in the corporate SD Risk Register. In evaluating the consequence level, we consider potential impacts on employee and public safety, socio-cultural and economic impacts to stakeholders, environmental impact, and reputational and financial implications. As part of the process, we examine the interdependence of risks and work to identify emerging risks such as new regulatory requirements and emerging greenhouse gas (GHG) pricing regimes.

Read more about our risk register and [Climate Change Action Plan](#).

## Resiliency Planning Workshops

We facilitate resiliency planning workshops in key BUs to identify and assess the risks and opportunities associated with the physical impacts of changing climate and the potential technology and solutions to mitigate risks and take advantage of opportunities. These workshops are conducted on a periodic basis to ensure that our operations have access to the most up-to-date science provided by qualified consultants to inform their engineering and infrastructure decisions. Workshops were not conducted in 2020 due to COVID-19 restrictions.

## Climate-Related Risk Assessment

A climate-related risk assessment is conducted on any future project development that costs more than \$50 million net and is expected to emit more than 25,000 metric tonnes CO<sub>2</sub> equivalent (CO<sub>2</sub>e) net to ConocoPhillips during any year of its lifespan. This assessment is mandatory for investment approval. Project teams for qualifying projects are required to assess the potential risks and opportunities associated with GHG emissions, GHG regulation and a physically changing climate based on local jurisdictions and geographies as opposed to using our corporate scenarios. The climate risk assessment guidelines provide a framework for project teams to:

- Forecast GHG emissions for the life of the project.
- Evaluate climate-related risks and opportunities, including physical and transition risks that apply to the project.
- Make decisions on GHG emissions control in project design, including energy efficiency solutions, power source selection, emissions management, carbon capture and storage/utilization, and external compliance options such as the purchase or origination of GHG offsets.
- Evaluate the potential cost of GHG emissions in project economics.

We assess climate-related risks early in the project engineering stage to better inform our investment decisions and facility design. The ConocoPhillips Health, Safety and Environment (HSE) Due Diligence Standard also provides further guidance on accounting for sustainable development issues for new acquisitions, new business ventures, joint ventures and real property transactions.

## Project Authorization

Our corporate authorization process requires all qualifying projects to include GHG pricing in their project approval economics. The base case for project approval economics now includes the higher of the forecast of existing regulations and the current transition scenario for that jurisdiction. Where there is no GHG price regulation, we use the current transition scenario for that jurisdiction. We also run two sensitivities:

- With only existing carbon pricing regulations, to reflect near-term cash more accurately.
- With a sensitivity of \$60 per tonne CO<sub>2</sub>e to act as a stress test to reduce the risk of stranded assets should climate regulation accelerate.

This ensures that both existing and emerging regulatory requirements are considered in our planning and decision-making.



# Managing Climate-Related Risks

Our climate-related risk management process is designed to drive appropriate action for adapting to a range of possible future scenarios. Through integrated planning and decision-making, we develop mitigation plans for climate-related risk, track performance against our goals and adjust our plans as we learn and conditions evolve.

Local risks and opportunities related to our operations and projects are assessed and managed at the BU level, enabling tailored business goals to address the challenges and opportunities unique to each region's operations. Reporting and overarching climate-related risks, such as GHG target-setting and prioritization of global emissions-abatement projects, are managed at the corporate level.

The diagram below shows a simplified process flow of our climate-related risk management process.



## Corporate Strategy

Our corporate strategy and the embedded Climate Risk Strategy are informed by the output of our corporate scenarios and the risk management system. Examples of impacts on our corporate strategy include:

- Reducing the sustaining price of the company — the equivalent oil price at which we can sustain production and pay our dividend.
- Lowering the cost of supply to manage market risk and improve returns.
- Maintaining a diversified portfolio of projects and opportunities.
- Diversifying our portfolio to include assets with lower decline rates and low capital intensity to drive higher free cash flow yields.
- Developing technologies that reduce both costs and emissions.
- Monitoring alternative energy technologies.

The objective of our Climate Risk Strategy is to manage climate-related risk, optimize opportunities and equip the company to respond to changes in key uncertainties, including government policies around the world, technologies for emissions reduction, alternative energy technologies and changes in consumer trends. The strategy sets out our choices around portfolio composition, emissions reductions, targets and incentives, emissions-related technology development, and our climate-related policy and finance sector engagement.

[Read more](#) about our emissions reduction targets.

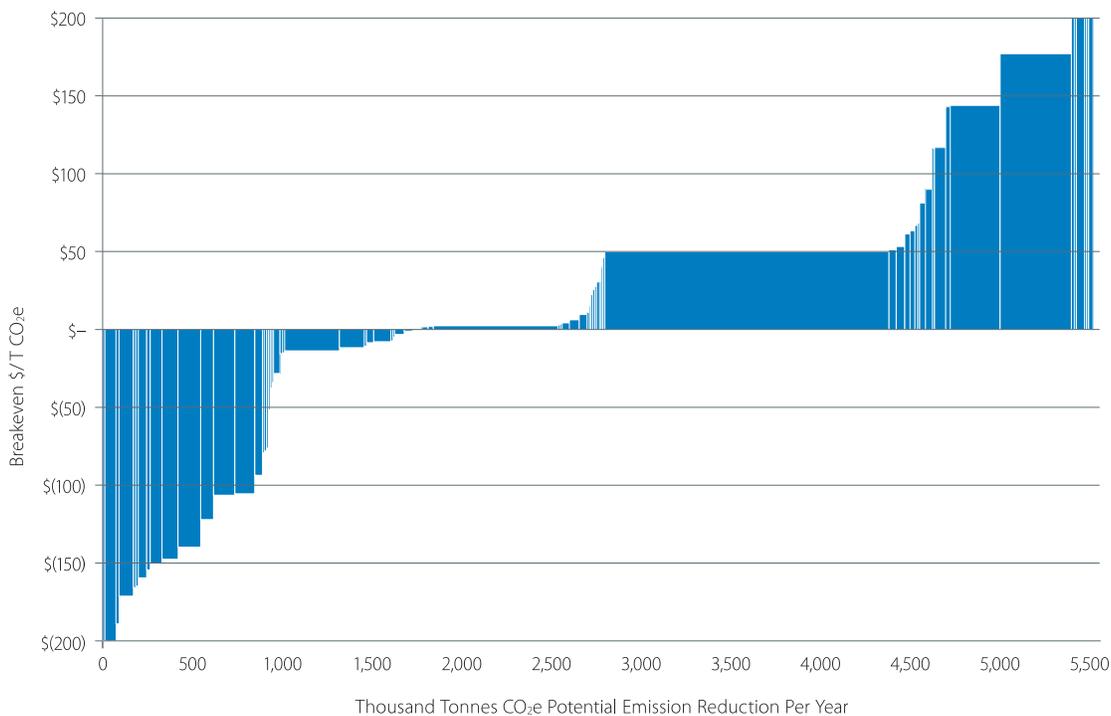
## Long-Range Plan

The ConocoPhillips Long-Range Plan provides the data that underlies our corporate strategy and enables us to test our portfolio of projects against our climate-related risk scenarios, and thus make better-informed strategic decisions.

We use a marginal abatement cost curve (MACC) process to collect potential GHG emissions reduction projects from our business units, prioritize them based on their cost and reduction volume, and implement the most cost-effective projects. As a result, we have completed the installation of non-condensable gas co-injection in the Canadian oil sands to enhance production while reducing energy consumption and emissions. In the U.S. Lower 48, we have changed the design of some new facilities to include instrument air packages rather than gas-driven devices, reducing methane emissions from those sites. To continue those reductions, we have set up regional teams in North America, Australia, Southeast Asia and Europe to use the MACC process to identify additional energy efficiency projects. Output from the MACC informs our annual budget, Long-Range Plan and technology strategy.



*Grissik Gas Plant, South Sumatra*



Projects below the line are economic and have a negative breakeven cost of carbon. Projects above the line are not economic — the taller the bar, the higher the breakeven cost of carbon. The width of the bar indicates the annual emissions saving that would occur should the project be undertaken — the wider the bar, the greater the emission saving.

[Read more](#) about our MACC process and 2020 projects.

## SD Risk Management Process

The SD risk management process ensures that a Climate Change Action Plan is developed to track mitigation activities for each climate-related risk included in the corporate SD Risk Register. This plan includes details about our commitments, related responsibilities, resources and milestones. As part of annual updates to the register, the action plan and its effectiveness are evaluated, and decisions are made to continue mitigation measures, add new measures, or simply monitor the risk for further developments. The table below lists our key SD risk management processes, their scope and purpose.

Risk Management Process	Scope	Description
Corporate strategy	Corporate/portfolio	Defines the company's direction for exploration and development, including portfolio, capital allocation and cost structure.
Climate-related risk strategy	Corporate/portfolio	Identifies options to reduce and mitigate climate-related risks as policies, markets and technologies develop over time.
GHG emissions intensity target	Business units and qualifying projects	Drives actions, reviews and management of future policy and market risk.
Long-Range Plan	Corporate/portfolio	Forecasts key data for our corporate strategy covering our proposed portfolio development and performance, including production, costs, cash flows and emissions.
Marginal abatement cost curve (MACC)	Business units	Collects a list of GHG emissions-reduction projects across our business units and prioritizes them based on cost and emissions abated.
SD risk management process	Corporate, business units and qualifying projects	Records all SD-related risks that are prioritized as significant and high in the SD Risk Register to ensure that mitigation progress is reported and issues are managed effectively.
Climate Change Action Plan	Corporate, business units and qualifying projects	Records mitigation actions, milestones and progress in managing climate-related risks from the SD Risk Register.

[Read more](#) about our Risk Register and Climate Change Action Plan.

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# Integrating Climate-Related Risks into ERM

Climate-related risks from the corporate SD Risk Register are mapped to key categories in the enterprise risk management process. Descriptions of these risks and mitigation measures from the [Climate Change Action Plan](#) are shared with Enterprise Risk Management (ERM) risk owners to inform their assessments of risk ranking, corporate actions and mitigations. Each risk owner evaluates and prioritizes risks in their area based on likelihood and consequences, thereby determining the relative significance of climate-related risks in relation to other enterprise risks.

The ERM process is a direct input into our strategic planning process. By identifying major cross-cutting risks and trends, we closely link action plan efforts to key performance issues and address and mitigate identified risks. The board regularly reviews the ERM system and mitigation actions.

Information about issues deemed material to our investors may be found in our [Security and Exchange Commission \(SEC\) filings](#).

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## Performance Metrics and Targets

We calculate key metrics and use targets to measure and monitor our performance and progress in managing climate-related risks and opportunities in line with our strategy and risk management process. These include:

- Greenhouse gas (GHG) emissions intensity target.
- Scope 1, scope 2 and scope 3 GHG emissions.
- Metrics for methane, flaring, and water.
- Internal proxy GHG pricing and the financial impact of existing GHG pricing on our businesses across the globe.

We believe these metrics and targets are the most useful in managing climate-related risks and opportunities and monitoring performance.

### 2020 Performance Highlights

- Adopted a Paris-aligned climate-related risk framework with an ambition to become a net-zero company for operational emissions by 2050.
- Set a 35-45% reduction target for operational emissions by 2030.
- Set a zero routine flaring target by 2030, with an ambition to meet the goal by 2025.
- Set a methane emissions intensity reduction target of 10% by 2025, which is in addition to our already significant reductions of approximately 65% since 2015.
- Added continuous methane monitoring devices to our operations, with an initial focus on our Lower 48 facilities.

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“Our long-term ambition to reduce our operational greenhouse gas emissions to net-zero by 2050 reflects how we see the company’s role in a global mandate to address climate change, meet energy demand and remain financially competitive.”

— CHAIRMAN AND CEO RYAN LANCE



# Emissions Reduction Targets

In 2020, we announced a climate risk strategy that sets an ambition to reduce our operational greenhouse gas (GHG) emissions to net-zero by 2050. We also substantially revised our 2030 target to reduce our GHG emissions intensity, endorsed the World Bank Zero Routine Flaring by 2030 initiative and set a target to reduce methane emissions intensity. These targets inform internal climate goals at the business level and support innovation on efficiency and emissions reduction, GHG regulatory risk mitigation and climate-related risk management throughout the life cycle of our assets.

[Read more](#) about our target details.

All data is from January 1 to December 31, 2020. Our Performance Metrics footnotes outline the scope and methodologies of our data reporting. The minimum boundary for reporting on environmental priorities is assets we operate. [Read more](#) about our performance metrics.

The 2020 oil price crash and economic downturn caused by the COVID-19 pandemic led to reduced drilling activity and production curtailments which translated into reductions of GHG emissions for many of our key performance indicators.

## GHG Emissions Intensity Target

Our target is to reduce our operated GHG emissions intensity by 35-45% by 2030 from a December 31, 2016 baseline.

The target covers scope 1 and scope 2 gross operated emissions as these are the emissions over which we have the most control. Our scope 1 and scope 2 GHG emissions and emissions intensity calculations directly measure our climate performance and help us understand climate transition risk. For example, our ability to manage GHG emissions can help us measure resilience to emerging carbon tax regulation.

### 2020 GHG Emissions Intensity Target Progress



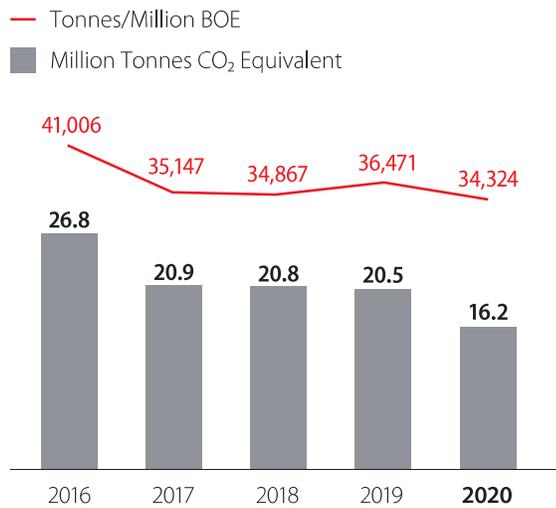
**Scope 1** – Direct GHG emissions from sources owned or controlled by ConocoPhillips.  
**Scope 2** – GHG emissions from the generation of purchased electricity consumed by ConocoPhillips.  
**Scope 3** – All other indirect GHG emissions as a result of ConocoPhillips activities, from sources not owned or controlled by the company.

[Read more](#) about GHG Protocol definitions.

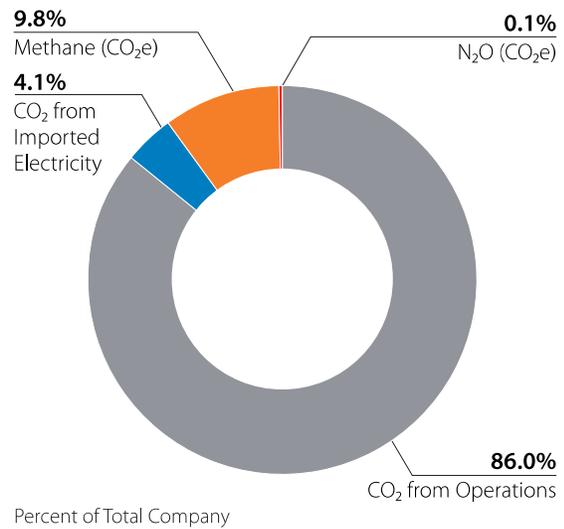
The target includes emissions that are related to production and excludes emissions from our Aviation and Polar Tankers fleets. This may give rise to small differences between the intensity we report for our GHG target purposes and the intensity we report for our annual metrics.

In 2020, our total gross operated GHG emissions, in CO<sub>2</sub> equivalent terms, were approximately 16.2 million tonnes.

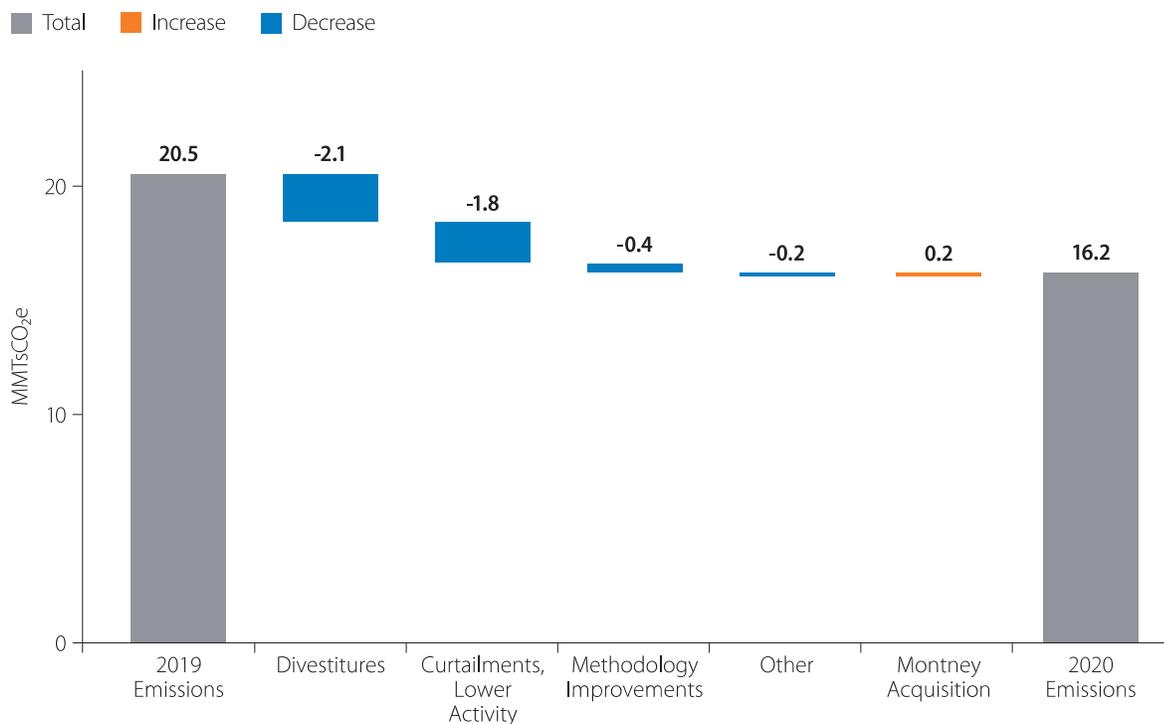
### Total GHG Emissions and Intensity



### Total GHG Emissions



### GHG Emissions Changes



## GHG Emissions Intensity Reduction Projects

Our 2020 gross operated global GHG emissions are 30% lower as a result of discretionary projects since 2009 when compared to business-as-usual emissions.

### Canada

Reducing the GHG emissions intensity of our in-situ oil sands operations continues to be a priority for our Canada operations. We are using technology to co-inject noncondensable gas (NCG) with steam to reduce steam requirements and increase production at Surmont. This allows for a reduction in the steam-to-oil ratio (SOR) and consequent reduction in GHG emissions intensity. Four

of the 16 producing pads had NCG infrastructure installed and ongoing co-injection. In 2020, co-injection was expanded to the remaining 12 pads. The technology can be applied to almost any Steam Assisted Gravity Drainage (SAGD) operation, resulting in GHG intensity reductions of approximately 15-35%. Early project results have been shared with [Canada's Oil Sands Innovation Alliance](#) (COSIA) Innovation Plus consortia to encourage widespread deployment of the technology throughout Alberta's oil sands.

The Innovation Plus mandate focuses on technology innovation and ConocoPhillips led members through an in-situ fundamentals workshop covering NCG co-injection in early 2020. The forum provided an opportunity for knowledge sharing and collaboration to develop increased confidence for our Surmont operation to adjust NCG plans in 2020 to accommodate for a more rapid deployment in the face of COVID-related curtailment pressures.

We are also piloting multilateral well technology including innovative drilling and completion methods and thermal junction technology in existing vertical wellbores to increase production from a single surface location. Thermal junction technology enables the drilling of multiple lateral sections without the need for additional above-ground infrastructure. These wells reduce surface footprint and provide increased bitumen production without additional steam injection, thereby reducing GHG emissions intensity and operating costs per barrel of bitumen. The pilot is expected to result in a reduction in GHG emissions intensity of 17%.



Both technology pilots have benefitted from financial support provided through [Emissions Reduction Alberta](#) (ERA). ERA invests the proceeds from carbon pricing paid by large industrial emitters into Alberta's Technology Innovation and Emissions Reduction (TIER) regulation to reduce GHGs and strengthen the competitiveness of new and incumbent industries in Alberta. These investments help innovators develop and demonstrate GHG-reducing technologies that lower costs, improve competitiveness, and accelerate Alberta's transformation to a low carbon economy.

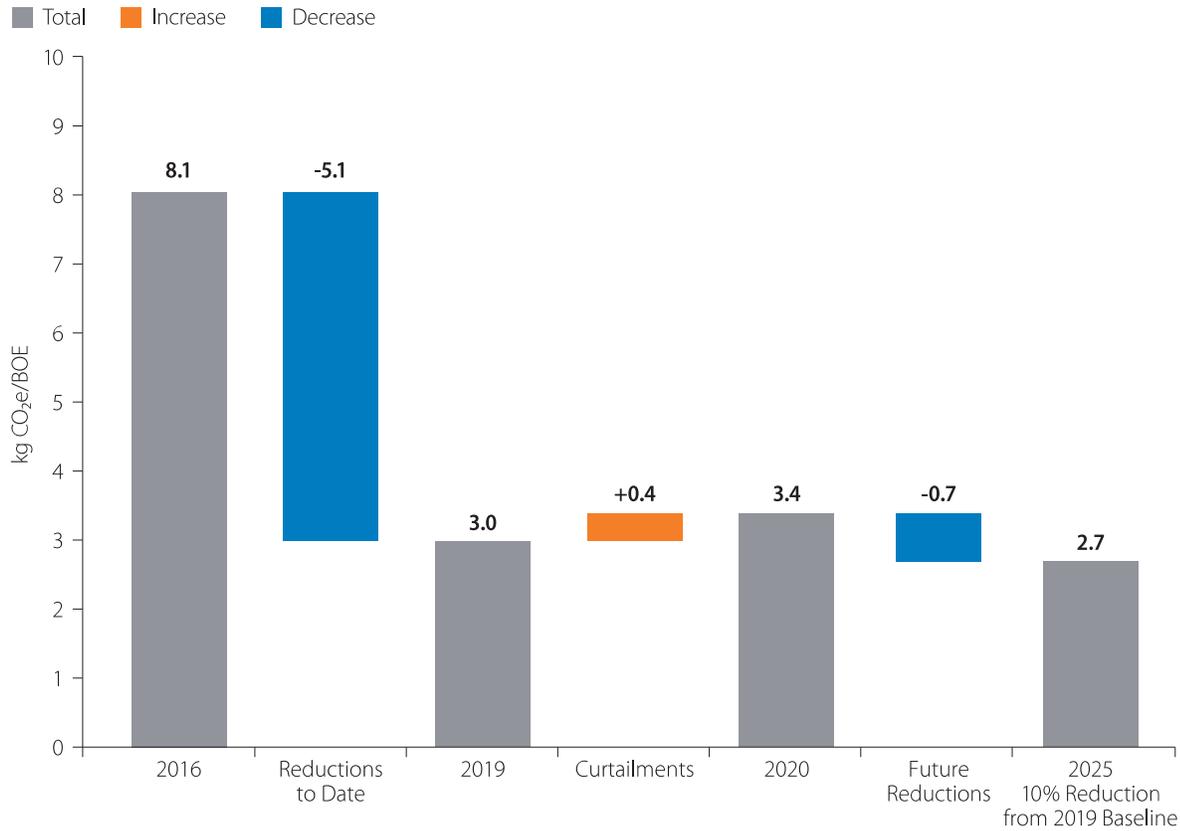
## Lower 48

In our Zia Hills operations in the Permian, we tested the use of associated natural gas that is co-produced with oil to power hydraulic fracturing at a well in 2020. The dual fuel trial resulted in replacing about 30% of the diesel typically required for a frac job and reduced combustion emissions by over 650 tonnes CO<sub>2</sub>e. Results will be used by our operations to further reduce the amount of diesel required during future trials. This innovation along with innovations in efficiency, water and safety are also providing significant cost savings per well.

## Methane Emissions Intensity Target

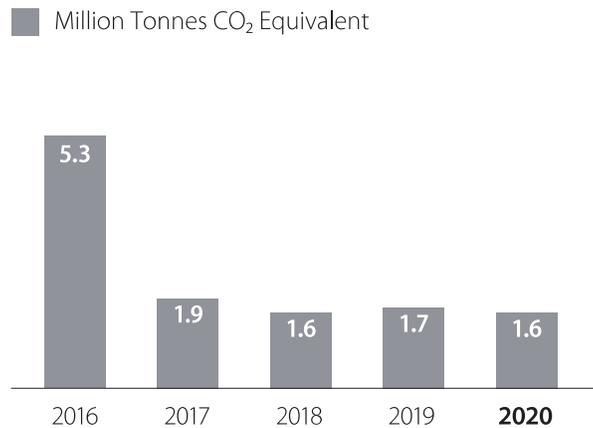
Reducing methane emissions, even the small equipment leaks known as fugitive emissions, is a key part of our operations. We have a near-term target to reduce methane emissions intensity by 10% by 2025. This is in addition to our already significant reductions of approximately 65% since 2015. Just over half of that reduction has come from voluntary methane reduction activities and the rest from portfolio changes. In 2020, methane intensity increased slightly due to production curtailments while absolute methane emissions continued to decline.

## Methane Emissions Intensity Target Progress



In 2020, methane emissions totaled 1.6 million tonnes of CO<sub>2</sub>e and constituted 9.8% of our total company GHG emissions.

## Total Methane Emissions



We have standard operating procedures to detect and repair leaks. Audio-visual-olfactory (AVO) inspections are routinely performed during operator rounds to identify any leaks or other issues. **Leak detection and repair (LDAR)** is a work practice used to identify and quickly repair leaking components, including valves, compressors, pumps, tanks and connectors, in order to reduce GHG emissions and increase efficiency.

We comply with federal, state and local regulation of methane detection processes. At many of our locations, especially high rate producing wells and stand-alone compressor stations, we also have a periodic voluntary fugitive monitoring program using optical gas imaging cameras (OGI) to enhance our LDAR. OGI cameras create real-time images of gases or liquids leaking from pipes, vessels, tanks and other types of process equipment. OGI surveys are completed at new or modified well sites, and subsequent monitoring surveys are conducted at least annually. We fix leaks as soon as feasible, with many leaks repaired either

the same day or within a few days of being detected. We implement engineered solutions and/or operational changes if we identify developing trends of systemic hardware problems. We are also piloting other technologies that potentially provide continuous monitoring capability of facilities. [Read more](#) about methane emissions detection.

## Methane Reduction Projects

### Lower 48

Setting a methane emissions intensity target ensures continued focus on methane emissions reductions, including designing new facilities to avoid methane emissions as much as practical. In 2020, we evaluated ways to better design our well pads and central facilities for zero GHG emissions. This includes:

- Electrification — using power from the grid, waste gas generators or alternative energy such as solar rather than natural gas.
- Combustion control — making flares efficient.
- Emissions capture and suppression — reducing connections and installing sensors to detect open hatches.
- Vapor recovery units — installing at all central facilities and adding to the base design for all future facilities. These capture low pressure emissions from oil and water tanks for sale.

[Read more](#) about our Marginal Abatement Cost Curve.

We are participating in [The Environmental Partnership](#), a coalition of over 80 natural gas and oil companies working to improve methane emissions management. As part of our commitment, we have focused on two key areas:

- LDAR programs — In 2020, we conducted approximately 7,600 surveys across our assets to detect leaks and quickly repair them. While this is a regulatory requirement in many areas, over 40% of the surveys were done voluntarily. These surveys continue to provide a better understanding of where leaks occur and how we can minimize fugitive emissions.
- Eliminating gas-driven pneumatic devices — Many of our greenfield designs at new facilities include devices to use supplied air instead of site gas to reduce natural gas emissions from pneumatics.

In addition, we continue to test and deploy new methane detection technologies, including continuous monitoring. [Read more](#) about our methane detection toolkit. While this technology is proving to work well for expeditiously identifying and mitigating leaks, our reported emissions continue to be based on the EPA-mandated methodology for reporting GHG emissions.

### Canada

Our new development in Montney was designed to eliminate the majority of methane emissions by utilizing self-generated electricity and electric equipment rather than traditional natural gas driven equipment.

## Flaring Target

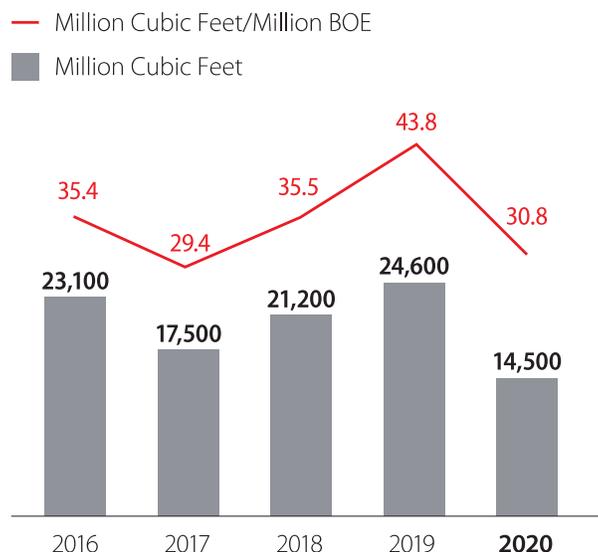
Flaring is a regulated and permitted process for the controlled release and burning of natural gas during oil and gas exploration, production and processing operations. Flaring is required to safely dispose of flammable gas released during process upsets or other unplanned events and to safely relieve pressure before performing equipment maintenance. Flaring is also used to control and reduce emissions of volatile organic compounds from oil and condensate storage tanks, and to manage emissions at well sites that lack sufficient pipeline infrastructure to capture gas for sale.

Setting a target to get to zero routine flaring by 2030, with an ambition to get there by 2025, is a key near-term action within our ambition to become a net-zero company by 2050. While our flaring emissions make up only 8% of our total GHG emissions, the target will drive continued near-term focus on routine flaring reductions across our assets. Routine flaring is defined as flaring that occurs during the normal production of oil in the absence of sufficient facilities to utilize the gas onsite, dispatch it to a market, or re-inject it. Flaring for safety reasons, non-routine flaring or flaring gas other than associated gas is not included as part of the World Bank Zero Routine Flaring initiative.

As the target was announced in late 2020, we do not yet have data specific to routine and nonroutine flaring emissions for the year. We will be collecting one full year of data in 2021 and begin reporting our performance on the goal in our 2021 reporting.

In 2020, our total volume of flared gas was 14.5 BCF. The 41% reduction was primarily due to production curtailments, better flare management and the Australia West divestiture. In the Permian, we are utilizing an internal decision tree to optimize our operations to reduce flaring during third party outages.

### Total Flaring Volume



## Flaring Reduction Projects

### Lower 48

We have reduced flaring by utilizing closed-loop completions, central gas gathering systems, vapor recovery units, directing condensate to sales pipelines and improving uptime through operational excellence (a major focus for all our operating facilities). Our Bakken team has identified several measures to reduce flaring, including a focus on debottlenecking, reducing H<sub>2</sub>S, and working with midstream partners to better align pipeline capacity with production. [Read more](#) about our Bakken flaring reduction projects. In the Permian, we have built and operate our own gathering system, which enables more flexibility and connections to multiple third-party processors. We have also developed and implemented facility design changes to reduce (or eliminate) flaring from tanks.

### Norway

In the North Sea, we are reducing our safety flaring by installing a new gas compressor that will reduce emissions from the flare tower at Ekofisk 2/4 J by more than 90% or 26,000 tonnes per year. Instead of gas being flared, it will now become part of production.

## Scope 3 Emissions

Our current GHG intensity target does not cover scope 3 emissions. While we recognize that scope 3 emissions arise because of our business, as an exploration and production company with no downstream assets we do not own the sources of emissions or control how the raw materials we produce are transformed into other products or the efficiency of their consumption.

### Reporting

We have reported annually on scope 3 emissions in our CDP submissions since 2010 to acknowledge the role they play in climate risk assessment. We calculate scope 3 emissions using the IPIECA 2016 *Estimating Petroleum Industry Value Chain (scope 3) Greenhouse Gas Emissions guidance* based on net equity production numbers. We report the four largest categories of scope 3 emissions that apply to our operations.

For oil and natural gas exploration and production companies, scope 3 emissions fall primarily into the “use of sold products” category. Though we do not control how our total production is ultimately processed into consumer products, we make the conservative assumption that the majority of production is ultimately burned as fuel by end users. We use the Environmental Protection Agency GHG emissions factors for crude oil and natural gas burned as fuel. This method accounts for all possible GHG emissions that could be associated with end use of our production. Our assumption and method are especially conservative when the “double counting” issues inherent in scope 3 estimations for an exploration and production company (discussed below) are taken into account.

We conservatively calculate the other three categories of scope 3 emissions by taking our entire volume of crude and natural gas and applying the relevant transportation, distribution and processing emission factors from academic life cycle analyses, including the 2019 National Energy Technology Laboratory study: *Life cycle analysis of natural gas extraction and power generation*. In 2020, scope 3 emissions decreased by 17%, primarily due to decreased net production.

Source	Estimated Million Tonnes CO <sub>2</sub> e
Upstream transportation and distribution	2.2
Downstream transportation and distribution	6.6
Processing of sold products	11.6
Use of sold products	142.3

## Target Setting

### Climate Policy to Address End-Use Demand and Emissions

We have been clear since our first Climate Change Position in 2003 that end-use emissions must be addressed to meet global climate commitments. Climate policies along with advances in technology and consumer choice will ultimately drive demand and end-use emissions. We have long taken the position, consistent with the conclusions reached by many leading economists, that an economy-wide, escalating price on carbon emissions, aligned with the aims of the Paris Agreement, is the most effective and efficient way to impact consumer demand and end-use emissions. Our constructive advocacy for effective carbon pricing policy began when we became the first U.S. oil and gas company to join the United States Climate Action Partnership in 2007 and continued in 2018 when we joined the Climate Leadership Council as a founding member. It is also reflected in the fact that our main industry associations have now adopted positions on carbon pricing and other climate policy that align with our public positions.

### Production and GHG Emissions Shift

To meet a scope 3 target, an exploration and production company would need to shift its capital to alternative energy products or curtail production. This capital shift would not necessarily address the world’s net-zero emission ambitions because it does not impact the oil and gas demand that is predicted across any Paris-aligned transition pathway. Instead, it would result in a production shift with economic and carbon leakage to local and overseas producers, which could lead to an increase of GHG emissions.

### Exploration and Production Company versus Integrated Company

As an exploration and production company, we do not have the same opportunities to influence end-use emissions as integrated oil and gas companies which have ownership and control over the production and sale of end-use energy products to consumers. A consumer-facing integrated company has the option to dilute risk and pursue opportunity by changing their mix of energy products in line with the course of the energy transition.

## Double Counting

The double-counting of end-use emissions makes accurate accounting and credible target-setting extremely problematic for companies along the natural gas and oil value chain. For example, the scope 3 emissions from refining the oil we produce are a refiner's scope 1 emissions. The combustion of that oil in the form of an end-use product such as gasoline are also scope 3 emissions for the producer of the oil, the refiner and the marketer. The combustion of gasoline is also a scope 1 emission for distribution and transportation companies. There is double counting throughout the economy. Likewise, our scope 3 emissions from the combustion of natural gas at a power station would be the electricity producer's scope 1 emissions and our own scope 2 emissions for electricity purchased to run our operations.

We are following the development of the Science Based Targets Initiative methodology for the Oil and Gas industry and have responded to their recent Net-Zero criteria consultation. We believe that the most practical way to avoid double-counting of emissions and overlap of targets is for all companies to align with the Paris Agreement and set targets for their scope 1 and 2 emissions.

"We are focused on reducing the emissions that we own and control, assessing emerging low carbon opportunities, and advocating for an economy wide price on carbon as the most effective policy to reduce end-use GHG emissions across the economy."

— DOMINIC MACKLON, SENIOR VICE PRESIDENT, STRATEGY AND TECHNOLOGY



## Energy Efficiency

We continually strive to make our operations more energy efficient. This can provide an environmental benefit through reduced emissions, as well as an economic benefit through lower production costs or greater sales revenue. Through the natural decline of production, as our fields diminish in size, they tend to require either the same, or in some cases, even greater amounts of energy to extract the product and transport it for processing or refining.

Total energy consumption in 2020 was 185 trillion British Thermal Units (BTUs). Approximately 98% of our consumption was combustion of fuel for our own energy use with the remaining from purchased electricity.

## Low-Carbon Emitting Products

In 2020, we supplied customers with approximately 0.9 trillion cubic feet (or 2.4 billion cubic feet per day) of natural gas. To put this in perspective, if all the natural gas we produced in 2020 had been used to replace coal for electricity generation, GHG emissions would have been reduced by approximately 48 million metric tonnes, more than double the company's combined scope 1 and scope 2 emissions for the year.

## CDP

The annual CDP survey collects a wide range of information concerning corporate efforts to manage climate change issues effectively and drive emissions reductions. It includes an emphasis on governance, strategy, actions and reporting to try to provide a complete view of companies' performance for comparison. It also provides a view of sector performance. ConocoPhillips has participated in the survey since 2003. Our most recent CDP submission can be found in the [2020 CDP document](#).

Read more about our [Performance Metrics](#) and [SASB metrics](#).

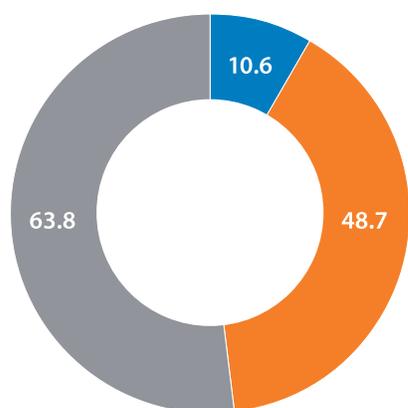
# Water

Access to water is essential to the communities and ecosystems near our operations and for our ability to produce natural gas and oil. Water risks are evolving globally in response to cumulative effects of human water demand, physical effects of climate change and changing priorities and expectations of governments, investors and society. We measure and report on the volume of fresh water and non-fresh water withdrawn from local water sources and the volume of produced water that is reused, recycled, disposed or discharged after treatment. This data is used to estimate our water intensity and exposure to water stress. We also collect water forecast data for our Long-Range Plan which enables us to test our portfolio of projects against our water risks to make better-informed strategic decisions.

## Source Water – Global

MM Cubic Meters

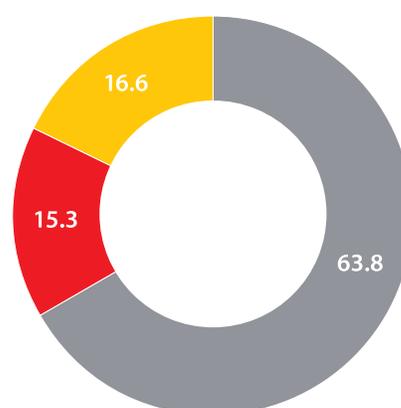
■ Fresh ■ Non-fresh ■ Reuse/Recycled Produced Water



## Produced Water Managed – Global

MM Cubic Meters

■ Disposed ■ Discharged ■ Reuse/Recycled Produced Water



The 2020 fresh water consumption intensity for our unconventional assets in the U.S. (Eagle Ford, Delaware and Bakken) and in Canada (Montney) was 0.23 bbl/BOE EUR<sup>1</sup>. The 2020 fresh water consumption intensity for our conventional (Alaska, Canada Surmont, U.S. Permian, LNG and Indonesia) and offshore assets (Norway) was 0.05 bbl/BOE. [Read more](#) about our water metrics.

Water sourcing and produced water disposal for our unconventional assets continue to be priority risks for our business and stakeholders. While some water is required during drilling, the majority is used for hydraulic fracturing. Some wells can produce more water than natural gas or oil, and the relative volumes vary significantly with basin geology/hydrogeology. [Read more](#) about how we manage our water risks.

We use the [World Resources Institute Aqueduct Risk Atlas](#) (Aqueduct tool) to assess our portfolio exposure to water stress. Our Anadarko, Lost Cabin Gas Plant, Permian Midland Basin and Alaska Kuparuk assets are located in basins with high or extremely high baseline water stress and accounted for 4.5% of our total fresh water withdrawal and 1.5% of our total fresh water consumption in 2020. In water stressed regions, fresh water is mostly used for domestic purposes in staff camps, operational activities that require wash water, processing and drilling (e.g., for water-based drilling mud) where fresh water use is required.

1. Estimated ultimate recovery.

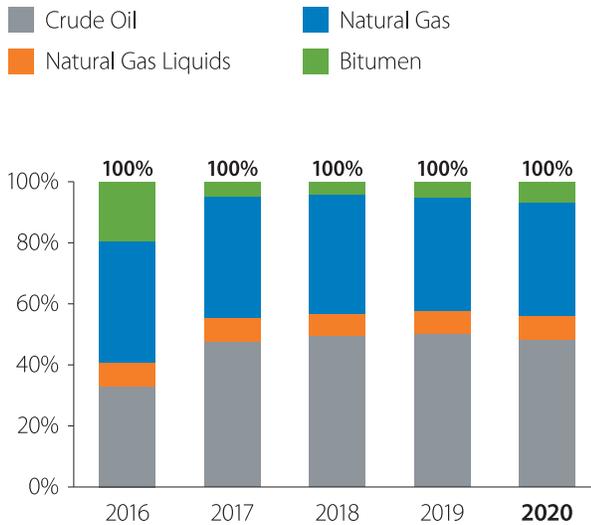
# Strategic Flexibility and Planning

A robust and flexible corporate strategy will be key to navigating the energy transition. The three key strategy components for an exploration and production company are portfolio, capital allocation and management of uncertainty. We manage uncertainty by focusing on the fundamental characteristics that drive competitive advantage in a commodity business — a low sustaining price, low cost of supply, low decline rates and low capital intensity that drive free cash flow, capital flexibility and a strong balance sheet. Based on our scenario analysis and monitoring of signposts, we decide when we should act and which actions to take.

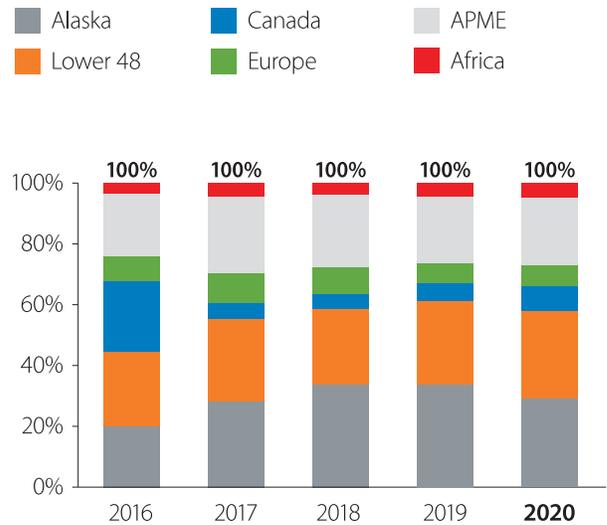
## Portfolio Diversification

The mix and location of the resources in our portfolio demonstrate flexibility and the ability to adapt to change as we monitor scenarios and global trends. Our short-cycle project times and capital flexibility enable us to redirect capital to the most competitive basins. Our extensive low cost of supply resource base allows us to divest higher cost assets to high-grade our portfolio as our strategy evolves. This applies not only to hydrocarbon mix, but geographic region as well. If policy in a country or region significantly impacts cost of supply, we can shift capital to other opportunities. Examples include our presence in the oil sands business in Canada and in North American natural gas. Changing market fundamentals led us to significantly reduce our focus on both, while our portfolio diversity enabled expansion in other areas.

**Percent of Proved Reserves by Hydrocarbon Type (Net Equity)**



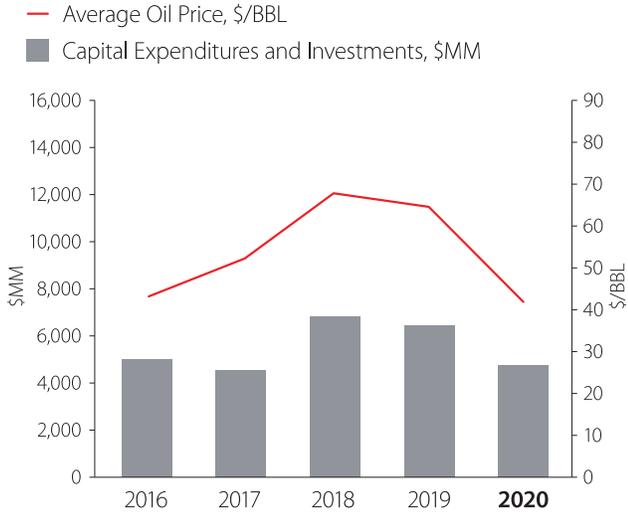
**Percent of Proved Reserves by Region (Net Equity)**



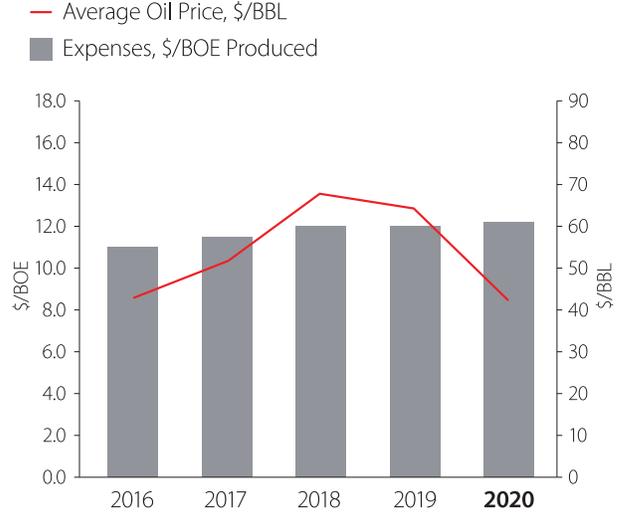
## Capital and Operating Spend

Our strategy is also made more robust by discipline in capital and operating costs. When oil prices started dropping in 2014, we could respond with changes to short- and long-term planning, as well as more cost-effective and efficient operations.

## Capital Expenditures



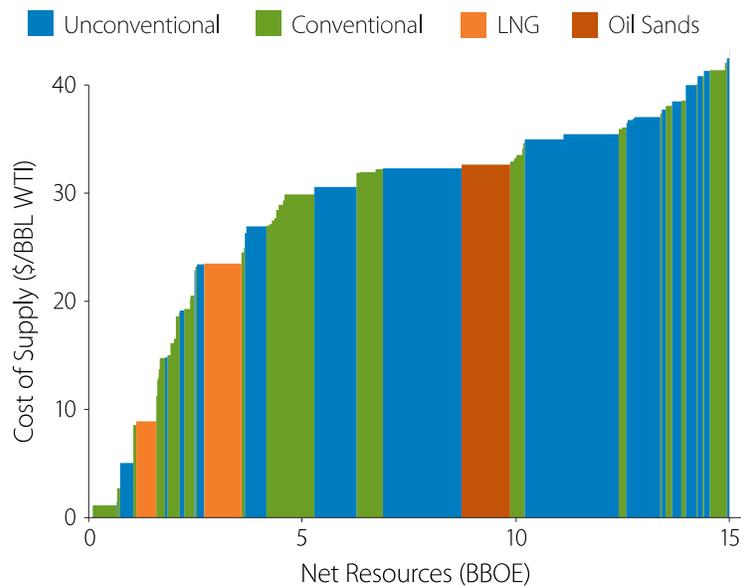
## Expenses



## Cost of Supply

Cost of supply is the West Texas Intermediate (WTI) equivalent price necessary to generate a 10% after-tax return on a point-forward and fully burdened basis, including cost of carbon where legislation exists. In our definition, cost of supply is fully burdened with exploration, midstream infrastructure, facilities cost, price-related inflation and foreign exchange impact, and both regional and corporate general and administrative costs. Cost of supply is the primary metric that we use for capital allocation, and it has the advantage of being independent of price forecasts. Any oil price above the cost of supply will generate an after-tax fully burdened return that is greater than 10%.

The cost of supply of our resource base supports our assertion that resources with the lowest cost of supply are most likely to be developed in scenarios with lower demand, such as the [IEA's Sustainable Development Scenario](#). In 2020, we had approximately 15 billion barrels of resource below \$40 per barrel diversified across four megatrends (does not include Concho resource additions).



As of November 2019

## GHG Price

We use GHG pricing to navigate GHG regulations, change internal behavior, drive energy efficiency and low-carbon investment, and stress-test investments. In 2020, the company used a range of estimated future costs of GHG emissions for internal planning purposes, including an estimate of \$40 per metric tonne applied beginning in the year 2024 as a sensitivity to evaluate certain future projects and opportunities. In 2021, we have made changes to the way that qualifying projects will include GHG pricing in their project approval economics and long-term planning. The base case for project approval economics and planning will now include the higher of the forecast of existing GHG pricing regulations and our current energy transition scenario for that jurisdiction. Where there is no GHG price regulation, we use the current transition scenario for that jurisdiction. We also run two sensitivities:

- With only existing carbon pricing regulations, to reflect near-term cash more accurately.
- With a sensitivity of \$60 per metric tonne CO<sub>2</sub>e, increased from \$40 per tonne in 2020, to act as a stress test to reduce the risk of stranded assets should climate regulation accelerate.

This ensures that both existing and emerging regulatory requirements are considered in our planning and decision-making.

In accordance with SEC guidelines, the company does not use an estimated market cost of GHG emissions when assessing reserves in jurisdictions without existing GHG regulations.

## Cost of Compliance with Carbon Legislation

Climate Legislation	2020 Cost of Compliance, Net Share Before Tax (US\$ approx)	Operations Subject to Legislation	Percent of 2020 Production*
European Emissions Trading Scheme (EUETS)	\$7 million	U.K., Norway	11
Alberta Carbon Competitiveness Incentive Regulation (CCIR)	\$2 million	Canada	5
Norwegian carbon tax	\$29 million	Norway	11
British Columbia and Alberta carbon tax	\$3.5 million	Canada	6

\*2020 country production over total production; cost of GHG emissions may only apply to some of our assets or to a portion of our emissions over a set baseline.

## Carbon Capture, Use and Sequestration

In the U.S. our operations at Buckeye East in New Mexico use recycled CO<sub>2</sub> for enhanced oil recovery, and in 2020 we purchased 195,000 tonnes of CO<sub>2</sub> for injection. We are also a member of the Energy Advance Center (EAC), a voluntary association of energy and energy-related organizations dedicated to advancing the development and deployment of carbon capture, utilization and storage to achieve a cleaner energy profile and improve U.S. economic security. Our interest in EAC centers around advocating for a commercially reasonable standard to demonstrate secure geological storage in the context of captured carbon dioxide that gets sequestered underground as a tertiary injectant in enhanced oil recovery projects.

Seven of Canada's Oil Sands Innovation Alliance (COSIA) member companies, led by ConocoPhillips Canada, partnered with NRG Energy, an integrated power company in the U.S., to back a global competition to research technologies to capture and transform CO<sub>2</sub>. The **NRG COSIA Carbon XPRIZE** challenges the world to reimagine what can be done with CO<sub>2</sub> emissions by incentivizing and accelerating the development of technologies that convert CO<sub>2</sub> from fossil fuel combustion into valuable products. Ten teams from five countries were finalists for the \$20 million competition. Teams range from entrepreneurs and start-ups to academic institutions and companies that have been tackling the carbon challenge for more than a decade. [Read and view more](#) about the Carbon XPRIZE teams.

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# Verification and Assurance

Each of our business units is responsible for quantifying emissions and reporting the information to our corporate center for compilation and internal verification. Reporting to authorities and regulators is also the responsibility of business units and we report our operated emissions in the following regions, countries and provinces in accordance with regulation:

- **Australia:** The National Greenhouse and Energy Reporting Act 2007 (NGER Act) and the National Greenhouse and Energy Reporting (Measurement) Determination 2008.
- **European Union:** EU Emissions Trading System, Monitoring and Reporting Regulation Council Directive 2003/87/EC, as amended by Council Directive 2009/29/EC.
- **Norway:** Greenhouse Gas Emission Trading Act of 17 December 2004.
- **United Kingdom:** Greenhouse Gas Emissions Trading Scheme Regulations 2012.
- **Alberta, Canada:** Emissions Management and Climate Resilience Act: Specified Gas Reporting Regulation, Alberta Regulation 251/2004.
- **British Columbia, Canada:** Greenhouse Gas Industrial Reporting and Control Act: Greenhouse Gas Emission Reporting Regulation, British Columbia Reg. 249/2015.
- **Indonesia:** Minister of Environment Regulation No. 12 of 2012 regarding Guideline for the Emission Load Calculation for Oil and Gas Industry Activities.
- **United States:** 40 CFR 98 Subparts C, MM, PP, UU, W, and Y — Stationary Combustion Sources; Suppliers of CO<sub>2</sub>; Suppliers of Petroleum Products, Injection of CO<sub>2</sub>; Petroleum and Natural Gas Systems; Petroleum Refineries

Our corporate reporting system uses the rules, emission factors and thresholds for regulatory emissions with the following amendments. We use a facility threshold for reporting of 25,000 tonnes per year increasing the corporate emissions reported for Alberta, Canada, which uses a regulatory threshold of 10,000 tonnes per year. In our corporate reporting system, we include scope 2 (emissions from imported electricity) which are not required under regulatory reporting.

The method of data collection at each individual source ranges from continuous emissions monitoring to emissions estimations. Estimating approaches meet applicable regulatory reporting requirements or industry guidance, as appropriate. The quality of estimating methodologies, measurements and calculations are audited on a routine schedule by our corporate HSE auditing team and periodically assessed by third parties.

The verification and assurance process for 2020 data consists of independent third-party limited assurance of scope 1, scope 2 and scope 3 GHG emissions, as well as methane emissions, GHG intensity, methane intensity, flaring volumes and energy use. See our most recent [ERM CVS Assurance Statement](#).

[Read more](#) about our internal quality assurance and third-party verification.

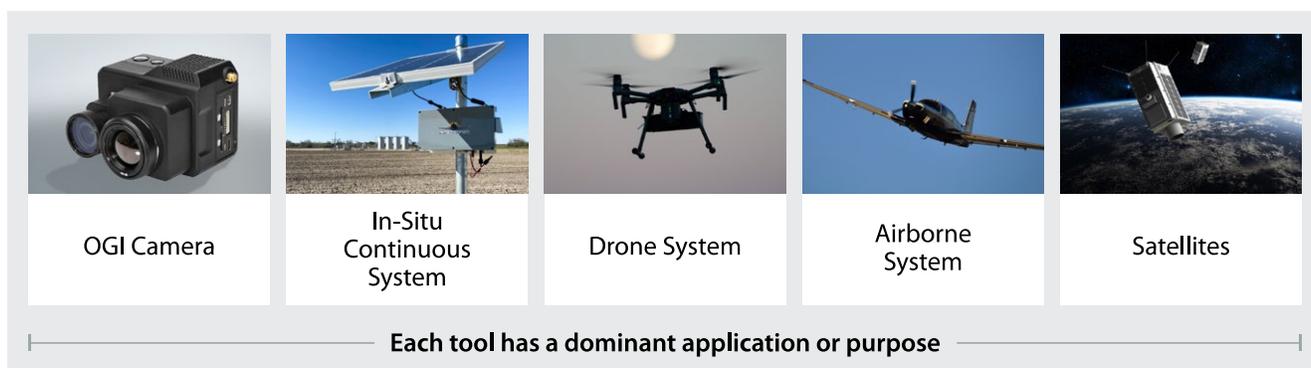
# Building a Technology Toolkit for Methane Emissions Detection

Quickly detecting and repairing methane leaks is crucial as we work to reduce our greenhouse gas (GHG) emissions and continuously test and deploy new methods to mitigate methane emissions.

In the U.S. Lower 48, we rely on a variety of tools and techniques as part of our well-established leak detection and repair (LDAR) process to find and address leaks with solutions that best suit each site. In addition to traditional audio-visual-olfactory inspections and the use of optical gas imaging (OGI) cameras, recent advancements in technologies are providing additional monitoring solutions.

We have been conducting pilots of new technologies at several facilities within the Lower 48 to determine effectiveness and scalability for these next-generation detection and quantification technologies. This has included a range of possible technologies from ground based to aerial with each providing different strengths for different monitoring situations.

“The goal is to identify and repair leaks faster, resulting in faster mitigation of emissions from our operations,” said ConocoPhillips’ Senior Geoscience Fellow, Khalid Soofi.



## Continuous monitoring

In 2020, we led industry by working with Scientific Aviation to develop and test continuous methane monitoring devices at select Lower 48 facilities to further enhance LDAR. Building on previous experience with plume modeling using planes and drones, Scientific Aviation and ConocoPhillips worked to design a ground-based sensor system to detect leaks.

The SOOFIE, which stands for Systematic Observations of Facility Intermittent Emissions, sensor is a relatively simple and cost-effective metal oxide sensor that continuously records several methane measurements a second. Three to four sensors are placed on poles around a facility for better coverage and effectiveness under variable wind conditions.

Any elevated measurement of emissions picked up by the SOOFIE sensors are integrated into an automated machine learning system that considers details such as equipment location, distance, wind speed and direction to identify the most probable emission source. By using information and lessons learned from our operations, Scientific Aviation was able to modify the system to improve its capabilities quickly. If the system suspects a leak, an alert is sent to operations personnel for investigation and repair.

Testing has shown the sensors to be more effective at quickly detecting leaks commonly found using OGI cameras. While the sensors are wind dependent and require internet connectivity to operate, they have been tested against other more established and expensive equipment and show similar accuracy.

“Unlike other detection systems we use, which are deployed on a more scheduled basis, these sensors allow industry to shut down large emission sources quickly,” said Steve Conley, Scientific Aviation’s President and Chief Executive Officer.



*The large red triangles represent how the algorithm geolocates an emission source using methane readings and accurate wind data. The deep red coloring where all the wind triangles intersect is the most probable emission source.*

The SOOFIE system allows us to mitigate methane emissions by identifying leaks in real time and fixing them more quickly than other technologies which only sample on demand. We evaluated the risk associated with assets across our operations and deployed continuous monitoring sensors to locations based on the potential for emissions and proximity to neighbors. We have installed approximately 360 devices covering over 100 locations, with a focus on continuous monitoring of our larger Lower 48 production facilities. We are continuing to evaluate system durability through weather events in the field and to optimize the number of sensors required at each location. We are also aligning methane data with our operations data to better understand the correlation of leaks and equipment functions. Implementation of continuous monitoring has given our operations people on the ground the opportunity to better understand how equipment performs and it is changing the way we manage and mitigate anomalous leaks. Just as a continuous focus on safety has changed behavior and made us a safer company, we believe the continuous detection of emissions will change the way we think and handle methane leaks.

ConocoPhillips, Scientific Aviation and six other energy companies have also joined together to further study the best way to deploy continuous methane monitoring technology to detect emissions and assess quantification uncertainty. Referred to as Project Falcon, the data and results from SOOFIE sensors will be made available to the industry, regulators and the public through publication in a peer reviewed journal.

In addition, we have also tested cameras at several facilities to allow operators to conduct virtual site visits. These cameras, which are also equipped with sound, provide a complete view of the well facility. Operators can monitor for lifted hatches on tanks, smoking or unlit flares, releases from pressure safety valves and spills. The integrated operations center (IOC) team can also view the well site immediately after a remote monitoring alarm is triggered to assess the situation and prioritize dispatching an operator.

## Aerial monitoring

We have tested several different types of aerial monitoring technologies that enable routine monitoring over a larger area and number of facilities. Airborne systems are an established way of providing a better overview of emissions from an entire facility and geographic area.

Drones are an established technology that have proven to be very effective in detecting the source of leaks and quantifying emissions due to their low flying altitude. By flying a vertical plane pattern downwind of facilities, they can pinpoint the source of emissions and quantify the leak. While very accurate, we only use them in specific circumstances as they are difficult to execute across hundreds of facilities due to economics, drone-related flight regulations and the special resources required to use them. [View more](#) about drone technology.

Airplanes with mounted sensors fly over facilities to detect leaks based on the relative amount of methane and wind direction and speed. If leaks are suspected, operations personnel take over to verify and fix the leak. The sensors can detect smaller leaks, but their effectiveness can be diminished in areas where other facilities are in close proximity, like the Permian Basin.

Satellite-based detection technology is another large-scale leak detection option, and its effectiveness has improved rapidly. We are currently testing the technology at a range of assets where it works well at detecting larger leaks such as unlit flares, but also has limitations in areas where facilities are in close proximity. Recently launched satellites are showing promise in providing better imaging, detecting smaller leaks, and providing more frequent monitoring of specific facilities.

Combined, these technologies have helped build a stronger and more robust monitoring toolkit as we work to reduce emissions across our operations.

# Creating a Pipeline of GHG Reduction Projects

ConocoPhillips has been using a marginal abatement cost curve (MACC) to analyze operational greenhouse gas (GHG) emissions reduction projects since 2008 when we developed our first corporate Climate Change Action Plan. The MACC began to take on an even more important planning role with the development of our 5-year strategy in 2014. The process has been a key component in identifying and prioritizing reduction projects to drive our actions since we set our first public GHG emissions reduction target in 2017. In 2019, we enhanced the process by establishing a discretionary corporate funding mechanism so that projects could be more broadly analyzed through a company-wide lens rather than driven by capital constraints of specific business units (BUs). In 2020, as we set our new energy transition and climate risk strategy, the MACC process gained further importance as a driver for emissions reduction projects across the company.

## Driving Action

The purpose of the MACC is to identify projects that decrease GHG intensity and lower long-term climate-related risk for current operating assets, non-operated assets and future designs. The MACC plots a breakeven cost of carbon that considers capital cost, operating costs and potential increased revenue for each project against the cumulative GHG emissions that can be reduced. For example, a project that installs a compressor to move previously flared gas into a sales pipeline will have an upfront cost, increased expenses to operate and maintain, and increased revenue from natural gas sales. Depending on the volume and natural gas price, this could lead to either a positive or negative breakeven cost of carbon associated with executing the project.

The annual process gathers insights into project viability such as planning time, technology readiness and permitting. Detailed economic analysis is performed on candidate projects to determine which might achieve the most emissions reductions at the lowest cost if implemented. Together, this data helps identify projects that might become viable through future research, development and deployment. The result is an inventory of projects that can potentially be developed over the next 10 years, which informs annual budgeting, long-range planning and our technology strategy.

Additionally, the MACC allows us to compare operational emissions reduction projects across the world on a consistent basis, regardless of different local carbon pricing regulations. An internal carbon price is not included in the economic analysis because the MACC provides an overall picture of which projects, and how many projects, would be economic at certain carbon price levels.

Each year the Executive Leadership Team determines which projects to fund to optimize emissions reduction opportunities. Project funding is based on a number of criteria:

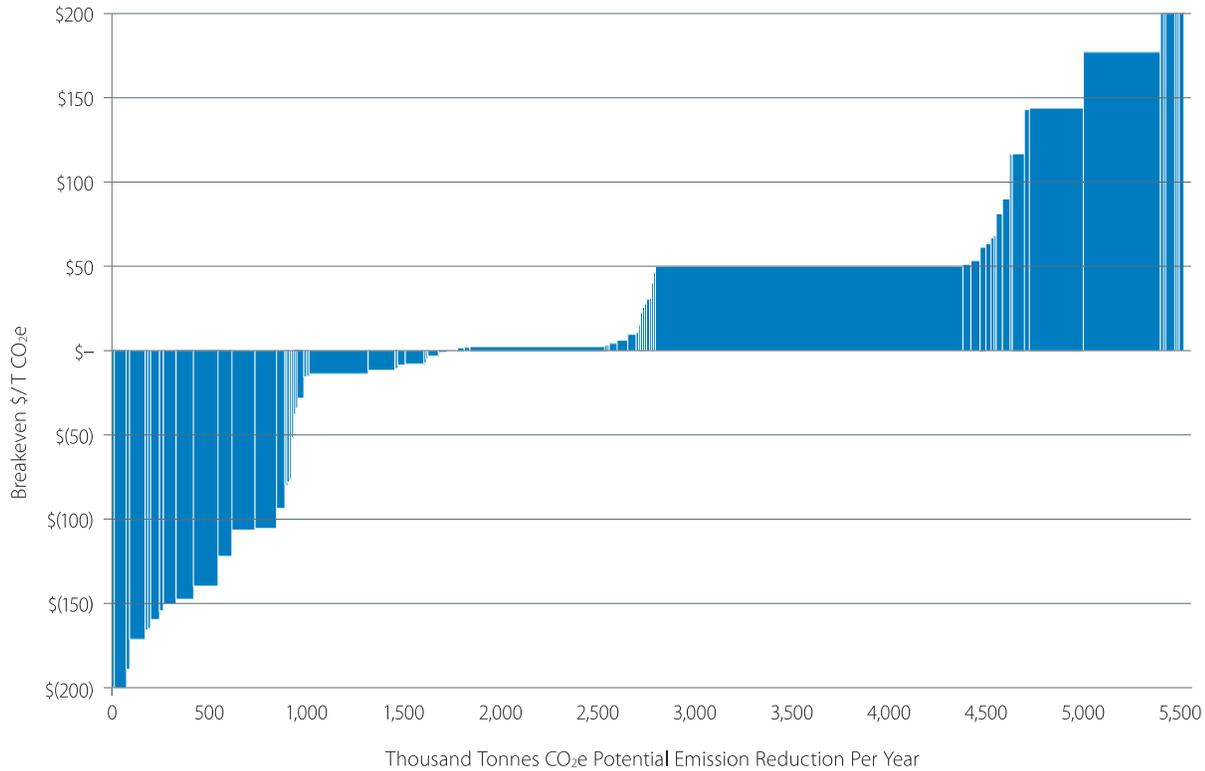
- Lowest \$/TeCO<sub>2</sub> equivalent – project reduces emissions and cost or boosts production with minimal increase in emissions.
- Scalability – project or pilot that can be scaled up to provide meaningful emissions reductions.
- Repeatability – project can be repeated in other business units.
- Strategic implications – project can lead to further future opportunities or reduce future regulatory risks.
- Visibility – project has an impact on reductions important to stakeholders such as flaring, methane emissions and use of renewables.
- Offsets – project generates high quality (real, verifiable, permanent, additional) emissions reductions that are certified to international standards.
- Partner agreement – joint venture partners are willing to participate in funding the project.

Regional teams in North America, Australia, Southeast Asia and Europe use the MACC process to identify further energy efficiency projects through collaboration. By using our global innovation pipeline platform, FUEL, we are increasing innovation and knowledge sharing between business groups for emissions reductions projects. Through this online platform, project ideas are submitted, shared and tracked across the entire company, enabling successes and learnings to be shared with ease and accelerating adoption of new technologies globally. Additionally, teams like our cross-functional GHG technology working group meet monthly to share project details and ideas.

# Building a Project Pipeline

The MACC process provides a pipeline of projects that we continue to monitor for economic and technological viability. By establishing the corporate funding mechanism, the number of projects included in the 2020 MACC increased substantially. It also drove the inclusion of several studies and pilot projects that had previously been considered as optional since the work to complete them did not compete for capital within individual businesses.

The number of projects has steadily increased, from 11 projects in 2015, to 45 in 2019 and more than 100 in 2020.



Projects below the line are economic and have a negative breakeven cost of carbon. Projects above the line are not economic — the taller the bar, the higher the breakeven cost of carbon. The width of the bar indicates the annual emissions saving that would occur should the project be undertaken — the wider the bar, the greater the emissions saving.

Our current MACC projects fall within two areas. Studies and pilot programs are focused on power generation and electrification of oil and gas operations, including the use of renewable energy and oil sands emissions reductions. Projects that are ready for implementation focus on flaring, venting and methane detection along with greenfield projects to utilize electric power generation and equipment.

## Project Examples

In Norway, options to further reduce emissions in the Greater Ekofisk areas are being studied as part of the MACC process, including utilizing power from offshore wind turbines. The Greater Ekofisk area currently depends on gas-powered turbines and offshore wind has the potential to deliver large amounts of clean, renewable energy. The first phase of the study was completed in 2020. The concept establishes two wind turbines, in conjunction with gas power generators, providing electricity with the potential to reduce CO<sub>2</sub> emissions by approximately 75,000 tonnes per year. The second phase will evaluate optimal wind turbine location, tie-in location and power integration to the Ekofisk complex systems. To complement the ongoing wind study, the BU is also studying electrification with power from shore or larger offshore wind power farms. This could be implemented in two ways: a direct current cable from shore, or from future offshore wind power farms connected by an alternating current cable. These concepts have the potential to provide needed power and further reduce GHG emissions significantly at the Greater Ekofisk area.

# External Collaboration

External engagement is important to understanding the issues and challenges relating to climate and the evolution of policy development. Current actions include:

- Developing methane and shale development communications.
- Taking part in global legislation and regulation development.
- Engaging with stakeholders, including investors, on climate-related risks.

## External Perspective

We are members or sponsors of a number of external groups that support our efforts to manage climate-related risks.

The [American Petroleum Institute \(API\)](#) Climate Committee addresses climate change issues affecting the U.S. oil and natural gas industry. The group oversees the development of API's Climate Position, Climate Policy Principles and industry initiatives. The group developed the recent [Climate Action Framework](#), a combination of policies, innovation and industry initiatives to reduce emissions from energy production, transportation and use by society. We are active in many API committees that can also involve or address climate-related issues, and we work to contribute our perspective in alignment with our positions and actions.

IPIECA established its [Climate Change Working Group](#) in 1988. Since then, the group has monitored the climate science and policy discussions, engaging with international governmental bodies and other stakeholders. It is not an advocacy body. It now also focuses on providing best practice guidance on GHG emissions monitoring, reporting and management to improve industry performance.

IPIECA participates in the Intergovernmental Panel on Climate Change (IPCC) and the United Nations Framework Convention on Climate Change (UNFCCC), and provides IPIECA members with reliable and timely information about these and other international process dealing with climate change.

We are sponsors of the [MIT — Joint Program on the Science and Policy of Global Change](#) program which supports efforts to:

- Improve knowledge of interactions among human and natural Earth systems, with a focus on climate and energy, and of the forces that drive global change.
- Prepare quantitative analyses of global change risk and its social and environmental consequences.
- Provide independent assessments of potential responses to global risks, through emissions mitigation and anticipatory adaptation, contributing to improved understanding of these issues among other analysis groups, policymaking communities and the public.
- Augment the pool of people needed for work in this area by the education of graduate and undergraduate students in relevant disciplines of economic and Earth science analysis and methods of policy assessment.

An interdisciplinary team of natural scientists, social scientists and policy analysts supports this mission, with their efforts coordinated through the maintenance and application of a set of analytical frameworks that integrate the various components of global system change and potential policy response.



IHS Markit hosts forums where member companies can discuss global climate change and clean energy research and its implications for policy. They provide a wide range of research products to ensure that members are up to date with current developments around the world.

Additionally, we have worked with the following groups:

- [International Oil and Gas Producers Association \(IOGP\)](#)
- [U.S. Business Council for Sustainable Development \(USBCSD\)](#)
- Socially Responsible Investors (SRIs)
- Nongovernmental Organizations (NGOs)

We are a founding member of [Canada's Oil Sands Innovation Alliance \(COSIA\)](#), a group of oil sands producers focused on accelerating the pace of improvement in environmental performance in Canada's oil sands through collaborative action and innovation. COSIA member companies, led by ConocoPhillips Canada, partnered with NRG Energy, a leading integrated power company in the U.S., to establish a [Carbon XPRIZE](#) which challenges the world to reimagine what can be done with carbon dioxide (CO<sub>2</sub>) emissions by incentivizing and accelerating the development of technologies that convert CO<sub>2</sub> from fossil fuel combustion into valuable products.

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# Public Policy Engagement

ConocoPhillips supports well-designed climate policy that is practical, equitable and cost-effective in reducing greenhouse gas (GHG) emissions. We support the aim of the Paris Agreement to limit the rise of global average temperatures well below 2 degrees Celsius which is reflected in our Paris-aligned ambition to be a net-zero operational emissions company by 2050. [Read more](#) about history of engagement on climate issues.

## Proactive Engagement

Climate-related policy action can support an orderly transition to a low-carbon economy, facilitate the development of innovative technology, and reduce the overall risks associated with climate. We have been actively engaged in climate-related discussions with policy makers and stakeholders since our first global climate change position was published in 2003. Our approach to public policy engagement on climate change has evolved, however, we remain consistent in our view that market-based solutions at national and global levels, rather than a patchwork of less effective regulatory approaches, will be most effective in reducing GHG emissions.



We are a founding member of the [Climate Leadership Council](#) (CLC), an international policy institute founded in collaboration with business and environmental interests to promote a carbon dividends framework as the most cost-effective, equitable and politically viable climate solution in the U.S. Participation in the CLC provides another opportunity for ongoing dialogue about carbon pricing and framing the issues in alignment with our principles. We also belong to and fund Americans For Carbon Dividends (AFCD), the education and advocacy branch of the CLC. In the U.S., we support and are advocating for a carbon price contingent upon four pillars - a gradually increasing carbon price, carbon dividends for all Americans, border carbon adjustments and regulatory simplification.

Many trade organizations we participate in have climate change positions aligned to ours. Where they do not, we have continued to offer our viewpoint and attempt to work with them to better align their position with ours. For example, we've worked to influence the American Petroleum Institute (API), the Business Roundtable (BRT), the U.S. Chamber of Commerce and other organizations to support the direct federal regulation of methane. In addition to actively participating in trade organization position updates, we have also voted against or abstained from supporting specific actions requested by a trade organization if their positions were not aligned with ours. We have also decided not to renew some memberships because of misalignment on a number of policy topics, one of which is climate change.

[Read more](#) about our alignment with our associations regarding climate change.

[Read more](#) about public policy governance and major trade association memberships.

## Effective Policy

Climate change is a global issue which requires global solutions. Economy-wide governmental GHG management frameworks should be linked to binding international agreements comprising the major GHG contributors. Effective climate change policy requires a number of elements:

**Integrates energy and climate policy** - Climate change policy and energy policy should be coordinated to ensure a diverse and secure supply of affordable energy and avoid overlapping or duplicating existing energy and climate change programs. This must create a level competitive playing field among energy sources and between countries and encourage efficient use of energy.

**Promotes innovation** - Climate change policy should promote government and private sector investment in energy research and development and match the pace at which new technology can be developed and deployed.

**Demonstrates real GHG reductions** - It should result in the stabilization of global GHG atmospheric concentrations at safe levels and foster resiliency to the impacts of a changing climate.

**Provides economic certainty**- It should provide long-term certainty for investment decisions and avoid undue harm to the economy.

[Read more](#) about our climate change public policy principles.

## Carbon Pricing

A well-designed pricing regime on carbon emissions is the most effective tool to reduce greenhouse gas emissions across the global economy. Carbon pricing policy should support the implementation of currently uneconomic emission reduction projects and provide support for innovation to encourage the development of currently uneconomic projects. A revenue-neutral carbon tax that is transparent, predictable and cost effective to administer would be an effective policy option. It should result in some relief via the elimination of other laws and regulations aimed at reducing or controlling carbon and other GHG emissions. It is also the best way to regulate methane.

[Read more](#) about our carbon pricing principles.

## Methane Policy

In the absence of a carbon price in the U.S., the economy-wide direct regulation of methane would be effective. We support well-formulated federal regulation of methane emissions from oil and gas exploration and production if that regulation:

- Encourages early adopters and voluntary efforts.
- Incorporates cost-effective innovations in technology.
- Supports appropriate state-level regulations.



  
**ConocoPhillips**