APA Corporation

TCFD *Analysis*

Our Reporting Approach

This document is our Task Force on Climate-related Financial Disclosures (TCFD) Analysis, which identifies opportunities and risks for our business associated with climate change. This analysis uses the 2023 International Energy Agency (IEA) World Energy Outlook scenarios as the basis for evaluation. We update our TCFD analysis every other year, following the release of updated IEA scenarios in the Fall.

This **TCFD Analysis** complements our two main sustainability publications, **Our Approach to Sustainability** and our annual **Sustainability Progress Report**, which details our sustainability approach and highlights our performance, respectively. References within this analysis have been updated to reflect the page numbers in our various sustainability publications.

TCFD **Analysis**

Climate change is an important issue for our company and our stakeholders. We are committed to helping address the energy challenges that climate change presents, while also continuing to produce reliable, secure, affordable energy to help meet the world's needs and drive global prosperity. Our efforts are focused on reducing Scope 1 emissions from our oil and gas operations.

The task of identifying and managing the opportunities and risks presented by climate change, balanced against the need to provide secure energy resources to meet increasing worldwide demand, is an important part of our business planning and enterprise risk management. The TCFD disclosure framework was designed to facilitate the presentation by companies of their efforts around climate change, focusing on four key areas: governance, strategy, risk management, and metrics and targets.

Our business planning and risk management process considers how concern over climate change influences our operations from regulatory, lending and investment perspectives. Recent examples of U.S. and international regulatory changes, such as those implemented as part of the Inflation Reduction Act's Waste Emissions Charge (WEC) and the U.K. Energy Profits Levy, have prompted us to evaluate their impact on our business and future investment decisions. For this reason, the highest levels of our leadership team, including senior management and the board of directors, oversee our planning process on climate-related issues.

For investors and lenders in the oil and gas industry, concerns include the impact of new regulations; changes in energy demand; public policy and political attitudes toward demand for hydrocarbons; and competition for supply from lower-carbon energy sources.

We have updated our scenario analysis, using the 2023 International Energy Agency (IEA) World Energy Outlook (WEO) scenarios against which to disclose our performance. (See our **Reporting Standards and Frameworks** document for an index of TCFD-related disclosures).

Governance

Our board of directors and senior management are directly engaged in assessing our business strategy, including ongoing review and oversight of how capital is deployed. This process includes evaluating climate change-related risks and opportunities for the company.

The board's Audit Committee oversees the risk management process (described in more detail below and on p. 49 of **Our Approach to Sustainability**), which includes management of climate change-related business, legal and regulatory risks. The Corporate Responsibility, Governance, and Nominating (CRG&N) Committee oversees management and performance on sustainability issues, including the content within Our Approach to Sustainability document and the annual Sustainability Progress Report. The Management Development and Compensation (MD&C) Committee recommended to the full board, which subsequently adopted it, a resolution that linked greenhouse gas (GHG) emissions metrics to compensation for all employees, including executives. (See p. 55 of **Our Approach to Sustainability**.)

In addition to the work of these committees, the full board receives periodic updates on climate change-related topics, including our corporate approach to risk management, climate-related risks and opportunities, GHG emissions management, third-party environmental, social and governance (ESG) ratings, and our overall sustainability performance. The board also invites outside experts on sustainability issues to provide ongoing education on relevant subjects, including differing perspectives on climate-related risks and opportunities.

Our Sustainability Management Committee, a cross-functional team of corporate officers, is tasked with overseeing our climate and emissions strategy, goals and performance. Sponsored and led by APA's president, and generally meeting at least quarterly, this team is tasked with

integrating our sustainability priorities across the business. To help drive focus and accountability throughout the company, we are continuing to expand our use of sustainability performance metrics and tying them to incentive compensation for all employees — from the executive level to the field. In 2023, 20% of short-term compensation was linked to our combined Environmental, Health and Safety (EHS) and sustainability goals. The sustainability component featured two distinct goals. The first was to eliminate methane emissions associated with at least 2,000 methane-emitting pneumatic devices, either by conversion to instrument air or by retrofitting valves to recirculate rather than emit the gas. The second goal was to utilize at least 50% recycled produced water for completions in our U.S. onshore operations. Also in 2023, for the second consecutive year, we added a sustainability metric to the performance share program in our long-term incentive compensation (LTIC) plan. The new metric, set by the MD&C Committee, was to reduce our Scope 1 GHG emissions intensity by 10%–15% by 2030, with a near-term, compensation-linked milestone to reduce at least 5% by year-end 2025. This metric is in addition to the 2022 LTIC goal to identify and implement projects capable of eliminating at least 1 million tonnes of annualized carbon dioxide equivalent (CO_2e) emissions by year-end 2024. All of these 2023 goals were achieved.

We consider sustainability matters — including climate-related issues — to be critical areas in which to identify, track and mitigate risk. (Read more on our prioritizing and managing sustainability initiatives on p. 09 of **Our Approach to Sustainability**.)

Strategy

We are committed to producing energy safely and responsibly. Highlights of what this means to us include the following:

- We work to reduce our environmental footprint, operate safely and increase the benefits we provide to the communities where we live and work.
- A key part of our corporate vision is to be the premier exploration and production company. That aspiration extends beyond financial results; it begins and ends with working to achieve the best safety and environmental record, year after year.
- We are focused on reducing emissions across our operations. We have programs for preventing, identifying and correcting methane leaks.
- In 2023, we made significant progress in deploying emissions reduction projects across our assets, in furtherance of our LTIC goal to eliminate 1 million tonnes of annualized CO_2e emissions by year-end 2024.
- We are using cleaner-burning natural gas and electricity as alternatives to diesel to power our field operations where practicable, which reduces diesel fuel consumption and localized air emissions.

SCENARIO-PLANNING FRAMEWORK

In 2023, we updated our scenario-planning framework to align with TCFD recommendations by adding details related to the U.S. onshore base-case scenario pricing analysis. Scenario planning has long been embedded in our business and risk management processes, to assess how commodity demand drives the prices of our products. Two recent examples include the oil price crash that resulted from plummeting demand due to COVID-19, and the impact of the Russian invasion of Ukraine on natural gas prices across Europe. Undertaking scenario analyses is particularly important for us, given that our international asset portfolio exposes us to multiple commodity prices and a broader range of regulatory pressures than those experienced by pure-play operators or our U.S. onshore-focused peers. Our scenario-planning analysis includes the input of experts from multiple internal functional areas, for a more rigorous, multidisciplinary approach.

We consider a range of pricing scenarios when forming our long-term investment and development plans. These include scenarios involving a carbon-constrained future, which reflect the potential climate-related risks and opportunities influencing fossil fuel supply and demand. We also evaluate the relative balance within our portfolio of oil and natural gas production, to account for supply and demand issues. However, our expanded, climate-specific scenario-planning framework goes even further, by including third-party market-based forecasts of future demand and pricing in energy markets, based on assumptions concerning potential changes in government regulations and policy.

The TCFD guidance recommends that companies consider risks relating to the potential impact of climate change over near-, medium- and long-term time frames. However, the dynamic nature of our business has been clearly demonstrated by the commodity price volatility observed over the past few years, driven by the pandemic and by geopolitical impacts on global markets. Given such volatility, we believe our scenario analyses should be conducted over medium-term time frames. In our view, it is challenging to accurately assess scenario outcomes beyond a five-year time horizon, given the number and unpredictability of variables. However, for this exercise, in our climate-related risk assessments we have projected our base-case pricing analysis out to 2040, comparing it to external predictions of demand, carbon pricing and comparison-pricing scenarios.

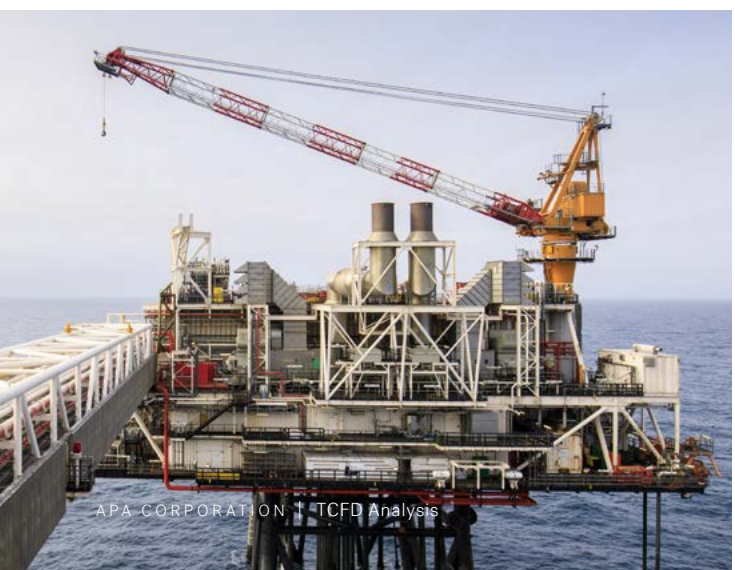
"Our scenario-planning analysis *positively supports* that the break-even prices referenced in each of APA's core development areas of operation indicate the *long-term potential* for generating positive returns."

APA base-case scenario

APA's own base-case scenario takes a conservative approach to future oil pricing, with an 18-year average blended oil price that is most closely aligned with the WEO's Announced Pledges Scenario (APS) (described in more detail below). Our 18-year average oil pricing, discounted for fees projected to be associated with the U.K. Emissions Trading Scheme in the North Sea and the WEC in the U.S., is $52 per blended West Texas Intermediate (WTI)/Brent barrel (Bbl).

Our base-case scenario is a quantification of our business perspective, utilizing an internal oil pricing deck that builds in an anticipated carbon price under the U.K. emissions trading scheme, such that our WTI/Brent blended pricing accounts for the assumption of a carbon tax on our U.K. production. To account for recent regulation in the U.S., a WEC fee is applied to forecasted future production in the U.S. As defined by the IEA's WEO, Egypt is classified as an emerging market country with a developing economy; therefore, no carbon pricing is assumed until 2030, escalating to $17/tonne for Egypt production barrels in 2040. In our base-case scenario, our crude oil pricing assumption after forecasted carbon fees is a WTI/Brent blend at $52 per Bbl, remaining flat until 2040.

Based on this assessment, we believe our company is well positioned when compared to any of the external pricing scenarios below. Our diverse asset base, including development in Egypt and active exploration plays in emerging market countries, provides us with optionality to invest in areas not overly burdened by carbon pricing.



2023 WEO scenarios

Our updated analysis includes the following IEA scenarios from the 2023 WEO report, against which we compare our internal APA base-case scenario: the Stated Policies Scenario (STEPS) and the Announced Pledges Scenario (APS). In addition, even though we do not currently have a commitment on net zero, we also present the Net Zero Emissions by 2050 (NZE) scenario in this year's analysis. Under any of the pricing scenarios considered, the third-party break-even prices referenced in each of APA's core areas of operation indicate the long-term potential for generating positive returns.

The STEPS scenario reflects all current governmental carbon policies, assessed sector to sector. Under this scenario, carbon pricing is applied to the company's U.K. oil production using existing country-based carbon tax structures, and is applied to our U.S. onshore production using the WEC fees. The 2023 STEPS shows a cumulative growth in world oil demand to 101.5 million Bbls of oil per day by 2030, followed by a decline to 97.4 million Bbls of oil per day by 2050. In the STEPS scenario, oil prices are shown to fall from 2022's $98 per Bbl to $85 per Bbl in 2030, and as demand slowly declines over the next 20 years, the oil price falls to $83 per Bbl in 2050.

The APS scenario assumes all countries' announced climate commitments are met in full and on time, including nationally determined contributions. This scenario includes all announced net zero pledges, and reflects any shortfalls associated with the alignment with the 2015 Paris Agreement. In our analysis, carbon pricing is applied to the company's U.K. production in all years, while its U.S. and Egypt production is burdened only from 2030 onward.

In contrast to STEPS, the APS projects much lower demand for oil in 2050 compared to 2020, with demand declining to 92.5 million Bbls per day in 2030, then declining more rapidly to 54.8 million Bbls per day in 2050. The APS scenario therefore predicts a larger price decline than the STEPS scenario, with oil at $74 per Bbl in 2030, and slowly sliding to $60 per Bbl in 2050. However the APS scenario predicts smaller changes in demand and pricing than the NZE scenario.

The NZE scenario represents the lowest demand scenario, with demand rapidly declining to 77.5 million Bbls per day in 2030, then declining more gradually to 24.3 million Bbls per day in 2050. The NZE scenario predicts a significant price decline due to eroding demand, with oil at $42 per Bbl in 2030, declining further to $25 per Bbl in 2050. It is important to note that under these price assumptions, taking into account the projected carbon pricing for advanced economy countries, the NZE yields a negative net price per Bbl after 2030. In short, the carbon prices of advanced economy countries with the assumed IEA NZE scenario pricing, combined with the predicted lower prices per Bbl, would make it impossible to profitably produce oil in countries with advanced economies, effectively pushing future development of oil to emerging market countries with no, or only minimal, carbon pricing impacts.

The STEPS, APS and NZE scenarios' projected oil and natural gas demand and carbon emissions through 2050 are shown in the charts on **p. 09** of this report.

Resilience in a global market

The focus of our scenario-planning exercises is our continued ability to meet demand for natural gas and oil in a global market. We actively monitor the demand scenario predictions and how they can affect global supply. We evaluate demand on a medium-term basis, to avoid overreacting to short-term cycles or to commodity price fluctuations that are influenced by unpredictable disruptions, such as occurred during the COVID-19 pandemic and with the geopolitical impact of Russia's invasion of Ukraine.

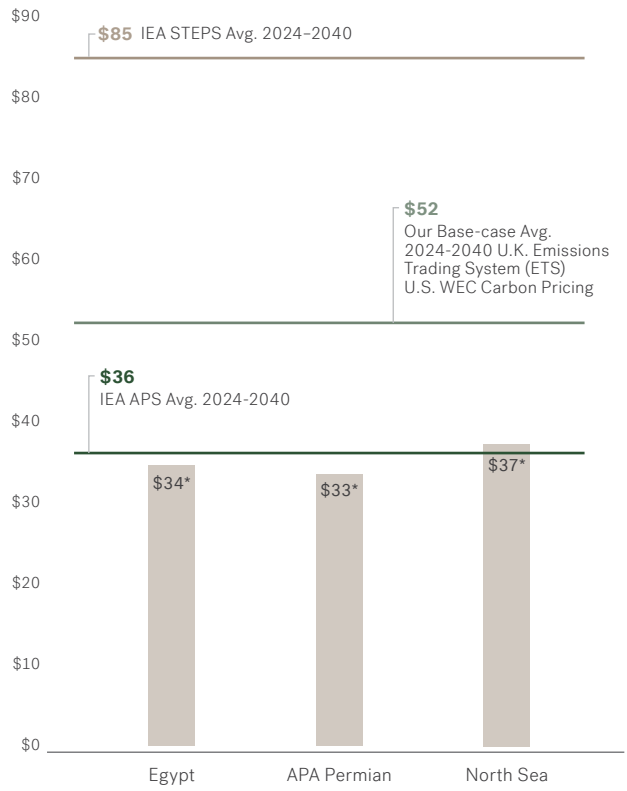
Our international portfolio of assets allows us to proactively manage our production mix to mitigate our exposure to WTI/Brent crude pricing disparity and to costs associated with carbon pricing where applicable. Our portfolio consists of a diversified global resource base, not a pure-play operating area asset. We currently have active development onshore in the U.S. and Egypt, with limited activity offshore in the U.K. North Sea. This multibasin asset portfolio enables us to shift capital investment to, or from, certain assets in response to changes in geographic commodity prices, local regulations, energy demand, supply-side issues or other market factors. Coupled with our experience as a cost-conscious producer and resource-efficient operator, we believe this approach reduces our carbon risk and helps the company optimize its capital investment in response to the market's price signals and energy needs.

The resilience of our approach can be seen in the results of our asset scenario-planning assessment, which compares projected break-even prices for our operating basins from third-party assessors (Wood Mackenzie and Enverus) to the average forecasted WTI/Brent blend equivalent pricing for 2022–2040, from each of the four planning scenarios discussed above. In all but the NZE scenario, the third-party break-even prices in Egypt and Permian yield profits. In the North Sea, the APS break-even price post-2030 is $1 per Bbl below third-party estimates of APA's break-even prices. However, APA's North Sea asset is in the later stages of its development life and, given U.K. initiatives like the North Sea Transition Authority's move to net zero, it is likely APA will be transitioning these assets into decommissioning before 2040. Again, our scenario-planning analysis positively supports that the break-even prices referenced in each of APA's core development areas of operation indicate the long-term potential for generating positive returns.

The following tables provide a summary of key climate-related risks and opportunities, and their timeframes, that we have identified and are working to address now and into the future.

Asset Scenario-Planning Assessment

WTI/Brent Blend Equivalent
Break-even Price $/Bbl (2020)



* Break-even pricing is from 2022 Wood Mackenzie Asset Report: Egypt Western Desert Apache and other fields. The U.K. North Sea sector includes the break-even 2024 Wood Mackenzie Insight: Q1 2024 Pre-FID Upstream Project Tracker: (U.K. Northern North Sea).

The APA Permian break-even pricing is the average of APA Tier 1 and Tier 2 break-even from the 2022 Enverus report: Scoop Stack Play Fundamentals Rebounding From the Depths.

Climate-related transition risks

Key: Near Term = 1–2 years | Medium Term = 3–5 years | Long Term = 5+ years

Type	Risks	Timing	Potential Impacts and Responses
POLICY AND LEGAL	**Changes in Regulation**		– Changes in asset base – Decreased asset diversification – Increased use of technology, including electrification and enhanced oil recovery (EOR)
	– Introduction of carbon taxes or cap and trade in U.S.	Long Term	
	– Federal oil and gas permit ban	Medium Term	
	– More stringent emissions regulations	Near Term	
	– Alignment with Paris Agreement	Long Term	
	Changes in National Policies		– Shift in operational areas – Enhanced water recovery and reuse – Increased community engagement and reporting – Stranded assets
	– Biden Administration's Climate Pledge	Near Term	
	– U.K. Carbon Budget	Near Term	
	– National hydraulic fracturing bans	Long Term	
	– National water policies on freshwater usage limits	Long Term	
	Changes in Tax Programs		– Capital planning changes – Support for growth in emerging markets and economies – Increased costs of compliance
	– Elimination of exploration tax incentives for oil and gas	Long Term	
	– Increased alternative energy tax incentives	Long Term	
	– U.K. Energy Profit Levy (EPL)	Near Term	
TECHNOLOGY AND MARKET	**Equipment and Technology**		– More efficient energy use, leading to a decrease in market demand – Failure to keep up with technological advances
	– Costs of installing lower-emission production and transportation technology	Near Term	
	– Alternative fuel technologies that ease the transition from fossil fuels to alternatives	Long Term	
	– Disruptive technologies in energy generation and/or transportation	Long Term	
REPUTATION	**Stigma of Fossil Fuels**		– Increased availability of green/ESG-linked lending – Increased dependence on midstream companies – Decreased industry appeal to emerging workforce talent
	– Stakeholder withdrawal of investment due to ESG-related concerns	Near Term	
	– Climate change litigation and publicity	Long Term	
	– Impacts on talent pipeline and supply chain due to market and energy transition	Medium Term	

Climate-related physical risks

Type	Risks	Timing	Potential Impacts
ACUTE	**Onshore**		– Enhanced requirements for asset hardening – Increased focus on emergency contingency planning and preparation – Increased cooperation and integration with community partners – Damage to assets and communities – Changes in population distribution and settlement patterns – Shrinking of local economies – Decreased access to local talent
	– Severe temperature changes affecting our operations (e.g., 2021 Winter Storm Uri)	Near Term	
	– Seasonal droughts affecting our operations	Medium Term	
	– Tornadoes or other severe storms affecting our operations	Near Term	
	Offshore		
	– Hurricanes and tropical storms affecting our operations	Near Term	
CHRONIC	**Onshore**		– Operational disruptions due to supply chain or impairment of crew-change operations during weather events – Damage to equipment or impaired access to offshore platforms – Increased costs related to additional operational expenses and insurance premiums for offshore or nearshore operations
	– Changes in rainfall or weather patterns affecting our operations	Long Term	
	– Extended droughts and temperature changes affecting our operations	Medium Term	
	– Changes in water availability patterns affecting our operations (surface water and groundwater)	Long Term	
	– Biodiversity and species listings affecting our operations	Long Term	
	Offshore		
	– Rising sea levels affecting our operations	Long Term	
	– Sea temperature change and current-related changes affecting our operations	Long Term	

Climate-related opportunities

Key: Near Term = 1–2 years | Medium Term = 3–5 years | Long Term = 5+ years

Type	Opportunities	Timing	Potential Impacts and Responses
RESOURCE EFFICIENCY	– Transportation fuel-related improvements (in miles-per-gallon ratings)	Long Term	– Additional product delivered to market – Project economies that increase the potential to expand operations – Decreased emissions within company vehicle fleet and operations equipment
	– Improved resource capture due to reduced GHG emissions	Near Term	
	– Increased recovery of hydrocarbons from the reservoir	Medium Term	
ENERGY SOURCE	– Increased demand for natural gas for power generation	Medium Term	– Collaboration with midstream and downstream companies – Increased expectations for enhanced reliability – Decreased emissions from operations
	– Development of economic demand for hydrogen and hydrogen-based technologies	Medium Term	
	– Utilization of field gas-generated power for drilling and completion equipment	Near Term	
	– Portable power not connected to the grid	Medium Term	
PRODUCTS AND SERVICES	– Development of grey and blue hydrogen markets	Medium Term	– Focus on green label products and enhanced ESG certification – Conversion and retrofitting of assets to capture carbon dioxide (CO_2) and other emissions – Extended life of assets
	– Premium pricing for delivery of certified, responsibly extracted resources	Near Term	
	– Development of commercial carbon capture utilization and storage (CCUS) market in aging oil fields around the world	Medium Term	
MARKETS	– Development of new markets for refined products to offset reduction of transportation fuel demand	Long Term	– Emergence of exportation assets – Increased focus on reliability and output – Identification of ESG key performance indicators and projects tied to green lending – Partnerships to reduce societal GHG emissions
	– Expanding crude oil and natural gas markets in developing economies throughout the world	Long Term	
	– Development of hydrogen and CCUS markets	Medium Term	
	– Access to green bonds and capital to expand ESG efforts related to hydrogen, CCUS and water recycling	Near Term	
	– Identification of changing regulatory environments and the effect on market development	Medium Term	
RESILIENCE	– Transition of current EOR and water disposal practices to CCUS for industrial segments	Near Term	– Increased demand across operations footprint – Support to local policy makers for advancing technologies – Changes in recruiting, retention and workforce development – Increased spend and development in local communities
	– Hydrogen from natural gas	Medium Term	
	– Expansion of local supply chains in developing countries to ensure the necessary tools are available to maintain operations	Medium Term	
	– Development of localized staff to ensure employee attraction and workforce retention	Medium Term	

Risk Management

Scenario analyses are integrated into our risk management processes for asset planning and capital investment and are reviewed by senior managers and executives. The final analyses are presented to the board's CRG&N Committee for review prior to publication.

We also have a Risk Management function within our EHS group focused on health, safety, environmental and security risks — including climate change-related risks. The EHS risk management team works with personnel in other departments to identify, understand and mitigate these risks across our operations. Employees at all levels of the company representing multiple disciplines participate in analyzing the potential impacts of climate change-related risks on our business, supporting a comprehensive approach to risk management that is ultimately reviewed by the board's CRG&N Committee.

MANAGING CLIMATE CHANGE-RELATED OPPORTUNITIES AND RISKS

We strive for continuous improvement in our operational processes to further lower costs, reduce our environmental footprint and optimize capitalization of natural gas in a lower-carbon energy future, including by:

- Our commitment to reducing GHG emissions (see p. 04 of our **Sustainability Progress Report**).
- Employing leak detection and repair programs, using the latest equipment and technologies, to reduce methane losses (see p. 14 of **Our Approach to Sustainability**).
- Addressing GHG emissions from our operations through the elimination of routine flaring and by powering our equipment with utility grid electricity where practicable (see p. 14 of **Our Approach to Sustainability** and p. 05 of our **Sustainability Progress Report**).
- Working to address the potential physical impacts to our operations posed by climate change. For example, to mitigate the risk of reduced fresh water supplies critical to our operations (as well as to conserve those resources), we are continuing efforts to optimize water recycling, especially in areas already deemed water-scarce (see pp. 16-17 of **Our Approach to Sustainability**).
- Collaborating with industry, governmental and nongovernmental partners to encourage others in our industry to reduce emissions and to develop more effective technologies to do so, including:
  - As a partner in the ***Oil & Gas Methane Partnership 2.0***, part of the U.N. Environment Programme, a group focused on methane emissions reduction and improving the accuracy and transparency of methane emissions reporting.
  - As a founding member of the ***ONE Future Coalition***, a group of more than 40 companies across the natural gas value chain that is focused on reducing methane emissions.
  - As a member of the ***American Petroleum Institute's The Environmental Partnership***, a group of U.S. oil and gas companies working to address environmental challenges and further improve environmental performance in our industry. (See p. 14 of **Our Approach to Sustainability** for more information on our partnerships.)
  - As a member of the ***American Exploration and Production Council*** (AXPC), working with other operators to develop collaborative solutions to reduce GHG emissions while "meeting the world's growing need for abundant, low-cost, reliable energy."

Metrics and Targets

We use a wide range of metrics and targets to assess and drive our performance in managing climate change-related risks, in particular by reducing operational methane and other GHG emissions. We measure our progress in reducing these emissions using intensity metrics (emissions per unit of production), rather than total emissions, because intensity metrics provide a more comparable year-over-year measure of our performance that is not skewed by changes in activity levels, acquisitions and divestitures, and other factors. However, we do focus on absolute emissions reductions when we evaluate the implementation of a particular project and how that project influences future emissions-related operational decisions.

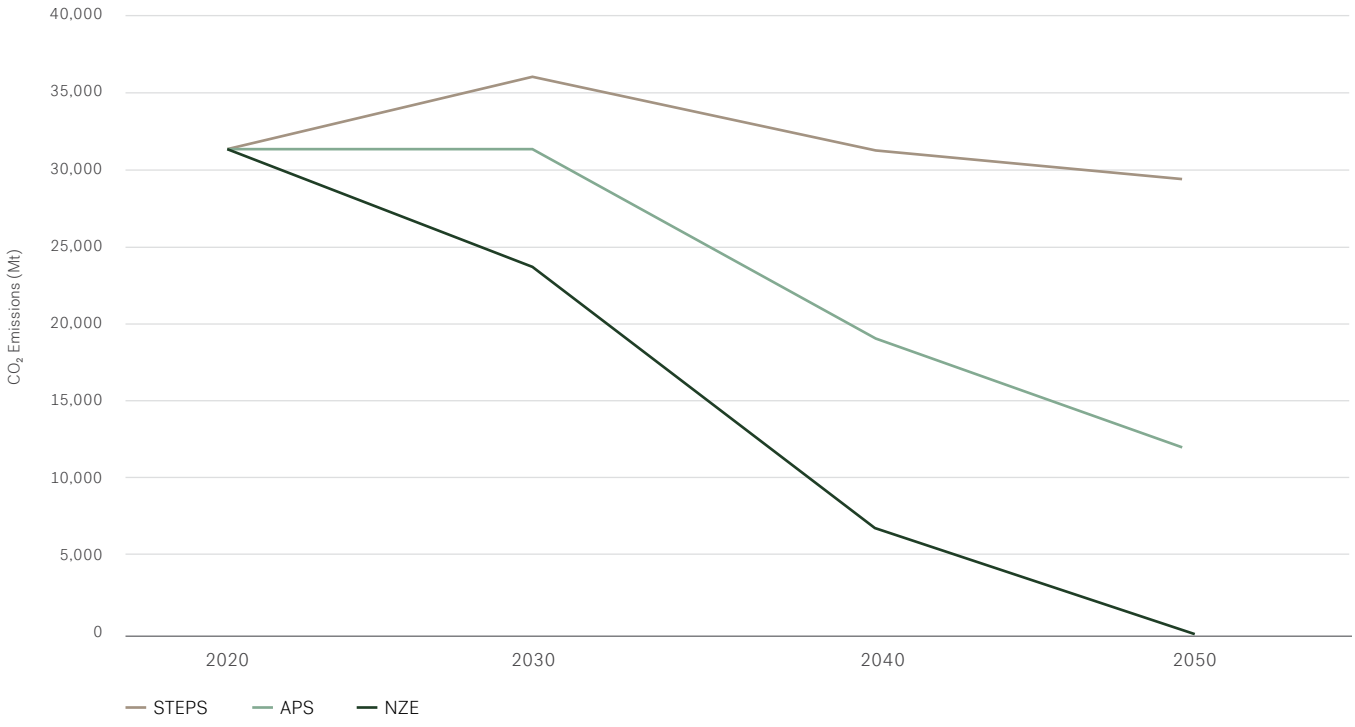
We measure and report our GHG emissions* as total CO_2e and by primary gas type, including carbon dioxide, methane and nitrous oxide. (See p. 05 of our **Sustainability Progress Report**).

To drive performance improvements in 2022, we adopted and achieved a target to reduce upstream flaring by 40% in our Egyptian operations. We also set a goal, tied to long-term incentive compensation for all employees, of identifying and implementing projects capable of eliminating 1 million tonnes of annualized CO_2e emissions by year-end 2024. In 2023, we set a compensation-linked goal to eliminate methane emissions from more than 2,000 pneumatic devices — which are the highest source of methane emissions in our U.S. onshore operations — by converting them to instrument air or by valve retrofits. We also introduced a longer-term goal to reduce our companywide Scope 1 GHG emissions intensity 10%–15% by 2030, with a near-term, compensation-linked milestone to achieve a minimum 5% reduction by year-end 2025. We have achieved our 2022 flaring goal and 2023 pneumatic controller goal, and we are on track to meet the remaining goals slated for achievement in 2024, 2025 and by 2030.

"We are *on track* to achieve a compensation-linked goal to implement projects capable of *eliminating* 1 million tonnes of annualized CO_2e emissions by year-end 2024."

* GHG emissions data used for calculations in this report are from year-end 2023 (Scope 1 = 5,962 Thousand tCO_2e and Scope2 = 223 Thousand tCO_2e).

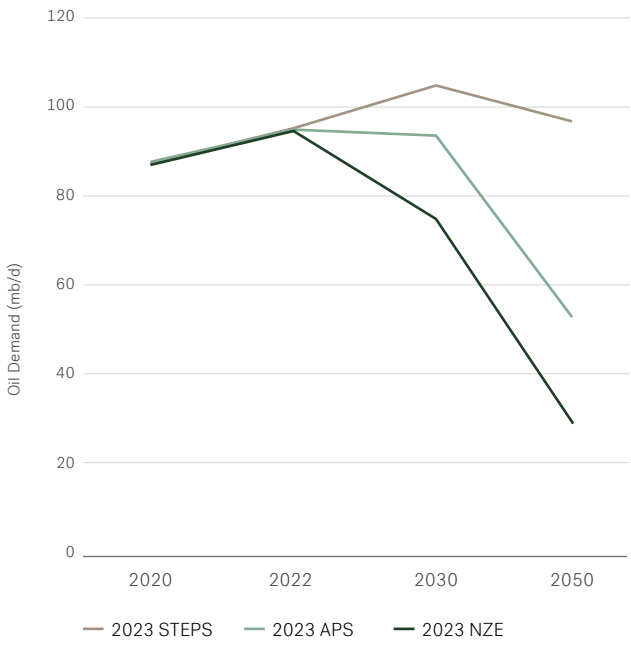
Total World CO_2 Emissions (Mt)



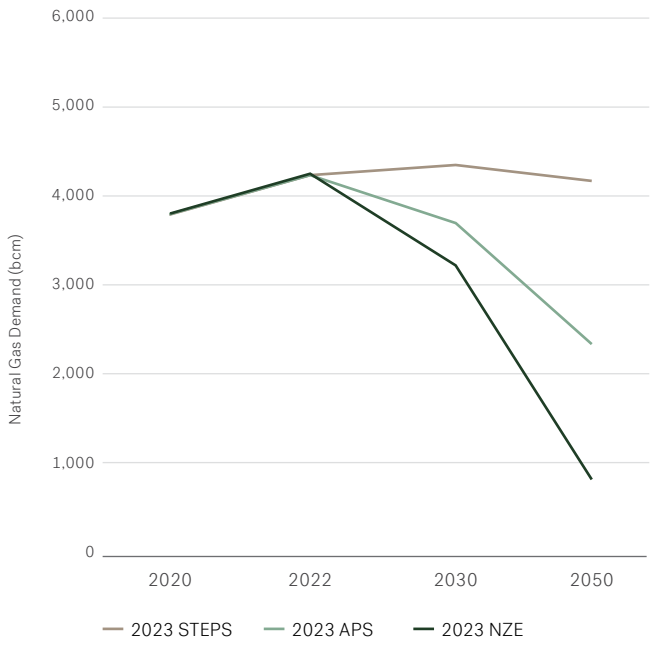
Key

Mt:	million tonnes of CO_2 emissions
mb/d:	million barrels per day
bcm:	billion cubic meters

IEA World Oil Demand



IEA World Natural Gas Demand



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