Welcome to your CDP Climate Change Questionnaire 2023

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

Canadian Natural is one of the largest independent crude oil and natural gas producers in the world. We have an effective and efficient, diversified combination of assets in North America, the UK portion of the North Sea and Offshore Africa, which enables us to generate significant value. Our balanced portfolio of light, synthetic, and heavy crude oil and natural gas represents one of the strongest and most diverse asset portfolios of any energy producer in the world. Our financial discipline, commitment to a strong balance sheet, and capacity to internally generate cash flows provide us the means to responsibly and sustainably grow our Company in the long term. At Canadian Natural, we are committed to conducting our business in a way that embraces the key piece of our mission statement "doing it right". Environmental stewardship is a fundamental value of our company and this is reflected in our approach to energy development. Our goal is to develop resources in a sustainable and responsible way. We are committed to managing and minimizing the environmental impacts of our operations during all phases of our projects. To reach high standards of environmental performance and achieve regulatory compliance, we adhere to the principles of continuous improvement, efficient operations and technological innovation. Our Environment team works together with management and all our operating divisions to ensure environmental stewardship is factored into our decision-making process. Through our Environmental Excellence program, we work together to proactively reduce greenhouse gas (GHG) emissions, minimize habitat disturbance and advance reclamation, minimize the impact on the landscape to conserve high-value biodiversity and wildlife, and reduce fresh water use. We foster a culture of environmental awareness where everyone has a vital role to play in identifying and mitigating environmental impacts from our operations. We reinforce environmental excellence through employee training, due diligence and the communication of environmental priorities.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data and indicate whether you will be providing emissions data for past reporting years.

Reporting year

Start date

January 1, 2022

End date

December 31, 2022

Indicate if you are providing emissions data for past reporting years

Yes

Select the number of past reporting years you will be providing Scope 1 emissions data for

1 year

Select the number of past reporting years you will be providing Scope 2 emissions data for

1 year

Select the number of past reporting years you will be providing Scope 3 emissions data for

1 year

C0.3

(C0.3) Select the countries/areas in which you operate.

Canada
Côte d'Ivoire
United Kingdom of Great Britain and Northern Ireland

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

CAD

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Other, please specify

The Company's reporting is based on the operational control approach using gross operated production values (before royalties) unless otherwise noted.

C-OG0.7

(C-OG0.7) Which part of the oil and gas value chain and other areas does your organization operate in?

Row 1

Oil and gas value chain

Upstream

Other divisions

Carbon capture and storage/utilization

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, a CUSIP number	136385101

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual or committee	Responsibilities for climate-related issues
Director on board	Responsibilities for climate-related issues The Board of Directors is responsible for overseeing and ensuring the Management Committee (MC) has appropriate and effective measures in place to create and execute its strategies, including management of climate-related issues. The Board brings a mix of experience and knowledge gained through senior level positions held in the public and private sectors such as oil and natural gas, energy storage solutions, technology, legal, finance, and health, where leadership and governance over sustainability matters have been a longstanding priority. Eight Directors of the Board have relevant experience in climate change/carbon policy & emissions, ten Directors have relevant experience in health, safety and environment, and twelve Directors have relevant experience in risk management. The Directors oversee and monitor company-wide efforts to support, manage and improve our performance, and ensure the effectiveness of our sustainability programs, including climate related issues. Specifically, Directors on the Health, Safety, Asset Integrity and Environment (HSAI&E) Committee of the Board receive quarterly updates from the Environment, Social, and Governance (ESG) Committee, a select group of the MC. Directors are part of the reporting process and are responsible for monitoring implementation of our sustainability programs, including review and approval of internal reports about objectives, performance, key

	performance indicators, and actions undertaken to mitigate risk. Each year, detailed presentations to the Board are provided by Management, including a review of the company's: Environmental Stewardship Report and key developments anticipated in the following year; and management of environmental risks including GHG emissions/climate change and the role of innovation to address and continuously improve environmental stewardship and performance. In addition, the Board, through the Directors on the Compensation Committee, focus on aligning executive pay for performance, assessing the Corporation's performance under set categories, including sustainability metrics for safety, asset integrity and environment. Performance is evaluated against benchmarks determined by prior period performance. For example, the 2021 corporate GHG emissions intensity performance was 0.045 tonnes/BOE, with our 2022 performance improving to 0.044 tonnes/BOE.

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – some meetings	Reviewing and guiding annual budgets Overseeing major capital expenditures Overseeing acquisitions, mergers, and divestitures Reviewing and guiding strategy Overseeing the setting of corporate targets	The Board of Directors is responsible for overseeing and ensuring Management Committee (MC) has appropriate sustainability programs in place, including the identification of climate-related risks and opportunities and their implications for our business strategies across Canadian Natural. The Board of Directors provides expertise and oversight on specific ESG factors through the roles and responsibilities of the following Board committees: • Nominating, Governance and Risk Committee is responsible for corporate governance practices and management of enterprise risk exposure. Processes for identifying, assessing, and managing climate-related issues are integrated into our Enterprise Risk Management (ERM) framework. The Nominating, Governance and Risk Committee of the Board reviews and monitors the status of ERM activities, including climate-related regulatory and operational risks, and the steps Management has taken to implement mitigating actions.

	Monitoring progress towards corporate targets Overseeing and guiding public policy engagement Reviewing and guiding the risk management process	• Health, Safety, Asset Integrity and Environment Committee is responsible for occupational and process safety, asset integrity, environmental stewardship, regulatory, risk management, sustainability and social initiatives. Climate-related advocacy priorities and lobbying activities are reported quarterly to the HSAI&E Committee and discussed as needed. The Directors in the HSAI&E Committee oversee and monitor all ESG matters, including company-wide efforts to support, manage and improve our performance, and ensure the effectiveness of our sustainability programs. Sustainability programs relate to health, safety, asset integrity, environmental risk and social initiatives. The Health and Safety, Asset Integrity, Environment, Stakeholder Relations and Community Investment groups report on a regular basis to Senior Management in the Environment, Social, and Governance (ESG) Committee, who provide updates to the HSAI&E Committee of the Board. The HSAI&E Committee reviews quarterly internal stewardship reports about objectives, performance and key performance indicators and targets, advocacy priorities, and actions and initiatives undertaken to mitigate climate related risk. For example, senior management challenged the business units to propose a meaningful company-wide GHG emissions reduction target in 2022. They answered the challenge by working together and then aggregating each business unit's plans for their respective GHG reduction projects, including conventional, thermal, oil sands mining and international. The target was presented to the ESG Committee, who then presented it to Management Committee for approval and the HSAI&E Committee for review in their oversight role. Progress, including progress against targets and annual performance objectives, is tracked and shared across all levels of employees, and corporate status reports are presented quarterly to senior management and Board of Directors. Performance results are reported externally through the annual sustainability report.

C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues
Row 1	Yes	The Board has constituted the Nominating, Governance and Risk Committee to annually conduct a self-assessment of the Board's performance, an assessment of Board members and its committees, (with each committee assessing its members), and to recommend to the Board, nominees for appointment of new directors to fill vacancies or meet additional needs of the Board. Through the Board evaluation process and ongoing monitoring of the needs of the Corporation, desired expertise, diversity and skill sets are identified and individuals that possess the required experience and skills are contacted by the Chair of the Nominating, Governance and Risk Committee. Nominees for director are selected on the basis of, among other things, broad perspective, integrity, independence of judgment, experience, expertise, diversity in background, experience and skills, ability to make independent analytical inquiries, understanding of the Corporation's business environment and willingness to devote adequate time and effort to Board responsibilities and such other factors as it deems appropriate given the current needs of the Board and Corporation, to maintain a balance of diversity, knowledge, experience, background and capabilities. This evaluation includes consideration of nominee expertise and experience in environmental aspects of our activities, including climate-related issues.

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Position or committee

President

Climate-related responsibilities of this position

Managing major capital and/or operational expenditures related to low-carbon products or services (including R&D)
Integrating climate-related issues into the strategy
Conducting climate-related scenario analysis
Setting climate-related corporate targets
Monitoring progress against climate-related corporate targets
Managing public policy engagement that may impact the climate
Assessing climate-related risks and opportunities
Managing climate-related risks and opportunities

Coverage of responsibilities

Reporting line

Reports to the board directly

Frequency of reporting to the board on climate-related issues via this reporting line

Quarterly

Please explain

Our Corporate Management Committee, a group of Canadian Natural's senior executives who share the responsibilities normally associated with a Chief Executive Officer position, reviews and approves decisions on climate-related issues. Two members of the Management Committee are also Directors of the Company — the Executive Chair and the President. The President and our Management Committee (MC)

are responsible for the identification, assessment and management of climate change related risks and opportunities material to our industry and company.

The President leads our ESG Committee, a sub-group of the Management Committee (MC), and is responsible for providing direction and guidance on climate-related issues. The ESG committee consists of our President, Chief Operating Officers (COOs) and Senior VPs and VPs representing Health, Safety, Asset Integrity, Environment, Operations, Finance, and Technology. Collectively, these individuals have the relevant expertise in their areas and play a critical role in the timely identification, assessment, monitoring and management of climate-related issues across our organization, including setting and reviewing targets. We monitor climate-related issues by tracking government policy development, monitoring peer company activity, reviewing independent external scenario analyses, and through discussions with investors. The ESG Committee monitors and reports on climate-related issues to the MC and Board of Directors on a quarterly and annual basis, including sustainability performance, key indicators, targets and actions taken to mitigate risks.

The Board of Directors is responsible for overseeing and ensuring the President and Management Committee (including the ESG Committee) has appropriate sustainability programs in place, including the identification of climate-related risks and opportunities and their implications for our business strategies across Canadian Natural.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	Yes. In 2021, we reinforced the significance of environmental performance on the overall performance of the company, increasing the Safety, Asset Integrity and Environmental performance measure weighting by 50% (from 10% in 2020 to 15% in 2021). The weighting increase is in addition to targets for North America E&P absolute methane emissions as well as abandonment and reclamation activity. These changes further align executive compensation with Canadian Natural's performance when measured against sustainability metrics. Evaluation is based on improvement from prior period results (e.g. corporate GHG intensity & methane emissions) and/or against target ranges determined by prior period performance. Our executive compensation policies and procedures are centered on a pay-for-performance philosophy and aligned with the long term interests of our shareholders. The compensation program, including the compensation weighting, is reviewed continually by the Compensation Committee of the Board.

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to incentive

President

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary

Performance indicator(s)

Reduction in absolute emissions
Reduction in emissions intensity

Incentive plan(s) this incentive is linked to

Short-Term Incentive Plan

Further details of incentive(s)

With the exception of Canadian Natural's Debt to Book metric, which has been established to reflect all commodity price cycles, we established 2022 performance targets as part of our 2022 budget guidance, which was released on January 11, 2022.

The resulting performance measures are assigned weightings as indicated in the Performance Scorecard (available in our 2022 Management Information Circular) and the resulting overall score is utilized by the Compensation Committee to determine the performance bonus for the President.

The cash bonus awarded is based on Canadian Natural's and the individual's performance over the year in contributing to the company meeting its yearly operating plans and its operating and financial goals as evidenced by corporate performance. Corporate greenhouse gas emissions intensity (tonnes/BOE) and North America E&P absolute methane emissions are two metrics in the corporate Performance Scorecard on which performance bonuses are based.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

Our Greenhouse Gas Emissions Intensity and Absolute Methane Reduction Key Performance Indicators outlined in our annual Performance Scorecard (page 37 of our 2022 Management Information Circular) look for year-over-year progress. In 2022, Canadian Natural's performance results were highlighted at internal town hall meetings, with specific attention placed on our scorecard metrics. This highlighted the importance of the metric throughout the company and served to incent workers towards finding new ways to reduce emissions.

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	3	No comment
Medium-term	3	7	No comment
Long-term	7	100	No comment

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

Given the dynamic nature of risk, Canadian Natural uses a multidisciplinary Enterprise Risk Management (ERM) framework to identify, assess, and mitigate risks that may affect the company and our operations. The ERM framework incorporates a matrix approach to risk assessment that categorizes and aligns risks across operational areas, allowing teams to better understand the identified risks, their impacts on our operations and the mitigation being undertaken to address these risks. This allows management to monitor potential risk exposures and the steps taken to address the identified risks, or otherwise mitigate these exposures by identifying the specific individuals on our Management Committee responsible for each of the identified risks. Reporting on the risks and related mitigating activity throughout Canadian Natural is also part of the ERM framework. Summaries of corporate risk, including climate-related, regulatory and operational risks, are provided in the corporate enterprise risk register and reported to the Nominating, Governance and Risk Committee (NGRC) twice a year. To ensure proper accountability of risk, this semi-annual report includes an assessment of the inherent risk areas, mitigating action plans and the Board or Management Committees that have oversight and management responsibilities for each risk. Our risk processes include an assessment of the significance and scope of identified existing and emerging climate-

related risks. We use an Enterprise Risk Matrix to determine likelihood (probability) and impact of risks, and classify them as High, Moderate, or Low. A classification of 'High' would be considered a substantive financial or strategic impact to Canadian Natural's business. This process helps us prioritize climate-related risks and determine materiality.

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered

Direct operations

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

Canadian Natural identifies, assesses and responds to climate-related risks and opportunities using a multidisciplinary risk management process, which considers these types of risks and opportunities as part of business evaluation. Processes that the Company uses to identify, assess, manage and respond to environmental and climate-related issues are integrated into our Enterprise Risk Management (ERM) and reporting framework.

Our business strategy incorporates knowledge of climate-related risks and opportunities, including current and potential policies and regulations, into decisions made by our Management Committee (MC) and Board of Directors. Risk is managed at all levels of our company through:

- MC - responsible for the identification, assessment and management of climate change risks and opportunities. Business units identify and report on significant local risks and opportunities regularly. MC, including the ESG Committee and the Greenhouse Gas (GHG) Operations Strategy Committee, provides direction and guidance to business units on climate-related risk assessment, carbon emissions management and project implementation.
- ESG Committee - provides internal stewardship reports to the HSAI&E Committee of the Board, reporting on sustainability performance, key indicators and actions taken to mitigate risks.
- GHG Operations Strategy Committee - responsible for climate change strategy and issue prioritization. This Committee oversees groups that manage and coordinate GHG reduction and technology projects across the company, such as the cross-functional Methane Steering Committee. The GHG Committee also assesses and provides input on current and developing GHG policy and regulation.
- Semi-annually, the Nominating, Governance and Risk Committee (NGRC) of the Board reviews and monitors the status of inherent and emerging enterprise risks, including environmental and climate-related regulatory and operational risks, along with a summary the steps Management has taken to implement mitigating actions.
- HSAI&E Committee of the Board - ensures Management has effective design and implementation of sustainability and environmental risk management programs, including controls and reporting systems.
- Board of Directors - Oversees and ensures MC has appropriate and effective measures in place to manage climate-related risk.

Climate change risk management also occurs at the asset level through recurring projects and reviews, economic evaluations, including forecasting GHG intensity and compliance costs over the medium and long-term, and reviewing abatement projects. Internal quarterly management reviews are completed to monitor GHG performance. GHG emissions reports are submitted annually, as per regulatory requirements for specific facilities and/or jurisdictions where we operate.

Climate-related risks and opportunities are continuously monitored and the status of risk management activities are reviewed at least every six months by the Board, NGRC and Management Committee, including considering risks that impact our business for the medium and long-term. We review transition risk and physical climate risk. Short and medium-term physical climate change risks are mitigated by our geographically diverse production base and emergency response plans. For example, our Horizon oil sands operation may experience physical climate change risk in the form of more frequent forest fires or reduced ability to withdraw water from the Athabasca River due to low stream flows. Canadian Natural identified these risks and addressed them by constructing a fire break (cleared area) around the Horizon site, and by constructing a water storage pond on site to ensure a supply of fresh water at times of low stream flow. As a result, the Horizon facility has not been damaged by forest fires nor been affected by water shortages.

We are also working with relevant parties to ensure new policies encourage technological innovation, energy efficiency, and targeted research and development while not impacting competitiveness. We provide ongoing reporting on how we address climate and other environmental related financial and operational risks over the short-term.

For example, we actively track the development of policies and regulations at the international, national, federal and provincial level. In December 2020, the Canadian government announced its intention to surpass Canada's previously stated reduction target under the Paris Agreement, to increase the carbon price to $170 in 2030, and to establish methane reduction targets for 2030 and 2035. In addition, in 2022 the federal government released the Clean Fuel Regulations which apply to producers or importers of liquid fuels (including gasoline, diesel, kerosene and light and heavy fuel oils). Aspects of the Clean Fuel Regulations will increase the cost of liquid fuels consumed in the Company's operations while also providing a potential mechanism to generate offset credits.

Canadian Natural's associated environmental risk management strategies focus on working with legislators and regulators to ensure that any new or revised policies, legislation or regulations properly reflect a balanced approach to sustainable development. This work is guided by the Management Committee that reports into the NGRC and the HSAIE Committees of the Board.

Value chain stage(s) covered

Direct operations

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

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- ESG Committee - provides internal stewardship reports to the HSAI&E Committee of the Board, reporting on sustainability performance, key indicators and actions taken to mitigate risks.
- GHG Operations Strategy Committee - responsible for climate change strategy and issue prioritization. This Committee oversees groups that manage and coordinate GHG reduction and technology projects across the company, such as the cross-functional Methane Steering Committee. The GHG Committee also assesses and provides input on current and developing GHG policy and regulation.
- Semi-annually, the Nominating, Governance and Risk Committee (NGRC) of the Board reviews and monitors the status of inherent and emerging enterprise risks, including environmental and climate-related regulatory and operational risks, along with a summary the steps Management has taken to implement mitigating actions.
- HSAI&E Committee of the Board - ensures Management has effective design and implementation of sustainability and environmental risk management programs, including controls and reporting systems.
- Board of Directors - Oversees and ensures MC has appropriate and effective measures in place to manage climate-related risk.

Climate change risk management also occurs at the asset level through recurring projects and reviews, economic evaluations, including forecasting GHG intensity and compliance costs over the medium and long-term, and reviewing abatement projects. Internal quarterly management reviews are completed to monitor GHG performance. GHG emissions reports are submitted annually, as per regulatory requirements for specific facilities and/or jurisdictions where we operate.

Climate-related management of risks and opportunities are monitored every quarter, with risks assessed every six months or more frequently, considering risks that impact our business for the medium and long-term. We review transition risk and physical climate risk. Short and medium-term physical climate change risks are mitigated by our geographically diverse production base and emergency response plans.

For example, our Horizon oil sands operation may experience physical climate change risk in the form of more frequent forest fires or reduced ability to withdraw water from the Athabasca River due to low stream flows. Canadian Natural identified these risks and addressed them by constructing a fire break (cleared area) around the Horizon site, and by constructing a water storage pond on site to ensure a supply of fresh water at times of low stream flow. As a result, the Horizon facility has not been damaged by forest fires nor been affected by water shortages.

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- Semi-annually, the Nominating, Governance and Risk Committee (NGRC) of the Board reviews and monitors the status of inherent and emerging enterprise risks, including environmental and climate-related regulatory and operational risks, along with a summary the steps Management has taken to implement mitigating actions.
- HSAI&E Committee of the Board - ensures Management has effective design and implementation of sustainability and environmental risk management programs, including controls and reporting systems.
- Board of Directors - Oversees and ensures MC has appropriate and effective measures in place to manage climate-related risk.

Climate change risk management also occurs at the asset level through recurring projects and reviews, economic evaluations, including forecasting GHG intensity and compliance costs over the medium and long-term, and reviewing abatement projects. Internal quarterly management reviews are completed to monitor GHG performance. GHG emissions reports are submitted annually, as per regulatory requirements for specific facilities and/or jurisdictions where we operate.

Canadian Natural's associated environmental risk management strategies focus on stakeholder engagement and working with legislators and regulators to ensure any new or revised policies, legislation or regulations properly reflect a balanced approach to sustainable development. Specific measures taken in response to existing or new legislation include focus on energy efficiency, air emissions management, released water quality, fresh water use reduction, and minimization of the impact on the landscape to conserve high-value biodiversity. Our internal procedures are designed to ensure the short, medium and long-term environmental aspects of new acquisitions and new developments are taken into account prior to proceeding.

Transitional climate change risks are mitigated by our large, diversified and balanced portfolio which positions us to be resilient in a lower carbon emissions economy. For example, the transitional risk of governments establishing increasingly stringent GHG emissions targets is mitigated by our long-life, low decline oil sands assets, with infrastructure that is well suited for continued investments in carbon capture, utilization and storage (CCUS). Our management response is participation in the Pathways Alliance, an alliance of oil sands companies working together with governments to achieve net zero GHG emissions from oil sands operations by 2050 – to help Canada meet its climate goals. The alliance considers multiple pathways to net zero including a foundational project of a CO2 trunkline connecting Fort McMurray and Cold Lake to a carbon sequestration hub; deploying existing and emerging GHG reduction technology such as carbon capture, solvents, process improvements, energy efficiency, fuel switching and electrification.

Another example of a transition risk is that customers may select against higher GHG intensity crude oils, which could reduce the value of that production. Our management response was to establish a corporate aspiration of net zero on our oil sands operations in 2018, to set a target to reduce our absolute methane emissions reduction target of 50% from a 2016 baseline by 2030, and to participate in the Pathways Alliance. Additionally, in 2022, we announced a corporate absolute Scope 1 and 2 GHG emissions target of 40% from a 2020 baseline by 2035.

As part of a transition to lower emissions intensity production, we have assessed the emissions of current projects, and developed technology pathways to reduce GHG emissions. For example, we have successfully piloted the use of solvents at our Kirby South thermal oil sands operation and are progressing a commercial scale solvent development at Kirby North, targeting solvent injection in early 2024. Additionally, a pilot at our Primrose steam flood operation is ongoing. As a result, we are using solvent enhanced technology as a way to reduce steam use and GHG emissions per barrel of production.

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Current and proposed climate change policies and regulations are relevant because their impacts are considered when making decisions to advance Canadian Natural's business strategy, including current and future projects. For example, the amended Technology Innovation and Emissions Reduction Regulation implements an increasing carbon price which increases the GHG cost for our facilities in Alberta, such as the Wapiti sweet gas plant and the Jackfish in situ oil sands facility.
Emerging regulation	Relevant, always included	An aspect of climate change risk that most influences Canadian Natural's business strategy is future compliance costs/regulatory changes. In Canada, the federal government has ratified the Paris Agreement, with a commitment to reduce GHG emissions by 40-45% from 2005 levels by 2030. The Canadian government has also committed to cap and cut emissions from the oil and gas sector, with further details to be developed in 2023. In addition, Canada has committed to reduce methane emissions from the upstream oil and natural gas sector by 40-45% by 2025, and has published a draft framework outlining proposed measures which are targeted to reduce methane emission by at least 75% by 2030, both as compared to 2012 levels. In October 2022, the federal government amended the Greenhouse Gas Pollution Pricing Act to increase the carbon price to $170/tonne by 2030 in annual increments of $15/tonne after 2022. We monitor the development of GHG regulations on an ongoing basis in the jurisdictions in which we operate to assess the impact of future regulatory developments on the Company's operations and planned projects. For example, the federal government released the Clean Fuel Regulations in 2022 which apply to producers or importers of liquid fuels (including gasoline, diesel, kerosene and light and heavy fuel oils). This may increase the cost of liquid fuels, which would increase the operating cost for facilities, such as our Oil Sands Mining and Upgrading operations.
Technology	Relevant, sometimes included	Canadian Natural works with relevant parties to ensure new policies encourage technological innovation, energy efficiency, and targeted research and development while not impacting competitiveness. Regulatory and policy changes to address climate change may require the development or adoption of new sustainable technologies to reduce environmental footprint and support the transition to a lower carbon emissions/energy efficient economy at significant cost. The risks to Canadian Natural are that the available technologies may not prove to be economic and there is potential

		execution risk in implementing new technologies, including when retrofitting into existing facilities. For example, we have successfully piloted the use of solvents at our Kirby South thermal oil sands operation and are progressing a commercial scale solvent development at Kirby North, targeting solvent injection in early 2024. Additionally, a pilot at our Primrose steam flood operation is ongoing. As a result, we are using solvent enhanced technology as a way to reduce steam use and GHG emissions per barrel of production. We also continue to evaluate new technologies to reduce environmental impacts, including support for Pathways Alliance and Petroleum Technology Alliance Canada.
Legal	Relevant, always included	Canadian Natural strives to carry out its activities in compliance with applicable regional, national and international regulations and industry standards. Environmental specialists in Canada and the UK track numerous environmental performance indicators, review the operations of our worldwide interests and report on a regular basis to senior management, who in turn reports on environmental matters directly to the Health, Safety, Asset Integrity and Environmental Committee of the Board of Directors. Canadian Natural regularly meets with, and submits to inspections by, the various governments in the regions where we operate. Our associated environmental risk management strategies focus on working with legislators and regulators to ensure that any new or revised policies, legislation or regulations properly reflect a balanced approach to sustainable development. For example, failure to meet the reporting requirements under the Alberta Specified Gas Reporting Regulation for facilities such as the Clearhills Gas Plant would result in enforcement action, up to and including a $500,000 fine for failure to report.
Market	Relevant, always included	Various jurisdictions have enacted or are evaluating low carbon fuel standards, which may affect access to market for crude oils with higher emissions intensity. Canadian Natural may be exposed to greater market risk for its products associated with the shift to a lower carbon emissions future. These risks may include increases in the demand for renewable energy sources, increases in compliance costs that may not be recoverable in the price of the product, which could delay the development of certain assets, and restricted access to markets for higher carbon intensive energy sources. This could result in a competitive disadvantage if producers in other jurisdictions are not subject to similar regulatory burdens. For example, Canadian Natural is evaluating and monitoring the Government of Canada's implementation of the Clean Fuel Regulations, which affects production and consumption of liquid fuels in Canada. The impact of the Clean Fuel Regulations on the Oil Sands Mining and Upgrading Operations is less than CAD $100 million per year.
Reputation	Relevant, always included	Aspects of climate change risk that most influence Canadian Natural's business strategy are: future regulatory changes and associated compliance costs, commodity price, access to markets and capital, social preferences and reputational

		risk, and technology development. Changes in public support for climate action, combined with increased activism and opposition to fossil fuels, which are designed to change consumption habits in order to accelerate the reduction of the global consumption of carbon-based energy, may impact the market for our products and securities and impact its ability to obtain approvals for new projects and raise capital. For example, approximately 30% of our production in 2022 was heavy crude oil and this may limit interest for our shares among investors who are screening for producers weighted towards light oil or natural gas production.
Acute physical	Relevant, always included	Canadian Natural manages for the risk of extreme weather events in its operations and emergency response plans. Our comprehensive corporate Emergency Management program is in place to coordinate Canadian Natural's response to potential incidents (including extreme weather events). This program includes Emergency Response Plans (ERPs) intended to ensure a prompt initial response and efficient management and containment of situations as they arise. Our Asset Integrity Management System also helps us identify and mitigate this risk. It includes the impact of extreme rainfall or flooding events when assessing the risk and associated mitigation of pipeline river crossings. This is done to reduce the risk of a flooding event or slope failure leading to a pipeline failure and the potential release of product into the environment. At our Horizon oil sands operations, we may experience physical climate change risk in the form of more frequent forest fires. The need to manage this risk was identified, with Canadian Natural addressing the risk by constructing a fire break (cleared area) around the Horizon site. The result is that the Horizon facility has not been damaged by forest fires.
Chronic physical	Relevant, sometimes included	Canadian Natural includes chronic, physical risks in its risk assessment process. For example, Canadian Natural evaluated the risk of reduced water flows in the Athabasca River and constructed additional water storage capacity at its Horizon Oil Sands Mining and Upgrading Operation in order to mitigate this risk. In the absence of a storage facility, the risk is that reduced water flows could result in lower water availability, which could cause reduced production at the Horizon facility.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Current regulation

Carbon pricing mechanisms

Primary potential financial impact

Increased indirect (operating) costs

Company-specific description

Governments in jurisdictions where Canadian Natural operates have developed or are developing GHG regulations as part of their national and international climate change commitments. Canadian Natural considers existing GHG regulations to determine the impact of compliance costs on current and future projects. In 2022, our operations were subject to carbon pricing specific to the regions of our operations. These regions included:

- British Columbia: Provincial pricing applied to all fuel gas, vent volumes and flare volumes at our BC facilities, and to gasoline, diesel, propane and other fuels.
- Alberta: Provincial pricing applied to a portion of emissions from the following operated facilities: Horizon, Athabasca Oil Sands Project, Primrose/Wolf Lake in situ, Kirby South in situ, Kirby North in situ, Jackfish in situ, Peace River in situ, the Brintnell power generation facility and all Conventional assets.
- Saskatchewan: Provincial pricing applied to a portion of emissions from fuel combustion at all assets in Saskatchewan

- Manitoba: The federal Output-Based Pricing System applied to a portion of emissions from fuel combustion and flaring at all assets in Manitoba.
- The UK: Pricing is variable, since the UK exited the European Union (EU) which is the compliance vehicle for the United Kingdom Allowances (UKA) which regulates our offshore North Sea oil production platforms.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

50

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Potential financial impact is represented by the cost per tonne of CO2 applied per the applicable regulation. In 2022, the carbon price in:

- British Columbia was $45/tonne in Q1 2022 and $50/tonne for the remainder of 2022. It applied to all fuel gas, vented gas, and flared gas at our BC facilities, and to gasoline, diesel, propane and other fuels. The tax is calculated as [(fuel/flare/vent volume x volumetric tax rate)].

- Alberta was $50/tonne and was applied to a portion of emissions from the following facilities: Horizon, Athabasca Oil Sands Project, Primrose/Wolf Lake in situ, Kirby South in situ, Jackfish in situ, Peace River in situ, the Brintnell power generation facility and all Conventional assets. The carbon cost is calculated as: carbon cost = $50/t x [Actual emissions minus emissions allocation].
- Saskatchewan: Provincial pricing applied to a portion of emissions from fuel combustion at all assets in Saskatchewan. The carbon cost is calculated as: carbon cost = $50/t x [Actual emissions minus emissions allocation]
- Manitoba: The federal Output-Based Pricing System applied to a portion of emissions from fuel combustion and flaring at all assets in Manitoba. The carbon cost is calculated as: carbon cost = $50/t x [Actual emissions minus emissions allocation].
- The UK pricing is variable, since the UK exited the EU, it is the market price of the United Kingdom Allowances (UKA) which is the compliance vehicle for the UK Emission Trading System (UK ETS – started Jan 01, 2021) which regulates our offshore North Sea oil production platforms. The UKA ranged from ~£43.20 – £88.15/tonne (CAD$74.73 - $152.73) for the time period of May 19, 2021 to April 30, 2022.

To calculate our potential impact figure, we used the subsequent carbon pricing multiplied by the specific emissions of the same facilities.

Cost of response to risk

750,000

Description of response and explanation of cost calculation

In Canada, Canadian Natural participates in both federal and provincially regulated climate and GHG emissions reporting programs and continues to quantify annual GHG emissions for internal reporting purposes to drive continuous improvement and reduce GHG emissions intensity. For example, Canadian Natural identified an opportunity to reduce operating costs, including carbon tax expense, at a natural gas plant in Northeast British Columbia in 2019. A maintenance shutdown provided an opportunity to install improved insulation on the incinerator stack. This reduces heat loss through the stack and therefore less fuel gas is required to maintain the minimum required stack-top temperature. This project reduced emissions by approximately 19,200 tCO2e in 2021, and reduced carbon tax expense by about $840,000 in 2021. The installation was successful and we were able to use a government grant program that provided capital funding for emission reduction projects. This project improved the energy efficiency of the incinerator and thereby reduced fuel gas use, reducing GHG emissions and carbon compliance costs. We also continue to expand our third party verification processes.

The internal staff time, software, and consulting services related to the annual third party verification processes of reported GHG emissions is $750,000.

Comment

No comment

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Acute physical

Wildfire

Primary potential financial impact

Decreased revenues due to reduced production capacity

Company-specific description

Approximately 28% of Canadian Natural's operations are in forested areas in British Columbia and Alberta where wildfires occur periodically. Examples include the Septimus Gas Plant in northwest British Columbia and the Gold Creek Gas Plant and Brintnell Oil Battery located north of Slave Lake, Alberta. Wildfires in the proximity of our facilities may cause loss of production due to facility shutdown, either directly because of risk to people, the facility, or because of impact to required infrastructure (e.g., pipeline facilities and power lines). Canadian Natural has implemented a number of mitigation measures, including, but not limited to, ensuring all buildings are constructed of metal cladding, tank vents have curved pipes to reduce the risk of exposure to embers, strong vegetation management practices are employed including mowing, pruning and reducing vegetation that could allow a fire to spread.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

4,953,000

Potential financial impact figure – maximum (currency)

49,530,000

Explanation of financial impact figure

Estimate of lost gross revenue in the event of a wildfire that would require us to shut down facilities, corporately the impact is estimated as 0.01% – 0.1% of 2022 revenue.

Cost of response to risk

200,000

Description of response and explanation of cost calculation

For example, our Horizon oil sands operation located in the boreal plains area of northern Alberta may experience physical climate change risk in the form of more frequent forest fires or, in the event of a fire, a reduced ability to withdraw water from the Athabasca River due to low stream flows. With the potential of wildfires in the area, Canadian Natural proactively identified the risk and reviewed our fire protection plans. As a result of this review, we constructed a fire break (cleared area) around the Horizon site to reduce the chance of wildfires from spreading near our operations, and constructed a water storage pond on the site to ensure a supply of fresh water at times of low stream flow. These risk mitigation efforts have resulted in the Horizon facility avoiding damage by wildfires and potential water shortages.

Maintaining the fire breaks around the Horizon site, including hiring contractors to widen the fire breaks using heavy machinery, costs an estimated $200,000.

Comment

No comment

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Chronic physical

Changing precipitation patterns and types (rain, hail, snow/ice)

Primary potential financial impact

Decreased revenues due to reduced production capacity

Company-specific description

For example, Canadian Natural's Horizon oil sands facility in northeast Alberta relies on water from the Athabasca River as part of the production process. The facility currently uses up to 42% of its authorized annual withdrawal limit. Water use efficiency has improved, reducing water demand allowing the license withdrawal limit to be reduced by approximately 30%. The water is used for extraction of bitumen from oil sands ore and for the production of hydrogen, which is used in the upgrading process. In times of low flows in the Athabasca River, the Horizon facility may be limited in the volume of water it is allowed to withdraw from the Athabasca. We mitigate this risk by having 28 days of water storage on site.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

689,000,000

Potential financial impact figure – maximum (currency)

834,000,000

Explanation of financial impact figure

If Canadian Natural did not have 28 days of water storage on site, there would a potential financial impact on production for 28 days. Potential financial impact is calculated as 28 days production x daily assumed production rate of 230,000 bbl/d x average 2022 realized sales price (CAD$117.69/bbl) with +/-10% for range.

Cost of response to risk

9,400,000

Description of response and explanation of cost calculation

For example, in times of reduced water flows in the Athabasca River due to weather events, Canadian Natural may be further limited in the volume of water it is allowed to withdraw from the Athabasca under very low flow conditions. Water use efficiency has improved, reducing water demand allowing the license withdrawal limit to be reduced by approximately 30%. Lowering the limit on the amount of water available for our operations could result in reduced production at the Horizon Oil Sands Mining and Upgrading operations. We evaluated this risk and as a result, built additional 28-day water storage capacity at Horizon to allow for continued operations at normal production rates during periods of reduced flows in the Athabasca River.

$9.4 million represents the capital spent to manage our risk through designing, hiring contractors to construct and then fill the water storage system at Horizon.

Comment

No comment

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resource efficiency

Primary climate-related opportunity driver

Use of more efficient production and distribution processes

Primary potential financial impact

Increased revenues through access to new and emerging markets

Company-specific description

Canadian Natural is a leader in the oil and natural gas industry in carbon capture, utilization and storage (CCUS) projects, with a carbon capture capacity of 1.5 million tonnes at our Oil Sands Mining and Upgrading operations – including recovering CO2 from our hydrogen plant and adding it to our tailings at Horizon and a 70% interest in the Quest Carbon Capture and Storage (CCS) facilities at Scotford. These initiatives combined with CO2 capture at our Hays Gas Plant for use in enhanced oil recovery and a 50% stake in the Sturgeon Refinery, have a total carbon dioxide equivalent (CO2) capture capacity of 2.7 million tonnes/year, making Canadian Natural largest owner of capture capacity in the Canadian crude oil and natural gas sector, based on data from the Global Carbon Capture and Storage Institute.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

43,900,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

0.876 million tonnes of GHG offset credits earned by the Quest CCS project (net to Canadian Natural) multiplied by offset value of $50/tonne. Financial impact is calculated as Canadian Natural's share of GHG offset credits earned at Quest, multiplied by the government carbon price of $50/tonne.

Cost to realize opportunity

790,000,000

Strategy to realize opportunity and explanation of cost calculation

The decision to acquire the Athabasca Oil Sands Project (AOSP) assets in 2017 was influenced by the GHG intensity performance of this asset, including the Quest CCS. The Quest CCS project is part of the AOSP, of which, Canadian Natural has 70% ownership interest. CO2 is captured from the hydrogen plant at the Scotford upgrader, and then compressed and transported to an offsite location for long-term sequestration in a deep-saline aquifer. We work closely with our AOSP partners to ensure the facility is operating to its full potential and regularly discuss opportunities to improve. The Quest CCS facility has captured and permanently stored 7.7 million tonnes of CO2 at the end of 2022. The Quest cost of $790 million is calculated by the operator as the capital required for the project to reach commercial operation and is reported to the Government of Alberta. The cost calculation is reported at: Quest Carbon Capture and Storage project: annual report, 2019 - Quest Carbon Capture and Storage project: annual summary report - Alberta Department of Energy: 2019 - Open Government. The calculation listed in this report reads as follows on page 10-1: Shell Labor & Commissioning: $147,582,000, Tie-in Work/Brownfield Work (Tie-In/Turnaround Work Capture, Tie-In Work Pipeline): $37,118,000, Capture Facility costs (Engineering, construction management, material, site labor, subcontracts, Mod Yard Labor Including Pipe Fab, Indirects/Freight, FGR Mods/HMU Revamps): $437,419,000, Subsurface wells (Injection Wells, Monitor Wells, Water Wells, Other MMV): $40,251,000, Pipelines (Materials, Engineering, and Services): $127,460,000 = $789,830,000.

Comment

No comment

Identifier

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Energy source

Primary climate-related opportunity driver

Use of lower-emission sources of energy

Primary potential financial impact

Reduced direct costs

Company-specific description

Reducing methane emissions is a key part of our GHG Management Strategy and critical to meeting our methane reduction target of 50% reduction in absolute methane emissions in our North American Exploration and Production (NA E&P) operations by 2030 from a 2016 baseline. In our NA E&P operations, pneumatic pumps are used to inject chemical(s) into wells and pipelines to protect them from corrosion, plugging and freezing and pneumatic instruments are used to control operating conditions at our facilities. Pneumatic devices, which include both pumps and instruments, can use pressurized natural gas to function, some of which release low volumes of natural gas as part of their normal operations. We are continuously inventorying our pneumatic pumps and instruments across our operations to help identify opportunities to reduce methane emissions. In 2018, Canadian Natural launched a project to convert high-emitting pneumatic instruments to low-emitting ones. To date, in our NA E&P operations, we have completed over 8,000 pneumatic instrument retrofits and removals since 2018, resulting in a cumulative CO2e reduction of approximately 815,000 tonnes.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

2,800,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The estimated emission reduction value pertaining to solar pump configurations of 69,000 tCO2e/year is split between Alberta (approximately 45,000 tCO2e/year) and BC (approximately 24,000 tCO2e/year). From this estimated emission reduction value, the associated estimated financial value in Alberta is based on carbon offset credit generation (@ $50/tCO2e based on 2022 pricing) plus the revenue from sales of the incremental gas conserved valued at $2.50/mcf for a total estimated value of $2.5 MM. Whereas in BC, the estimated financial value is based on the carbon tax savings (@$45/tonne in Q1 2022 and $50/tonne for the remainder of 2022) plus the revenue from sales of the incremental gas conserved at $2.50/mcf for a total estimated value of $0.3 MM. The combined financial impact is $2.8 MM.

Cost to realize opportunity

9,300,000

Strategy to realize opportunity and explanation of cost calculation

A key element of achieving our GHG reduction goals is continuing to lower emissions incrementally. Our methane emissions reduction plan, led by our Conventional Greenhouse Gas (GHG) Steering Committee of senior leaders and technical experts teams, identified an opportunity to convert pneumatic injection pumps in our Alberta and British Columbia conventional areas (in our NA E&P operations) to solar configurations. Converting specific pneumatic pumps to solar pumps that utilize pressurized natural gas to function will eliminate methane emissions, and also optimize operating costs by improving the accuracy and precision of chemical injection rates. An additional potential benefit is the generation of carbon offsets through methane reduction, which can be applied to GHG compliance costs at our facilities.

The multi-year solar pump conversion project launched in January 2022 in the Edson and Fort St. John districts is targeting pump-replacements at specific wells across NA E&P operations to the end of 2025. Emission reductions from these replacements will be realized throughout the facility lifetime. Typical facility lifetimes are in the 5-20 year time horizon. At facility end of life, equipment can be reused at other facilities and continue to generate GHG reductions. Further scope refinement is currently on-going to accurately determine the remaining pneumatic pumps requiring upgrade to solar configuration. In 2022, approximately 730 pumps were replaced with solar configurations, eliminating an estimated 69,000 tCO2e/year of emissions.

The $9.3 MM is the approximate cost (excluding government grants) to realize the opportunity and is derived from the costs to purchase and install solar pumps. We were able to use a government grant program that provided capital funding for emission reduction projects. We are targeting completing approximately 3,800 projects (replacing targeted pneumatic pumps with solar configurations) overall at sites across our NA E&P operations over multiple years, resulting in an approximate reduction of up to 361,000 tonnes/year of CO2e.

Comment

No comment

Identifier

Opp3

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resource efficiency

Primary climate-related opportunity driver

Use of more efficient production and distribution processes

Primary potential financial impact

Returns on investment in low-emission technology

Company-specific description

Canadian Natural operates a system of solution gas compressors and pipelines in its primary heavy oil area region, in particular, single- and multi-well batteries. This reduces the amount of solution gas that is vented or flared. In 2022, we completed 244 solution gas conservation projects in our primary heavy crude oil operations, resulting in a reduction of approximately 0.99 million tonnes/year of CO2e. From 2018 to 2022, Canadian Natural has spent over $27.6 million in our primary heavy crude oil and in situ oil sands operations to conserve the equivalent of over 10.4 million tonnes of CO2e.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

13,810,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The potential financial impact figure comes from the revenue from sale of the incremental gas conserved (163.6 e3m3/d x $6.55/mcf gas price).

Cost to realize opportunity

5,930,000

Strategy to realize opportunity and explanation of cost calculation

In 2016, we identified the opportunity to reduce emissions from compressors and pipelines across Canadian Natural. We used technologies such as heavy oil fans, load banks, and combustors as part of our Solution Gas Conservation Program to reduce emissions from venting of solution gas. The program established processes for identifying and implementing solution gas conservation projects in our primary heavy oil operations. The Solution Gas Conservation Program has three main objectives: reduce emissions from vented solution gas, maintain compliance with regulations, and provide a positive economic return (through a combination of incremental gas revenues, reduction in propane consumption, and potentially GHG offset credits for voluntary conservation efforts). In particular, single- and multi-well batteries located in the primary heavy oil area, ranging from 039-19W3 up to 065-07W4. As a result of this work, we have spent over $27.6 million over the past five years in our primary heavy crude oil and in situ oil sands operations to conserve the equivalent of over 10.4 million tonnes of CO2e.

The $5.93 MM in 2022 is the cost to realize the opportunity and is derived from the cost of completing the projects (installing compressors, replacing fans, and adding pipelines, etc.) at 244 solution gas conservation projects in our primary heavy crude oil operations, resulting in a reduction of approximately 0.99 million tonnes/year of CO2e.

Comment

No comment

C3. Business Strategy

C3.1

(C3.1) Does your organization’s strategy include a climate transition plan that aligns with a 1.5°C world?

Row 1

Climate transition plan

No, our strategy has been influenced by climate-related risks and opportunities, but we do not plan to develop a climate transition plan within two years

Explain why your organization does not have a climate transition plan that aligns with a 1.5°C world and any plans to develop one in the future

Canadian Natural has ongoing engagement with our shareholders to provide updates on our business strategy and plans, including our climate/GHG emission management plans. Canadian Natural is strongly committed to doing our part to lower GHG emissions, and helping to position Canada as the supplier of choice for safe, secure, reliable and environmentally responsible energy the world needs. While we do not have a carbon transition plan as defined by this question, we believe we have a plan in place to take us into a low carbon economy. Our GHG emissions reduction plan aligns with the definition provided by the Oxford Martin Net Zero Carbon Investment Initiative based on the following principles:

- Aspirational target of net zero GHG emissions in our oil sands operations and our commitment to the Pathways Alliance's ambition of net zero GHG emissions by 2050 in Canada's oil sands operations.
- Establishment of targets, for example, a new corporate absolute Scope 1 and 2 GHG emissions reduction target of 40% reduction by 2035 from a 2020 baseline was announced in November 2022.
- Canadian Natural's balanced portfolio of light, synthetic, and heavy crude oil and natural gas represents one of the strongest and most diverse asset portfolios of any energy producer in the world. The strength of our assets, along with our integrated GHG Emissions Management Strategy, positions Canadian Natural to be resilient in a lower carbon emissions future.
- Technology and innovation are keys to success in a lower carbon emissions future. We are investing in developing technologies to create value, enhance performance and reduce emissions today and into the future. These investments include CCUS projects, methane reduction projects and further advancements in technology. Leveraging technology and innovation have led to significant reductions in Canadian Natural's GHG emissions.
- Canadian Natural is also exploring opportunities to convert bitumen from Alberta's oil sands into valuable products that do not require combustion, contributing toward reducing scope 3 emissions.

Canadian Natural and the Canadian crude oil and natural gas sector are delivering game-changing environmental performance. We recognized the need to reduce GHG emissions across our operations, leveraging technology and Canadian ingenuity to deliver results, and will continue to do so into the future.

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

	Use of climate-related scenario analysis to inform strategy
Row 1	Yes, qualitative and quantitative

C3.2a

(C3.2a) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Transition scenarios IEA NZE 2050	Company-wide		The Net Zero Emissions by 2050 (NZE) Scenario shows a narrow but achievable pathway for the global energy sector to achieve net zero CO2 emissions by 2050, with advanced economies reaching net zero emissions in advance of the other scenarios. This scenario also meets key energy-related United Nations Sustainable Developm ent Goals (SDGs), in particular achieving universal energy access by 2030. The NZE Scenario does not rely on emissions reductions from outside the energy sector to achieve its goals, but assumes that non-energy emissions will be reduced in the same proportion as energy emissions. It is consistent with limiting the global temperature rise to 1.5 °C without a temperature overshoot (with a 50% probability).CO2 price in Canada is assumed to be $250 USD per tonne in 2050. This external scenario does not include crude oil and gas demand projections. We used this external scenario to qualitatively and quantitatively assess the potential energy mix in 2050 in a 1.5°C scenario and support business planning and identification of risks and opportunities.

Transition scenarios IEA APS	Company-wide		The IEA Announced Pledges Scenario (APS) takes account of all the climate commitments made by governments around the world including Nationally Determined Contributions as well as longer term net zero emissions targets, and assumes that they will be met in full and on time. The global trends in this scenario represent the cumulative extent of the world's ambition to tackle climate change as of mid-2022. The remaining difference in global emissions between the APS and the goals in the NZE Scenario shows the "ambition gap" that needs to be closed to achieve the goals agreed in the Paris Agreement in 2015. CO2 price in Canada is assumed to be $200 USD per tonne in 2050. Crude oil demand in this scenario is 57.2 MMbbl/d and natural gas demand is 2,660 BCM in 2050. We used this external scenario to qualitatively and quantitatively assess the impact to crude oil and natural gas demand and support business planning and identification of risks and opportunities.
Transition scenarios IEA STEPS (previously IEA NPS)	Company-wide		The IEA Stated Policies Scenario (STEPS) does not take for granted that governments will reach all announced goals. Instead, it explores where the energy system might go without additional policy implementation. As with the APS, it is not designed to achieve a particular outcome. It takes a granular, sector-by-sector look at existing policies and measures and those under development. The remaining difference in global emissions between the STEPS and the APS represents the "implementation gap" that needs to be closed for countries to achieve their announced decarbonisation targets. CO2 price in Canada is assumed to be $77 USD per tonne in 2050. Crude oil demand in this scenario is 102.1 MMbbl/d and natural gas demand is 4,355 BCM in 2050. We used this external scenario to qualitatively and quantitatively assess the impact to crude oil

			and natural gas demand and support business planning and identification of risks and opportunities.
Transition scenarios Customized publicly available transition scenario	Company-wide	Unknown	bp Energy's New Momentum scenario captures the trajectory along which the global energy system is currently travelling. There is increased weight on the global ambition for decarbonization. CO2e emissions in New Momentum peak in the 2020s and by 2050 are around 30% below 2019 levels. Crude oil demand in this scenario is 73.0 MMbbl/d and natural gas demand is 4,616 BCM in 2050. We used this external scenario to qualitatively and quantitatively assess the impact to crude oil and natural gas demand and support business planning and identification of risks and opportunities.
Transition scenarios Customized publicly available transition scenario	Company-wide	1.6ºC – 2ºC	bp Energy's Accelerated scenario explores how different elements of the energy system might change to achieve a reduction in CO2e-equivalent emissions 75% by 2050 (relative to 2019 levels). Crude oil demand in this scenario is 41.6 MMbbl/d and natural gas demand is 2,422 BCM in 2050. We used this external scenario to qualitatively and quantitatively assess the impact to crude oil and natural gas demand and support business planning and identification of risks and opportunities.
Transition scenarios Customized publicly available transition scenario	Company-wide	1.5ºC	bp Energy's Net Zero scenario embodies a shift in societal behaviour and preferences to support gains in energy efficiency and the adoption of low carbon energy. It considers what elements of the energy system might need to change if the world collectively takes action for CO2e-equivalent emissions to fall by approximately 95% by 2050 (relative to 2019 levels).

			Crude oil demand in this scenario is 21.5 MMbbl/d and natural gas demand is 1,658 BCM in 2050. We used this external scenario to qualitatively and quantitatively assess the impact to crude oil and natural gas demand and support business planning and identification of risks and opportunities.
Transition scenarios Customized publicly available transition scenario	Company-wide	Unknown	Equinor Energy's Walls scenario builds on current energy market trends and energy and climate policies, assuming climate action to progress at a slowly accelerating pace in the future.. Crude oil demand in this scenario is 81.5 MMbbl/d and natural gas demand is 4,379 BCM in 2050. We used this external scenario to qualitatively and quantitatively assess the impact to crude oil and natural gas demand and support business planning and identification of risks and opportunities.
Transition scenarios Customized publicly available transition scenario	Company-wide	1.5ºC	Equinor Energy's Bridges scenario is a normative scenario that assumes compliance with the 1.5°C carbon budget. This scenario demonstrates the enormous and sustained efforts required to reach this target. Crude oil demand in this scenario is 24.1 MMbbl/d and natural gas demand is 1,187 BCM in 2050. We used this external scenario to qualitatively and quantitatively assess the impact to crude oil and natural gas demand and support business planning and identification of risks and opportunities
Transition scenarios Customized publicly	Company-wide	2.1ºC - 3ºC	Shell Energy's Archipelagos scenario represents the near-term shift in prioritization of energy security over managing emissions. However, the drive for energy security results in increased

available transition scenario			use of low-carbon technologies, which accelerates the pace of the energy transition and limits warming to 2.2°C. Crude oil demand in this scenario is 91.8 MMbbl/d and natural gas demand is 3,611 BCM in 2050. We used this external scenario to qualitatively and quantitatively assess the impact to crude oil and natural gas demand and support business planning and identification of risks and opportunities.
Transition scenarios Customized publicly available transition scenario	Company-wide	1.5ºC	Shell Energy's Sky 2050 scenario represents a normative approach to achieve net-zero emissions by 2050 and limits global warming to 1.5°C. Crude oil demand in this scenario is 45.3 MMbbl/d and natural gas demand is 1,913 BCM in 2050. We used this external scenario to qualitatively and quantitatively assess the impact to crude oil and natural gas demand and support business planning and identification of risks and opportunities.

C3.2b

(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.

Row 1

Focal questions

- How will energy demand change under various scenarios?
- Have we identified the most material climate-related risks?

Results of the climate-related scenario analysis with respect to the focal questions

As part of evaluating climate change related risk and opportunities, Canadian Natural reviews independent external scenario analyses developed by energy firms and agencies representing a range of global crude oil and natural gas demand levels through 2050. We have reviewed scenarios that model assumptions, aligned with the commitment of the Paris Agreement, including the International Energy Agency's Net Zero Emissions by 2050 scenario and the UN's Sustainable Development Goal on climate action (SDG 13) that seeks to limit global warming to 1.5°C above pre-industrial levels.

These external scenario analyses are a tool used to support business planning and identification of risks and opportunities. As part of this process, we consider a number of variables and assumptions related to market events (e.g., economic, geopolitical, and social), commodity and carbon prices, policy, regulation, technology development and adoption, energy efficiency and reputation. The past year has driven a heightened focus on energy security and affordability while reducing emissions.

Although the scenarios reviewed show an accelerated pace to net zero, it is clear secure sources of crude oil and natural gas remain essential to the global energy mix for the foreseeable future. As the world evolves toward a lower carbon emissions energy system, Canadian Natural is one of the leading companies producing secure, reliable crude oil and natural gas while reducing our GHG emissions and supporting climate-related goals. We have an integrated GHG Emissions Management Strategy to ensure our resiliency in the short, medium and long term. Our strategy remains focused on investments in CCUS projectsand employing significant resources to reduce our methane emissions along with investing in natural gas production.

Natural gas is an integral part of our business strategy and a pathway to a lower carbon emissions future. As one of the largest producers of natural gas in Canada, our natural gas assets deliver strong environmental performance. As the energy system integrates more renewable energy sources, natural gas will continue to provide an affordable and secure baseload energy supply. Through industry collaborations, we are also exploring the opportunity of converting bitumen into valuable products that do not require combustion such as carbon fibre, activated carbon, graphite, and graphene. These products are valuable for the products we use every day, as well as the products that support the energy transition to a lower carbon emissions economy.

Canadian Natural's balanced portfolio of light, synthetic, and heavy crude oil and natural gas represents one of the strongest and most diverse, long life low decline asset portfolios of any energy producer in the world. The strength of our assets, along with our integrated GHG Emissions Management Strategy, helps to mitigate climate change risks to our reserves and will position us for success in a low carbon emissions future.

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	Climate-related risks have influenced our products and services strategy in terms of our evaluation of assets during acquisition assessments. For example, the acquisition of the Athabasca Oil Sands Project assets in 2017 was influenced by the GHG intensity performance of this asset, including the Quest CCS project. This evaluation of climate-related risk and opportunities is applied over the long-term planning time horizon of our business. An aspect of climate change risk that most influences Canadian Natural's business strategy is future compliance costs/regulatory changes. The costs of complying with environmental legislation in the future may have a material adverse effect on our financial condition. Current and potential climate change policies and regulations are considered when making decisions to advance the business strategy. We actively track the development of policies and regulations at the international level, and at the national and provincial level in Canada. Canadian Natural's associated environmental risk management strategies focus on working with legislators and regulators to ensure that any new or revised policies, legislation or regulations properly reflect a balanced approach to sustainable development. Climate risk management occurs at the asset level through recurring project and technology reviews, as well as economic evaluations, including forecasting GHG intensity and compliance costs, and reviewing abatement projects. We also use an internal price of carbon and climate policy as a sensitivity to evaluate returns on future emission reduction projects under different potential carbon prices. The internal price

		varies from $65/t to $170/t, depending on the project's applicability, jurisdiction, operational duration, and implementation timelines.
Supply chain and/or value chain	Yes	Increasing GHG compliance costs and other climate-related risks contributed to our decision to partner with a midstream company (Inter Pipeline, former owners were Williams Energy) on the investment in the Horizon Liquids Extraction Project (LEP) over a long-term time horizon. They had previously developed a similar project at another oil sands mining and upgrading facility. Discussions resulted in a commercial agreement on implementation of the LEP at Horizon, with operation of the LEP beginning in 2016. It is currently owned and operated by Inter Pipeline Limited. The LEP processes off-gas from Horizon's upgrading process to recover hydrocarbon liquids (such as ethane and propane). These liquids are then transported off site for use by Inter Pipeline in their midstream business. Prior to the LEP, the off-gas stream had been used as a source of fuel gas by Horizon operations. With the LEP in operation, Horizon no longer uses the off-gas stream for fuel, and has replaced it with pipeline-quality fuel gas, which has a lower GHG intensity per gigajoule than the off-gas stream and therefore produces a product with lower GHG intensity and reduces the GHG compliance cost at Horizon. The operation of the LEP reduced GHG emissions at Horizon by approximately 120,000 t CO2e in 2022 and avoided more than 847,000 t CO2e emissions since 2016. This program is expected to last the entire time horizon of the Horizon integrated oil sands operation.
Investment in R&D	Yes	Climate-related risks influence our R&D investments, including spend for emission mitigation research. Achieving an aspirational target of net zero oil sands emissions and oil sands emissions targets requires prioritizing evaluation and investment of R&D according to time horizons and actions in the near-, mid-, and long-term. Examples of actions include: • Near-term/current: Carbon Capture Utilization and Storage (CCUS), pneumatic retrofits, as well as piloting the In-Pit Extraction Process (IPEP) and Solvent Enhanced Oil Recovery (EOR);

		• Medium-term: Leverage CCUS advancements and learnings into the next generation of CCUS facilities and Solvent EOR; and • Long-term: Expand/develop CCUS and carbon capture and conversion projects. New technology takes time to test and commercialize necessitating collaboration. As a founding member of, and one of the largest contributors to Canada's Oil Sands Innovation Alliance (COSIA), the innovation arm of the Pathways Alliance, Canadian Natural has an important role in this collaborative effort. In 2022, we led 45 COSIA projects and participated in another 25. To date, we have shared technologies/innovation valued at $185 MM in tailings, $156 MM in water, $46.5 MM in GHG and $43 MM in reclamation through COSIA. We are a member of the Petroleum Technology Alliance Canada (PTAC) with over 800 R&D projects launched to date. Canadian Natural is also a founding member of the Clean Resource Innovation Network (CRIN), an industry-led network that leverages large-scale collaboration and aligns research and technology priorities. Significant collaboration across industry and governments is essential to accelerate the path to net zero. This is why Canadian Natural, along with Canada's largest oil sands producers, formed the Pathways Alliance. The goal of this unique alliance, working with the federal and Alberta governments, is to achieve net zero GHG emissions from oil sands operations by 2050 to help Canada meet its climate goals, including its Paris Agreement commitments. The Alliance involves multiple pathways to net zero including an executable plan to build a CO2 trunkline connecting Fort McMurray and Cold Lake to a carbon sequestration hub; deploying existing/emerging reduction technologies, such as carbon capture technologies, clean hydrogen, process improvements, energy efficiency, fuel switching and electrification.
Operations	Yes	Climate-related risks have influenced our operation's strategy by focusing our efforts on actions that deliver both GHG emission reductions and effective and efficient production of oil and gas. As a specific example, beginning in 2018 we implemented a program to retrofit or remove certain pneumatic control devices within our Conventional oil and gas operations in BC and Alberta. These

		devices are used to maintain safe and effective operation of facilities by controlling pressures and production flow rates. The replacement pneumatic devices perform the same functions with typically 80-90% lower emissions than the original devices. This has provided an environmental benefit of reduced GHG emissions (from reduced methane emissions), increased volumes of gas for sale (i.e., the gas not vented is sold), and improved operability from new control devices. Since 2018, Canadian Natural has completed over 8,000 pneumatic retrofits and removals resulting in a cumulative CO2e reduction from its operations of approximately 815,000 tonnes/year, of which approximately 1,250 retrofits/removals equivalent to 122,000 tonnes/year CO2e were completed in 2022. Emission reductions from these replacements will be realized throughout the facility lifetime. Typical facility lifetimes are in the 5-20 year time horizon. At facility end of life, equipment can be reused at other facilities and continue to generate GHG reductions.

C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Capital allocation Acquisitions and divestments Access to capital Assets Liabilities	The additional requirements of enacted or proposed GHG regulations on Canadian Natural's operations may increase capital expenditures and production expenses, including those related to our existing and planned oil sands projects. Climate-related risks and opportunities influence our capital allocation decisions. For example, the decision to acquire the Athabasca Oil Sands Project (AOSP) assets in 2017 was influenced by the GHG intensity performance of this asset, including the Quest Carbon Capture and Storage Project. Our planning included both existing and proposed climate change policies and regulations when making decisions to advance the business strategy. The carbon storage opportunities provides a planned 25 year time horizon with an estimated storage of 27 million tonnes. This provides long-term certainty to carbon reductions to offset emissions.

		Building on our expertise in CCUS projects, Canadian Natural identified an opportunity to collaborate with Canada's other largest oil sands producers and we co-founded the Pathways Alliance. The goal of this unique alliance, working together with governments, is to achieve net zero GHG emissions from oil sands operations by 2050 to help Canada meet its climate goals, including its Paris Agreement commitments. Initially, the Pathways Alliance is focusing on building a foundational carbon capture and storage network in northern Alberta. At the heart of the network is a proposed carbon transportation line to gather captured CO2 from more than 20 oil sands facilities and move it to a proposed hub in the Cold Lake area of Alberta for safe underground storage. The line would also be available to other industries in the region interested in capturing and storing CO2. Canadian Natural's balanced portfolio of light, synthetic, and heavy crude oil and natural gas represents one of the strongest and most diverse asset portfolios of any energy producer in the world. Our oil sands mining operations represent an important part of our business. Their long life, no decline, manufacturing-like operations represent one of the clearest paths to net zero emissions of any global crude oil asset. Our portfolio also includes natural gas, a reliable and affordable energy source for power generation, with less than half the carbon footprint of coal. For example, Canadian Natural has increased investment in low intensity natural gas assets, increasing natural gas production by 23% from 2021 to 2022. As one of the largest producers of natural gas in Canada, Canadian Natural's natural gas assets deliver strong environmental performance. The identification of climate-related risks and opportunities has also influenced our track record of investment in technology research and development, with over $151 million invested in technology development and implementation to reduce GHG emissions in 2022.

C3.5

(C3.5) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's climate transition?

	Identification of spending/revenue that is aligned with your organization's climate transition
Row 1	No, and we do not plan to in the next two years

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

Absolute target
Intensity target

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number

Abs 1

Is this a science-based target?

No, and we do not anticipate setting one in the next two years

Target ambition

Year target was set

2022

Target coverage

Company-wide

Scope(s)

Scope 1
Scope 2

Scope 2 accounting method

Location-based

Scope 3 category(ies)

Base year

2020

Base year Scope 1 emissions covered by target (metric tons CO2e)

23,810,000

Base year Scope 2 emissions covered by target (metric tons CO2e)

3,220,000

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)

Base year Scope 3, Other (upstream) emissions covered by target (metric tons CO2e)

Base year Scope 3, Other (downstream) emissions covered by target (metric tons CO2e)

Base year total Scope 3 emissions covered by target (metric tons CO2e)

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

27,030,000

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

100

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

100

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)

Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)

Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)

Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)

Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)

Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)

Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)

Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)

Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)

Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)

Base year total Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100

Target year

2035

Targeted reduction from base year (%)

40

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

16,218,000

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

23,243,129

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

3,092,646

Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Other (upstream) emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Other (downstream) emissions in reporting year covered by target (metric tons CO2e)

Total Scope 3 emissions in reporting year covered by target (metric tons CO2e)

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

26,335,776

Does this target cover any land-related emissions?

No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

% of target achieved relative to base year [auto-calculated]

6.4208657048

Target status in reporting year

New

Please explain target coverage and identify any exclusions

Target covers 100% of gross operated Scope 1 + 2 GHG emissions

Plan for achieving target, and progress made to the end of the reporting year

Canadian Natural's integrated GHG Emissions Management Strategy includes: Integrating emissions reduction in project planning and operations; leveraging technology to create value, enhance performance and reduce emissions; Investing in research and development (R&D) and supporting collaboration; focusing on continuous improvement to drive long-term emissions reductions through energy and process efficiencies; Leading in carbon capture, sequestration and storage; engaging proactively in policy and regulation to effectively manage climate risks and opportunities, including trading capacity and offsetting emissions and reviewing and developing new business opportunities and trends that present further opportunities to reduce our environmental footprint. Our three focus areas for 2023 and beyond are CCUS, methane emissions reductions and technology, innovation, and implementation. This target was announced on November 30, 2022 and corporate absolute Scope 1 & 2 GHG emissions have reduced by 3% compared to the 2020 baseline.

List the emissions reduction initiatives which contributed most to achieving this target

C4.1b

(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).

Target reference number

Int 1

Is this a science-based target?

No, and we do not anticipate setting one in the next two years

Target ambition

Year target was set

2021

Target coverage

Business activity

Scope(s)

Scope 1

Scope 2 accounting method

Scope 3 category(ies)

Intensity metric

Metric tons CO2e per barrel of oil equivalent (BOE)

Base year

2021

Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)

0.045

Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 1: Purchased goods and services (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 2: Capital goods (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 5: Waste generated in operations (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 6: Business travel (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 7: Employee commuting (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 8: Upstream leased assets (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 10: Processing of sold products (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 11: Use of sold products (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 13: Downstream leased assets (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 14: Franchises (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 15: Investments (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Other (upstream) (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Other (downstream) (metric tons CO2e per unit of activity)

Intensity figure in base year for total Scope 3 (metric tons CO2e per unit of activity)

Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)

0.045

% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure

100

% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure

% of total base year emissions in Scope 3, Category 1: Purchased goods and services covered by this Scope 3, Category 1: Purchased goods and services intensity figure

% of total base year emissions in Scope 3, Category 2: Capital goods covered by this Scope 3, Category 2: Capital goods intensity figure

% of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) covered by this Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) intensity figure

% of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution covered by this Scope 3, Category 4: Upstream transportation and distribution intensity figure

% of total base year emissions in Scope 3, Category 5: Waste generated in operations covered by this Scope 3, Category 5: Waste generated in operations intensity figure

% of total base year emissions in Scope 3, Category 6: Business travel covered by this Scope 3, Category 6: Business travel intensity figure

% of total base year emissions in Scope 3, Category 7: Employee commuting covered by this Scope 3, Category 7: Employee commuting intensity figure

% of total base year emissions in Scope 3, Category 8: Upstream leased assets covered by this Scope 3, Category 8: Upstream leased assets intensity figure

% of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution covered by this Scope 3, Category 9: Downstream transportation and distribution intensity figure

% of total base year emissions in Scope 3, Category 10: Processing of sold products covered by this Scope 3, Category 10: Processing of sold products intensity figure

% of total base year emissions in Scope 3, Category 11: Use of sold products covered by this Scope 3, Category 11: Use of sold products intensity figure

% of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products covered by this Scope 3, Category 12: End-of-life treatment of sold products intensity figure

% of total base year emissions in Scope 3, Category 13: Downstream leased assets covered by this Scope 3, Category 13: Downstream leased assets intensity figure

% of total base year emissions in Scope 3, Category 14: Franchises covered by this Scope 3, Category 14: Franchises intensity figure

% of total base year emissions in Scope 3, Category 15: Investments covered by this Scope 3, Category 15: Investments intensity figure

% of total base year emissions in Scope 3, Other (upstream) covered by this Scope 3, Other (upstream) intensity figure

% of total base year emissions in Scope 3, Other (downstream) covered by this Scope 3, Other (downstream) intensity figure

% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this total Scope 3 intensity figure

% of total base year emissions in all selected Scopes covered by this intensity figure

100

Target year

2022

Targeted reduction from base year (%)

1

Intensity figure in target year for all selected Scopes (metric tons CO2e per unit of activity) [auto-calculated]

0.04455

% change anticipated in absolute Scope 1+2 emissions

0

% change anticipated in absolute Scope 3 emissions

0

Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)

0.044

Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 1: Purchased goods and services (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 2: Capital goods (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 5: Waste generated in operations (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 6: Business travel (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 7: Employee commuting (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 8: Upstream leased assets (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 10: Processing of sold products (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 11: Use of sold products (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 13: Downstream leased assets (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 14: Franchises (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 15: Investments (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Other (upstream) (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Other (downstream) (metric tons CO2e per unit of activity)

Intensity figure in reporting year for total Scope 3 (metric tons CO2e per unit of activity)

Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)

0.044

Does this target cover any land-related emissions?

No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

% of target achieved relative to base year [auto-calculated]

222.2222222222

Target status in reporting year

Achieved

Please explain target coverage and identify any exclusions

This target covers all of Canadian Natural's operations. It is part of our 2022 Corporate Scorecard. The Corporate Scorecard performance measures are assigned weightings as indicated in the scorecard below and the resultant overall score is utilized by the Compensation Committee to determine the performance bonus for the NEOs, and the other members of the Corporation's Management Committee as well as the Corporation's employees generally. Performance is evaluated on this metric based on improvement from prior period results for corporate scope 1 GHG intensity.

Plan for achieving target, and progress made to the end of the reporting year

List the emissions reduction initiatives which contributed most to achieving this target

Canadian Natural's ongoing focus on steady reliable production consists of many initiatives which result in higher average production at marginal extra energy (and GHG) expense, reducing Oil Sands mining and thermal GHG intensity. Efforts to reduce low, or zero production time, through reliability initiatives, improves GHG intensity.

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?

Target(s) to reduce methane emissions

Net-zero target(s)

C4.2b

(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.

Target reference number

Oth 1

Year target was set

2021

Target coverage

Business activity

Target type: absolute or intensity

Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Methane reduction target

Other, please specify

Total Methane Emissions in tonnes CH4 from North American E&P operations

Target denominator (intensity targets only)

Base year

2016

Figure or percentage in base year

184,325

Target year

2030

Figure or percentage in target year

92,163

Figure or percentage in reporting year

91,705

% of target achieved relative to base year [auto-calculated]

100.496951021

Target status in reporting year

Achieved

Is this target part of an emissions target?

Yes, this absolute methane reduction target is part of our larger corporate target to reduce corporate absolute Scope 1 and 2 GHG emissions by 40% by 2035 from a 2020 baseline.

Is this target part of an overarching initiative?

Reduce short-lived climate pollutants

Please explain target coverage and identify any exclusions

Target coverage is methane emissions from operated assets in our North American Exploration and Production segment.

Plan for achieving target, and progress made to the end of the reporting year

List the actions which contributed most to achieving this target

The reduction plan for this target included vent emissions reductions from our primary heavy oil operations, through our program to retrofit pneumatic-powered devices such as controllers and pumps, by continuing with our Fugitive Emission Management Program (FEMP), and by completing solution gas conservation projects to reduce the amount of gas vented in heavy oil production. To the end of 2022, we have reduced emissions by 50.3% compared to 2016.

C4.2c

(C4.2c) Provide details of your net-zero target(s).

Target reference number

NZ1

Target coverage

Business division

Absolute/intensity emission target(s) linked to this net-zero target

Int1

Target year for achieving net zero

2050

Is this a science-based target?

No, and we do not anticipate setting one in the next two years

Please explain target coverage and identify any exclusions

In 2018, Canadian Natural was one of the first oil companies to announce an aspirational goal of achieving net zero emissions in our oil sands operations. Canadian Natural is also a member of the Pathways Alliance, an alliance of oil sands companies working together with governments to achieve net zero GHG emissions from oil sands operations by 2050 – to help Canada meet its climate goals, including Paris Agreement

commitments and 2050 net zero aspirations. The Pathways Alliance considers multiple parallel pathways to net zero including a foundational project of a CO2 trunkline connecting Fort McMurray and Cold Lake to a carbon sequestration hub; deploying existing and emerging GHG reduction technology such as carbon capture, clean hydrogen, process improvements, energy efficiency, fuel switching and electrification.

Canadian Natural is one of the largest owners of carbon capture capacity in the oil and natural gas sector globally through projects at Horizon, our 70% owned Quest carbon capture facility located at Scotford, and our 50% working interest in the NWR Refinery. As part of our GHG emissions reduction strategy, our CCUS projects include CO2 storage in geological formations, using CO2 in EOR techniques and CO2 injection into tailings. Gross carbon capture capacity through these projects combined is ~2.7 Mt of CO2 annually, equivalent to taking approximately 576,000 cars off the road per year. We've made significant progress to date by investing in CCUS projects, R&D and innovation. For example: we have invested $151 million in 2022 in GHG technology development and implementation. Another example of a technology project on our pathway to net zero includes Canadian Natural's pilot using solvents at our Kirby South thermal oil sands operation, as a way to reduce steam use and GHG emissions per barrel of production. In our Primrose and Wolf Lake operations, we use natural gas for power through cogeneration units. Cogeneration allows these facilities to simultaneously produce electricity and recover waste heat to meet the sites' steam and electricity demands.

Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?

No

Planned milestones and/or near-term investments for neutralization at target year

Planned actions to mitigate emissions beyond your value chain (optional)

No comment

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	14	0
To be implemented*	244	986,058
Implementation commenced*	1,772	1,443,812
Implemented*	1,403	160,903
Not to be implemented	0	0

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Fugitive emissions reductions

Oil/natural gas methane leak capture/prevention

Estimated annual CO2e savings (metric tonnes CO2e)

1,604,715

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

17,709,024

Investment required (unit currency – as specified in C0.4)

5,885,700

Payback period

<1 year

Estimated lifetime of the initiative

3-5 years

Comment

The 3-5 year time-frame is for the field implementation of the initiative. Reductions achieved will continue over the lifetime of the facilities being retrofitted. Monetary savings is the estimated value of GHG credits earned.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Compliance with regulatory requirements/standards	Canadian Natural has integrated emissions reduction strategies to meet performance goals and comply with GHG emissions and air pollutant requirements. We participate in the Canadian federal and provincial regulated GHG emissions reporting programs and quantify annual GHG emissions for internal and external reporting. We recognize the need to reduce GHG emissions and supports Canada's leadership in the Paris Agreement as a pathway to GHG reduction and driving innovation. We also support the federal and provincial goals to reduce methane emissions by 45% by 2025. Leveraging technology is a key part of our GHG reduction strategy. In 2022, we invested $151 million technology development and implementation to reduce GHG emissions. Projects span from CCS to enhancing steam efficiencies and conserving solution gas. In addition to our existing projects, we continue to explore emission reduction technologies with the potential to make a significant difference, including:

	• Using solvents at our Kirby and Primrose thermal operations to reduce steam use, and GHG emissions, per barrel of production; and • Using Cyclic CO2 injection in Cold Heavy Oil Production with Sand (CHOPS) assets. Produced CO2 is captured/re-injected in the production cycle, which improves viscosity and flow rates, while CO2 remains permanently sequestered in the reservoir. Our Technology and Innovation (TI) team supports technology development efforts by managing information to accelerate technology adoption, strengthening our internal expertise through internal/external collaborations, and coordinating resources and investment. They manage external partnerships and technical collaborations to support strategic decisions, maintain transparency, and drive results. For example, senior management and TI support is embedded in our GHG Operations Strategy Committee, which oversees working groups that manage and coordinate GHG reduction and technology projects. The Committee also identifies and manages issues/risks (including regulatory/policy awareness) with a consistent approach to technology deployment. TI teams provide support to help connect the areas, advance technologies, and assist business units in delivering their emissions reductions projects. For example, the Conventional GHG Steering Committee coordinates programs and technologies to reduce venting in our Alberta heavy oil operations.
Dedicated budget for other emissions reduction activities	Canadian Natural is committed to doing our part to reduce our emissions. Canadian Natural has been the leading R&D investor for the crude oil and natural gas sector for a number of years - investing $3.9 billion since 2009 and $587 million in technology development and deployment in 2022. Leveraging technology and innovation is the best way to deliver improved environmental performance, reduced costs, and increased productivity.
Employee engagement	Climate risk management occurs at the asset level through recurring project reviews, technology reviews, and economic evaluations including forecasting GHG intensity and compliance costs, and reviewing abatement projects. Our Field Operations teams provide valuable input on new opportunities.
Internal price on carbon	Canadian Natural uses the current regulated price of carbon to evaluate returns on future projects under different potential carbon regulations and for evaluating emission reduction projects.
Internal incentives/recognition programs	Greenhouse gas emissions intensity (tonnes/BOE) is one measure in the corporate performance scorecard on which performance bonuses are based.
Marginal abatement cost curve	Canadian Natural has developed marginal abatement cost curves that guide our R&D investments.

Partnering with governments on technology development	Canadian Natural is also a member of the Pathways Alliance, an alliance of oil sands companies working together with governments to achieve net zero GHG emissions from oil sands operations by 2050 – to help Canada meet its climate goals, including Paris Agreement commitments and 2050 net zero aspirations. The Pathways Alliance considers multiple parallel pathways to net zero including a foundational project of a CO2 trunkline connecting Fort McMurray and Cold Lake to a carbon sequestration hub; deploying existing and emerging GHG reduction technology such as carbon capture, clean hydrogen, process improvements, energy efficiency, fuel switching and electrification. The Pathways Alliance plan illustrates how industry and government can work together to reduce emissions from oil sands operations by 22 million tonnes CO2e per year by 2030 and achieve net zero emissions from operations by 2050. In addition, Canadian Natural completed an ERA-funded project to enhance the accuracy of GHG emissions measurements from large industrial area sources, typical of the oil sands region of Alberta. This research will help address some challenges faced by industry in quantifying the rates of methane and CO2 emissions, and allow the implementation of more effective strategies to reduce GHG emissions. This project deployed different working groups and approaches for measuring emissions using a holistic system of advanced sensors, laser and fiber optic technology, as well as computer models and meteorological data. The groups will deliver commercially proven technologies, guidelines for measurement and more accurate emissions profiles.
Other Scenario Analysis	As part of evaluating climate change related risk and opportunities, Canadian Natural reviews independent external scenario analyses developed by energy firms and agencies representing a range of global crude oil and natural gas demand levels through 2050. We've reviewed scenarios that model assumptions, which are aligned with the commitment of the Paris Agreement, including the International Energy Agency's Net Zero Emissions by 2050 scenario and the UN's SDG on climate action (SDG 13) that seeks to limit global warming to 1.5°C above pre-industrial levels. These external scenario analyses are a tool used to support business planning and identification of risks and opportunities. As part of the process, we consider a number of variables and assumptions related to market events (e.g. economic, geopolitical, and social), commodity prices, carbon prices, policy, regulation, technology development and adoption, energy efficiency and reputation. Although the scenarios reviewed show an accelerated pace to net zero, it's clear secure sources of crude oil and natural gas remain essential to the global energy mix for the foreseeable future. Canadian Natural has an integrated GHG Emissions Management Strategy to ensure our resiliency. Our strategy

	remains focused on investments in CCUS projects, as a co-founder of the Pathways Alliance, and employing significant resources to reduce our methane emissions along with investing in natural gas production. Natural gas is an integral part of our business strategy and a pathway to a lower carbon emissions future. Canadian Natural's natural gas assets deliver strong environmental performance. As the energy system integrates more renewable energy sources, natural gas will continue to provide an affordable and secure baseload energy supply. Through industry collaborations, we are exploring the opportunity of converting bitumen into valuable products that do not require combustion such as carbon fiber, activated carbon, graphite, and graphene. These products are valuable as building blocks for the products we use every day, as well as the products that support the energy transition to a lower carbon emissions economy. The strength of our assets, along with our integrated GHG Emissions Management Strategy, helps to mitigate climate change risks to our reserves and will position us for success in a low carbon emissions future.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?

No

C-OG4.6

(C-OG4.6) Describe your organization's efforts to reduce methane emissions from your activities.

Reducing methane emissions is a priority for Canadian Natural. Our methane reduction efforts include:

- The use of vapour combustor technology to convert methane to CO2 at our heavy oil operations reduced GHG emissions by 85% when compared to venting in 2022. In 2022, over 120,000 tCO2e of methane was converted to CO2 using this technology, reducing GHG emissions by more than 85% when compared to venting.
- From 2018 to 2022, we invested over $27.6 million in our Cold Heavy Oil Production with Sand (CHOPS) and in situ thermal operations to conserve the equivalent of over 10.4 Mt CO2e. In 2022, we completed 244 solution gas conservation projects resulting in a reduction of approximately 0.99 Mt CO2e/year. Our solution gas conservation projects include: efficient management of more than 1,375 compressor units used for gas conservation; proactive tie-in of wells and multi-well pads where solution gas is conserved; and continuous improvement in facility design to reduce vented gas. We also monitor compressor fleet performance to improve fuel gas efficiency.

- As part of our pneumatic retrofit program, in 2021 we identified the opportunity to use solar pumps to replace targeted pneumatic injection pumps in our Alberta and British Columbia conventional areas. Pneumatic pumps are powered by pressurized natural gas from commercial pipelines which emit small volumes of methane. Solar pumps, alternatively, are powered by solar panels to operate the pumps and eliminate the need for pressurized natural gas. When compared to pneumatic pumps, solar pumps have low associated annual operating costs and emit zero GHG emissions. A project plan was constructed, targeting converting approximately 3,800 pneumatic pumps over the next three years. The project launched in January 2022 and is targeting methane emissions reductions of up to 361,000 tonnes CO2e/yr when completed.
- Across our conventional and thermal field operations, our employees are using the Field Improvement Technique (FIT) to identify cost savings and methane reductions. Employees in our Medicine Hat District used the FIT process to identify a way to utilize unused horsepower from a natural gas engine to power an air compressor. This project converted the site from methane powered pneumatic control systems to instrument air, reducing methane emissions by 285 t CO2e/year.

C-OG4.7

(C-OG4.7) Does your organization conduct leak detection and repair (LDAR) or use other methods to find and fix fugitive methane emissions from oil and gas production activities?

Yes

C-OG4.7a

(C-OG4.7a) Describe the protocol through which methane leak detection and repair or other leak detection methods, are conducted for oil and gas production activities, including predominant frequency of inspections, estimates of assets covered, and methodologies employed.

The goal of Canadian Natural's Fugitive Emission Management and Control (FEMC) program is to reduce fugitive emissions by providing an efficient means to identify larger gas leaks and prioritize them for repair. The program consists of a combination of comprehensive fugitive surveys of facilities using optical gas imaging (OGI) cameras, screening of wellsites using auditory, visual, and olfactory (AVO) detection, and alternative detection methods using methane detectors on fixed-wing aircraft and on trucks. The program also includes a leak tracking and repair component, and record-keeping and reporting. The specific results vary by jurisdiction – typically facilities are surveyed 1-3 times per year and wellsites are screened annually. All assets except oil production facilities in Saskatchewan are included in the program.

In 2020, the Alberta Energy Regulator (AER) released stringent requirements for Fugitive Emissions Management. Compliance with this new directive could have been costly and time intensive to achieve. We saw an opportunity for industry and regulators to work together to develop made-in-Alberta solutions to ensure regulatory compliance while delivering the most cost and time effective model for emissions measurement. Canadian Natural utilized knowledge and connections made through Petroleum Technology Alliance Canada (PTAC) and developed an Alternative Fugitive Emissions Management Program (Alt-FEMP) with the support of Emissions Reduction Alberta (ERA). This program, managed and executed in-house to add area operational knowledge to our processes to continue to improve fugitive emission detection and expedite repairs, includes over 3,500 comprehensive fugitive emission surveys using optical gas imaging cameras and 20,272 fugitive emission screenings at wells across our North American Exploration & Production operations in 2022. The program also includes conducting pilots of emerging technologies across 1,500 facilities in our NA E&P operations to evaluate technology performance and validate forecasted emission and cost reductions. The pilots are testing the commercialization of technologies that offer accelerated detection and accurate characterization of methane emissions. They will assist industry in continuous improvement of LDAR efficiencies and overall methane emission reductions. Reductions achieved will continue over the lifetime of the facilities being retrofitted. If successful, the new Alt-FEMP will reduce methane fugitive emissions through faster detection and repairs, reduce our operating costs for methane LDAR by up to 86% and increase worker safety.

C-OG4.8

(C-OG4.8) If flaring is relevant to your oil and gas production activities, describe your organization's efforts to reduce flaring, including any flaring reduction targets.

Canada has among the highest flaring emissions management standards in the world. As one example of the success of these standards, the province of Alberta in 2021 achieved a 97% solution gas conservation rate (see Alberta Energy Regulator's "Upstream Petroleum Industry Flaring and Venting Report for the year ending December 31, 2021"). Canadian Natural meets all compliance obligations and targets. Our strategy for managing GHG emissions focuses on improving energy conservation and efficiency, reducing emissions intensity, supporting associated research and development, and adopting innovative technologies.

To support this strategy, we have flaring, venting, fuel and natural gas conservation programs in place. For example, in our international operations, flaring emissions decreased by 22.7% in 2022 as a result of our focus on minimizing operational flaring and by launching a project to replace a fuel gas purge of low-pressure flare.

Canadian Natural and the entire Canadian oil and gas sector have delivered game-changing environmental performance. Canada's oil and gas sector recognized the need to reduce GHG emissions and we have leveraged technology and Canadian ingenuity to deliver impressive results.

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?

No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?

No

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	Yes, a change in methodology	Immaterial changes to our calculation methodology for certain facilities were made based on an internal review of our GHG calculations. The impact on the inventory was less than 0.1%

C5.1c

(C5.1c) Have your organization's base year emissions and past years' emissions been recalculated as a result of any changes or errors reported in C5.1a and/or C5.1b?

	Base year recalculation	Base year emissions recalculation policy, including significance threshold	Past years' recalculation
Row 1	No, because the impact does not meet our significance threshold	Our base year has been changed from 2021 to 2020 to align with our new absolute emissions target of 40% reduction in total corporate absolute Scope 1 and 2 GHG emissions by 2035 from a 2020 baseline, announced in November 2022. In the event of a material acquisition or divestiture, Canadian Natural would evaluate our baseline emissions for adjustment.	No

C5.2

(C5.2) Provide your base year and base year emissions.

Scope 1

Base year start

January 1, 2020

Base year end

December 31, 2020

Base year emissions (metric tons CO2e)

23,810,000

Comment

Contains all operated facilities gross Scope 1 emissions

Scope 2 (location-based)

Base year start

January 1, 2020

Base year end

December 31, 2020

Base year emissions (metric tons CO2e)

3,230,000

Comment

Contains all operated facilities gross Scope 2 emissions

Scope 2 (market-based)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 1: Purchased goods and services

Base year start

Base year end

Base year emissions (metric tons CO2e)

0

Comment

No comment

Scope 3 category 2: Capital goods

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 4: Upstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 5: Waste generated in operations

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 6: Business travel

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 7: Employee commuting

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 8: Upstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 9: Downstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 10: Processing of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 11: Use of sold products

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

131,871,838

Comment

Contains all operated facilities gross Scope 3 emissions from use of sold products

Scope 3 category 12: End of life treatment of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 13: Downstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 14: Franchises

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 15: Investments

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3: Other (upstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3: Other (downstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

American Petroleum Institute Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry, 2009
Canadian Association of Petroleum Producers, Calculating Greenhouse Gas Emissions, 2003
European Union Emission Trading System (EU ETS): The Monitoring and Reporting Regulation (MMR) – General guidance for installations
ISO 14064-1

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

23,243,129

Start date

January 1, 2022

End date

December 31, 2022

Comment

Gross Scope 1 emissions

Past year 1

Gross global Scope 1 emissions (metric tons CO2e)

23,150,007

Start date

January 1, 2021

End date

December 31, 2021

Comment

Gross Scope 1 emissions

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We have operations where we are able to access electricity supplier emission factors or residual emissions factors, but are unable to report a Scope 2, market-based figure

Comment

No comment

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, location-based

3,092,646

Start date

January 1, 2022

End date

December 31, 2022

Comment

Gross operated facilities Scope 2 emissions

Past year 1

Scope 2, location-based

3,256,768

Start date

January 1, 2021

End date

December 31, 2021

Comment

Gross operated facilities Scope 2 emissions

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1, Scope 2 or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure?

Yes

C6.4a

(C6.4a) Provide details of the sources of Scope 1, Scope 2, or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure.

Source of excluded emissions

Propane consumption in North America E&P

Scope(s) or Scope 3 category(ies)

Scope 1

Relevance of Scope 1 emissions from this source

Emissions are relevant but not yet calculated

Relevance of location-based Scope 2 emissions from this source

Relevance of market-based Scope 2 emissions from this source

Relevance of Scope 3 emissions from this source

Date of completion of acquisition or merger

Estimated percentage of total Scope 1+2 emissions this excluded source represents

0

Estimated percentage of total Scope 3 emissions this excluded source represents

Explain why this source is excluded

Estimated to be immaterial (<1%). Difficult to track accurately.

Explain how you estimated the percentage of emissions this excluded source represents

Propane emissions were estimated using purchasing records and published emission factors.

Source of excluded emissions

Gasoline consumption in light-duty vehicles in NA E&P

Scope(s) or Scope 3 category(ies)

Scope 1

Relevance of Scope 1 emissions from this source

Emissions are relevant but not yet calculated

Relevance of location-based Scope 2 emissions from this source

Relevance of market-based Scope 2 emissions from this source

Relevance of Scope 3 emissions from this source

Date of completion of acquisition or merger

Estimated percentage of total Scope 1+2 emissions this excluded source represents

0

Estimated percentage of total Scope 3 emissions this excluded source represents

Explain why this source is excluded

Estimated to be immaterial (<1%). Difficult to track accurately.

Explain how you estimated the percentage of emissions this excluded source represents

Gasoline consumption were estimated using an estimated number of kilometers driven, estimated fuel consumption rate, and published emission factors.

Source of excluded emissions

Vapour emissions from spills of liquid hydrocarbons

Scope(s) or Scope 3 category(ies)

Scope 1

Relevance of Scope 1 emissions from this source

Emissions are relevant but not yet calculated

Relevance of location-based Scope 2 emissions from this source

Relevance of market-based Scope 2 emissions from this source

Relevance of Scope 3 emissions from this source

Date of completion of acquisition or merger

Estimated percentage of total Scope 1+2 emissions this excluded source represents

0

Estimated percentage of total Scope 3 emissions this excluded source represents

Explain why this source is excluded

Estimated to be immaterial (<1%). Difficult to track accurately.

Explain how you estimated the percentage of emissions this excluded source represents

Spills are rapidly cleaned up as soon as practical and this reduces the ability of spilled liquid to volatize into GHG emissions. Only a small fraction of spilled content is able to volatize into GHG emissions. Annual spilled content, even if completely volatized, would still represent far less than 1% of company fuel consumption, and reported Scope 1+2 emissions. This renders spilled content which actually volatizes into GHG emissions an even smaller fraction of the 1%, essentially rounding to zero %.

Source of excluded emissions

Accidental venting incidents, CH4 and N2O emissions in UK and Cote D'Ivoire

Scope(s) or Scope 3 category(ies)

Scope 1

Relevance of Scope 1 emissions from this source

Emissions are relevant but not yet calculated

Relevance of location-based Scope 2 emissions from this source

Relevance of market-based Scope 2 emissions from this source

Relevance of Scope 3 emissions from this source

Date of completion of acquisition or merger

Estimated percentage of total Scope 1+2 emissions this excluded source represents

0

Estimated percentage of total Scope 3 emissions this excluded source represents

Explain why this source is excluded

Estimated to be immaterial (<1%). Difficult to track accurately.

Explain how you estimated the percentage of emissions this excluded source represents

CH4 and N2O emissions were estimated for UK operations based on regulatory guidance. CH4 and N2O emissions for Cote D'Ivoire were estimated by scaling using CO2 emissions from Cote D'Ivoire, and CH4 and N2O emissions from UK operations as a percent of CO2 emissions from UK operations.

C6.5

(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

Not evaluated

Please explain

Negligible in comparison to use of sold products

Capital goods

Evaluation status

Not evaluated

Please explain

Negligible in comparison to use of sold products

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status

Not evaluated

Please explain

Negligible in comparison to use of sold products

Upstream transportation and distribution

Evaluation status

Not evaluated

Please explain

Negligible in comparison to use of sold products

Waste generated in operations

Evaluation status

Not evaluated

Please explain

Negligible in comparison to use of sold products

Business travel

Evaluation status

Not evaluated

Please explain

Negligible in comparison to use of sold products

Employee commuting

Evaluation status

Not evaluated

Please explain

Negligible in comparison to use of sold products

Upstream leased assets

Evaluation status

Not evaluated

Please explain

Negligible in comparison to use of sold products

Downstream transportation and distribution

Evaluation status

Not evaluated

Please explain

Negligible in comparison to use of sold products

Processing of sold products

Evaluation status

Not evaluated

Please explain

Once products are on the market, we believe that it is impractical to determine splits between buyers and subsequent final end use product allocations. We are also not able to assign GHG intensities of the processes, considering the uncertainty with the end user product state and application.

Use of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

124,113,645

Emissions calculation methodology

Other, please specify

Category 11 in the GHG Protocol following the Production Method, Emissions for Oil and Gas, using Higher Tier emission factors

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Scope 3 GHG emissions re: indirect emissions (not included in Scope 2) that occur upstream and downstream of a company's operations. Scope 3 emissions are a function of the demand for energy products and consumer choices on how and when to consume energy. These emissions are indirect and occur outside of our control, therefore the reporting of Scope 3 emissions is less certain. We have estimated Scope 3 emissions arising from the end use of our sold products (Category 11 in the GHG Protocol) on a net working interest basis, which is the category most material to the Company. The remaining categories of Scope 3 emissions were not included due to lack of reliable third-party data. Scope 3 emissions are calculated following the GHG Protocol. Additionally, the CDP Technical Note: Guidance methodology for estimation of Scope 3 category 11 emissions for oil and gas companies is used to determine emission factors that are applied to annual volumes of our sold products: crude oil, natural gas and natural gas liquids. In this calculation, we follow the Production Method (Tier 1) and use emissions factors that include non-energy use and storage factors to account for a portion of our products that do not emit carbon in their final consumption phase. Scope 3 emissions should be read with caution as the potential for duplication, inaccuracies and inconsistencies exists when looking at emissions within the overall energy system. For example, when looking at reported emissions from overlapping industries such as oil and gas producers, fuel distribution companies, vehicle manufacturers and vehicle insurance providers, there is a high likelihood of significant duplication as one company's Scope 3 emissions will be another's Scope 1.

End of life treatment of sold products

Evaluation status

Not relevant, explanation provided

Please explain

This is the same as the use of sold products (i.e., end of life treatment is the same as combustion or usage).

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

Canadian Natural does not have downstream leased assets.

Franchises

Evaluation status

Not relevant, explanation provided

Please explain

Canadian Natural does not own franchises

Investments

Evaluation status

Not evaluated

Please explain

Negligible in comparison to use of sold products

Other (upstream)

Evaluation status

Not evaluated

Please explain

Negligible in comparison to use of sold products

Other (downstream)

Evaluation status

Not evaluated

Please explain

Negligible in comparison to use of sold products

C6.5a

(C6.5a) Disclose or restate your Scope 3 emissions data for previous years.

Past year 1

Start date

January 1, 2021

End date

December 31, 2021

Scope 3: Purchased goods and services (metric tons CO2e)

0

Scope 3: Capital goods (metric tons CO2e)

0

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

0

Scope 3: Upstream transportation and distribution (metric tons CO2e)

0

Scope 3: Waste generated in operations (metric tons CO2e)

0

Scope 3: Business travel (metric tons CO2e)

0

Scope 3: Employee commuting (metric tons CO2e)

0

Scope 3: Upstream leased assets (metric tons CO2e)

0

Scope 3: Downstream transportation and distribution (metric tons CO2e)

0

Scope 3: Processing of sold products (metric tons CO2e)

0

Scope 3: Use of sold products (metric tons CO2e)

131,871,838

Scope 3: End of life treatment of sold products (metric tons CO2e)

0

Scope 3: Downstream leased assets (metric tons CO2e)

0

Scope 3: Franchises (metric tons CO2e)

0

Scope 3: Investments (metric tons CO2e)

0

Scope 3: Other (upstream) (metric tons CO2e)

0

Scope 3: Other (downstream) (metric tons CO2e)

0

Comment

No comment

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

No

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure

0.0005317136

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

26,335,776

Metric denominator

unit total revenue

Metric denominator: Unit total

49,530,000

Scope 2 figure used

Location-based

% change from previous year

33.85

Direction of change

Decreased

Reason(s) for change

Change in revenue

Please explain

When using revenue to calculate efficiency, the volatility of commodity markets is not taken into account and is therefore not an appropriate measure of GHG performance for oil and gas producers.

Intensity figure

0.0499

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

26,335,776

Metric denominator

barrel of oil equivalent (BOE)

Metric denominator: Unit total

527,800,000

Scope 2 figure used

Location-based

% change from previous year

3

Direction of change

Decreased

Reason(s) for change

Other emissions reduction activities

Please explain

Canadian Natural has a large, diversified and balanced portfolio and a risk management strategy which incorporates an integrated GHG emissions reduction strategy and investments in technology and innovation to improve its GHG performance. Our continuous improvement culture delivered reductions in GHG emissions intensity from 2021 levels, including reductions of absolute methane emissions in North American E&P.

C-OG6.12

(C-OG6.12) Provide the intensity figures for Scope 1 emissions (metric tons CO2e) per unit of hydrocarbon category.

Unit of hydrocarbon category (denominator)

Other, please specify

Thousands of barrels of oil equivalent

Metric tons CO2e from hydrocarbon category per unit specified

44.04

% change from previous year

2

Direction of change

Decreased

Reason for change

Change due to emission reduction activities (specifically: expanded pneumatic replacement and retrofit program, and solution gas conservation projects)

Comment

No comment

C-OG6.13

(C-OG6.13) Report your methane emissions as percentages of natural gas and hydrocarbon production or throughput.

Oil and gas business division

Upstream

Estimated total methane emitted expressed as % of natural gas production or throughput at given division

0.84

Estimated total methane emitted expressed as % of total hydrocarbon production or throughput at given division

0.2

Details of methodology

Total methane volume (181,535 e3m3) is converted to boe by using standard multiplication conversion factors (28.3 Mmcf/e3m3 and 6.00 bbl to Mcf). This is divided by total natural gas production (127,124,025) and total boe production (527,800,000) to give methane emission intensities.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?

Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	20,069,081	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	2,994,848	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	166,611	IPCC Fourth Assessment Report (AR4 - 100 year)
HFCs	8,049	IPCC Fourth Assessment Report (AR4 - 100 year)
SF6	1	IPCC Fourth Assessment Report (AR4 - 100 year)
Other, please specify CF4	1	IPCC Fourth Assessment Report (AR4 - 100 year)

C-OG7.1b

(C-OG7.1b) Break down your total gross global Scope 1 emissions from oil and gas value chain production activities by greenhouse gas type.

Emissions category

Combustion (excluding flaring)

Value chain

Upstream

Product

Unable to disaggregate

Gross Scope 1 CO2 emissions (metric tons CO2)

17,921,219

Gross Scope 1 methane emissions (metric tons CH4)

12,784

Total gross Scope 1 emissions (metric tons CO2e)

18,406,066

Comment

No comment

Emissions category

Flaring

Value chain

Upstream

Product

Unable to disaggregate

Gross Scope 1 CO2 emissions (metric tons CO2)

638,165

Gross Scope 1 methane emissions (metric tons CH4)

2,337

Total gross Scope 1 emissions (metric tons CO2e)

697,960

Comment

No comment

Emissions category

Venting

Value chain

Upstream

Product

Unable to disaggregate

Gross Scope 1 CO2 emissions (metric tons CO2)

375,593

Gross Scope 1 methane emissions (metric tons CH4)

75,292

Total gross Scope 1 emissions (metric tons CO2e)

2,257,901

Comment

No comment

Emissions category

Fugitives

Value chain

Upstream

Product

Unable to disaggregate

Gross Scope 1 CO2 emissions (metric tons CO2)

261,759

Gross Scope 1 methane emissions (metric tons CH4)

29,380

Total gross Scope 1 emissions (metric tons CO2e)

996,268

Comment

No comment

Emissions category

Process (feedstock) emissions

Value chain

Upstream

Product

Oil

Gross Scope 1 CO2 emissions (metric tons CO2)

872,345

Gross Scope 1 methane emissions (metric tons CH4)

0

Total gross Scope 1 emissions (metric tons CO2e)

872,345

Comment

No comment

Emissions category

Other (please specify)

waste and wastewater emissions

Value chain

Upstream

Product

Oil

Gross Scope 1 CO2 emissions (metric tons CO2)

1,611

Gross Scope 1 methane emissions (metric tons CH4)

108

Total gross Scope 1 emissions (metric tons CO2e)

4,539

Comment

No comment

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/area/region.

Country/area/region	Scope 1 emissions (metric tons CO2e)
Canada	22,467,297
United Kingdom of Great Britain and Northern Ireland	498,135
Côte d'Ivoire	277,697

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By business division

C7.3a

(C7.3a) Break down your total gross global Scope 1 emissions by business division.

Business division	Scope 1 emissions (metric ton CO2e)
NA Conventional E&P	15,118,582
Oil Sands Mining	7,348,715
CNR International	775,832

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

	Gross Scope 1 emissions, metric tons CO2e	Comment
Oil and gas production activities (upstream)	23,243,129	All company Scope 1 emissions attributed to Upstream Oil and Gas activities
Oil and gas production activities (midstream)	0	All company Scope 1 emissions attributed to Upstream Oil and Gas activities
Oil and gas production activities (downstream)	0	All company Scope 1 emissions attributed to Upstream Oil and Gas activities

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/area/region.

Country/area/region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Canada	3,092,646	0

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By activity

C7.6c

(C7.6c) Break down your total gross global Scope 2 emissions by business activity.

Activity	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Oil and Gas Production Activities	3,092,646	0

C7.7

(C7.7) Is your organization able to break down your emissions data for any of the subsidiaries included in your CDP response?

Yes

C7.7a

(C7.7a) Break down your gross Scope 1 and Scope 2 emissions by subsidiary.

Subsidiary name

CNR International

Primary activity

Oil & gas extraction

Select the unique identifier(s) you are able to provide for this subsidiary

Ticker symbol

ISIN code – bond

ISIN code – equity

CUSIP number

Ticker symbol

CNQ

SEDOL code

LEI number

Other unique identifier

Scope 1 emissions (metric tons CO2e)

775,832

Scope 2, location-based emissions (metric tons CO2e)

0

Scope 2, market-based emissions (metric tons CO2e)

0

Comment

No comment

C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7

(C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7) Break down your organization's total gross global Scope 2 emissions by sector production activity in metric tons CO2e.

	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Oil and gas production activities (upstream)	3,092,646	0	All company Scope 2 emissions attributed to Upstream Oil and Gas activities
Oil and gas production activities (midstream)	0	0	All company Scope 2 emissions attributed to Upstream Oil and Gas activities
Oil and gas production activities (downstream)	0	0	All company Scope 2 emissions attributed to Upstream Oil and Gas activities

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Decreased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change in emissions	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	4,438.45	Decreased	0.1896	Change in Renewable = (2022 BC hydro electricity use – 2021 BC hydro electricity use)/2021 total purchased electricity. = 8,784MWh/4,632,990 MWh = 0.1896%
Other emissions reduction activities	1,604,715	Decreased	6.08	We reduced gross global emissions by executing emission reduction activities. The largest contributor being 2450 gas conservation projects in primary heavy crude oil operations Canadian Natural completed in 2022. This resulted in the reduction of approximately 1,373,526, tonnes/year of CO2e. To calculate the percentage reduction, we summed total reductions attributed to emission reduction activities and divided by the total Scope 1 + Scope 2 emissions from 2022 (26 MtCO2e). This was multiplied by 100 to give the total % reductions. Emission reductions include the following projects and reductions: Gas conservation – 1,373,526 tCO2e Pneumatic controller replacement projects – 70,286tCO2e CO2 injected into tailings ponds – 84,932 tCO2e CO2 injection for enhanced oil recovery – 11,319 tCO2e Final numbers used for calculation are (1,604,715/26,406,775)*100 = 6.08%
Divestment	0	No change	0	No comment
Acquisitions	0	No change	0	No comment
Mergers	0	No change	0	No comment

Change in output	763,737	Increased	2.89	Production output increased by 2.9% or 14.8 MBOE. The average Scope 1 + Scope 2 GHG intensity of Canadian Natural in 2022 was 0.0499 tonnes CO2e/BOE making the increased emissions attributed to the increased output 0.76 MtCO2e, or 2.89% of total Canadian Natural 2021 emissions(26.41 MtCO2e).
Change in methodology	0	No change	0	No comment
Change in boundary	0	No change	0	No comment
Change in physical operating conditions	0	No change	0	No comment
Unidentified	0	No change	0	No comment
Other	0	No change	0	No comment

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Location-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 25% but less than or equal to 30%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	Yes
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	0	87,383,339.5	87,383,339.5
Consumption of purchased or acquired electricity		193,732.82	3,612,250.78	3,805,983.6
Consumption of purchased or acquired steam		0	4,239,727	4,239,727
Consumption of self-generated non-fuel renewable energy		0		0
Total energy consumption		193,732.82	95,235,317.28	95,429,050.1

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	Yes
Consumption of fuel for the generation of cooling	Yes
Consumption of fuel for co-generation or tri-generation	Yes

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Sustainable biomass

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

We do not collect this level of detail, except for our cogeneration units and our electricity generation at our offshore platforms.

Other biomass

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

We do not collect this level of detail, except for electricity generation at our offshore platforms, and for our cogeneration units.

Other renewable fuels (e.g. renewable hydrogen)

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

We do not collect this level of detail, except for our cogeneration units and for our electricity generation at our offshore platforms.

Coal

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

We do not collect this level of detail, except for our cogeneration units and for our electricity generation at our offshore platforms.

Oil

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

We do not collect this level of detail, except for our cogeneration units and for our electricity generation at our offshore platforms.

Gas

Heating value

HHV

Total fuel MWh consumed by the organization

78,417,896

MWh fuel consumed for self-generation of electricity

712,120

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self- cogeneration or self-trigeneration

9,733,564

Comment

We do not collect this level of detail, except for our cogeneration units and for our electricity generation at our offshore platforms.

Other non-renewable fuels (e.g. non-renewable hydrogen)

Heating value

HHV

Total fuel MWh consumed by the organization

8,965,443.7

MWh fuel consumed for self-generation of electricity

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self-generation of steam

MWh fuel consumed for self-generation of cooling

MWh fuel consumed for self- cogeneration or self-trigeneration

Comment

Diesel, refinery gas, and vapor recovery unit (VRU) off-gas. We do not collect this level of detail, except for our cogeneration units and for our electricity generation at our offshore platforms.

Total fuel

Heating value

HHV

Total fuel MWh consumed by the organization

87,383,339

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self- cogeneration or self-trigeneration

9,733,564

Comment

We do not collect this level of detail, except for our cogeneration units and for our electricity generation at our offshore platforms.

C8.2d

(C8.2d) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	0	0	0	0
Heat	0	0	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

C8.2g

(C8.2g) Provide a breakdown by country/area of your non-fuel energy consumption in the reporting year.

Country/area

Canada

Consumption of purchased electricity (MWh)

3,612,250.78

Consumption of self-generated electricity (MWh)

2,223,561

Consumption of purchased heat, steam, and cooling (MWh)

4,239,727

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

10,075,538.78

Country/area

United Kingdom of Great Britain and Northern Ireland

Consumption of purchased electricity (MWh)

0

Consumption of self-generated electricity (MWh)

284,848

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

284,848

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

C-OG9.2a

(C-OG9.2a) Disclose your net liquid and gas hydrocarbon production (total of subsidiaries and equity-accounted entities).

	In-year net production	Comment
Crude oil and condensate, million barrels	163.41	Production values presented in CDP are the Company's working interest share of production, before royalties. This differs from the production values in our 2022 Report to Stakeholders report, which uses the Company's gross operated production before royalties for the purposes of calculating greenhouse gas (GHG) intensities.
Natural gas liquids, million barrels	21.72	Production values presented in CDP are the Company's working interest share of production, before royalties. This differs from the production values in our 2022 Report to Stakeholders report, which uses the Company's gross operated production before royalties for the purposes of calculating greenhouse gas (GHG) intensities.
Oil sands, million barrels (includes bitumen and synthetic crude)	155.47	2021 production; includes Bitumen (Thermal Oil) and Oil Sands Mining & Upgrading Synthetic Crude Oil Production values presented in CDP are the Company's working interest share of production, before royalties. This differs from the production values in our 2022 Report to Stakeholders report, which uses the Company's gross operated production before royalties for the purposes of calculating greenhouse gas (GHG) intensities.
Natural gas, billion cubic feet	692.77	Production values presented in CDP are the Company's working interest share of production, before royalties. This differs from the production values in our 2022 Report to Stakeholders report, which uses the Company's gross operated production before royalties for the purposes of calculating greenhouse gas (GHG) intensities.

C-OG9.2b

(C-OG9.2b) Explain which listing requirements or other methodologies you use to report reserves data. If your organization cannot provide data due to legal restrictions on reporting reserves figures in certain countries/areas, please explain this.

For the year ended December 31, 2022, the Company retained Independent Qualified Reserves Evaluators ("IQRE"), Sproule Associates Limited and Sproule International Limited (together, "Sproule") and GLJ Ltd. ("GLJ"), to evaluate and review all of the Company's proved and proved plus probable reserves with an effective date of December 31, 2022 and a preparation date of February 6, 2023. Sproule evaluated and reviewed the North America and International light and medium crude oil, primary heavy crude oil, Pelican Lake heavy crude oil, bitumen (thermal oil), natural gas and NGLs reserves. GLJ evaluated the Oil Sands Mining and Upgrading SCO reserves. The evaluations and reviews were conducted and prepared in accordance with the standards contained in the Canadian Oil and Gas Evaluation Handbook ("COGE Handbook") and disclosed in accordance with National Instrument 51-101 – Standards of Disclosure for Oil and Gas Activities ("NI 51-101") requirements.

C-OG9.2c

(C-OG9.2c) Disclose your estimated total net reserves and resource base (million boe), including the total associated with subsidiaries and equity-accounted entities.

	Estimated total net proved + probable reserves (2P) (million BOE)	Estimated total net proved + probable + possible reserves (3P) (million BOE)	Estimated net total resource base (million BOE)	Comment
Row 1	18,046	18,046	18,046	Company gross (working interest before royalties)

C-OG9.2d

(C-OG9.2d) Provide an indicative percentage split for 2P, 3P reserves, and total resource base by hydrocarbon categories.

	Net proved + probable reserves (2P) (%)	Net proved + probable + possible reserves (3P) (%)	Net total resource base (%)	Comment
Crude oil/ condensate/ natural gas liquids	10	10	10	No comment
Natural gas	21	21	21	No comment
Oil sands (includes bitumen and synthetic crude)	70	70	70	Includes Bitumen (Thermal Oil) and Oil Sands Mining & Upgrading SCO

C-OG9.2e

(C-OG9.2e) Provide an indicative percentage split for production, 1P, 2P, 3P reserves, and total resource base by development types.

Development type

Onshore

In-year net production (%)

26

Net proved reserves (1P) (%)

7

Net proved + probable reserves (2P) (%)

8

Net proved + probable + possible reserves (3P) (%)

8

Net total resource base (%)

8

Comment

No comment

Development type

Shallow-water

In-year net production (%)

1

Net proved reserves (1P) (%)

0

Net proved + probable reserves (2P) (%)

0

Net proved + probable + possible reserves (3P) (%)

0

Net total resource base (%)

0

Comment

No comment

Development type

Deepwater

In-year net production (%)

1

Net proved reserves (1P) (%)

1

Net proved + probable reserves (2P) (%)

1

Net proved + probable + possible reserves (3P) (%)

1

Net total resource base (%)

1

Comment

No comment

Development type

Oil sand/extra heavy oil

In-year net production (%)

53

Net proved reserves (1P) (%)

75

Net proved + probable reserves (2P) (%)

70

Net proved + probable + possible reserves (3P) (%)

70

Net total resource base (%)

70

Comment

Includes Bitumen (Thermal Oil) and Oil Sands Mining & Upgrading SCO

Development type

Tight/shale

In-year net production (%)

19

Net proved reserves (1P) (%)

17

Net proved + probable reserves (2P) (%)

22

Net proved + probable + possible reserves (3P) (%)

22

Net total resource base (%)

22

Comment

No comment

C-OG9.5a/C-CO9.5a

(C-OG9.5a/C-CO9.5a) Break down, by fossil fuel expansion activity, your organization's CAPEX in the reporting year and CAPEX planned over the next 5 years.

	CAPEX in the reporting year for this expansion activity (unit currency as selected in C0.4)	CAPEX in the reporting year for this expansion activity as % of total CAPEX in the reporting year	CAPEX planned over the next 5 years for this expansion activity as % of total CAPEX planned over the next 5 years	Explain your CAPEX calculations, including any assumptions
Exploration of new oil fields				Canadian Natural reports capital expenditures by business unit and geographic area, not by new and existing oil and natural gas fields. Details on Canadian Natural's capital expenditures are reported in our quarterly and annual Financial Statements and Management Discussion and Analysis documents located on our website.
Exploration of new natural gas fields				Canadian Natural reports capital expenditures by business unit and geographic area, not by new and existing oil and natural gas fields. Details on Canadian Natural's capital expenditures are reported in our quarterly and annual Financial Statements and Management Discussion and Analysis documents located on our website.

Expansion of existing oil fields				Canadian Natural reports capital expenditures by business unit and geographic area, not by new and existing oil and natural gas fields. Details on Canadian Natural's capital expenditures are reported in our quarterly and annual Financial Statements and Management Discussion and Analysis documents located on our website.
Expansion of existing natural gas fields				Canadian Natural reports capital expenditures by business unit and geographic area, not by new and existing oil and natural gas fields. Details on Canadian Natural's capital expenditures are reported in our quarterly and annual Financial Statements and Management Discussion and Analysis documents located on our website.

C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
Row 1	Yes	Canadian Natural has a defined pathway to drive long-term emission intensity reductions. Leveraging technology is key to our GHG emissions reduction strategy. In 2022, we invested $151 million in R&D to reduce GHG emissions.Over and above the 2022 investment in GHG R&D, we are focused on advancing technologies in carbon capture initiatives to drive further emissions reductions. We integrate state-of-the-art carbon capture technologies in our projects – including CO2 capture capacity at our Horizon operations, a 70% interest in the Quest CCS facilities at the Scotford Upgrader, a 50% stake in the Sturgeon Refinery, and CO2 capture at the Hays natural gas plant. These projects combined are capable of capturing 2.7 million tonnes/year of carbon dioxide equivalent (CO2e). We are also actively evaluating and developing a range of unique projects with the potential to make a significant difference in emissions reduction. These technologies are at different stages of readiness, from discovery to deployment. 2022 examples include: - Co-injecting solvent with steam to reduce the amount of water needed for improving bitumen viscosity, and help recover more crude oil with less steam. Our pilot at Kirby South tested solvent effectiveness to improve oil recovery in a steam assisted gravity drainage (SAGD) process, showing steam-to-oil ratio (SOR) and GHG intensity reductions of 45% through the pilot process, as well as solvent recoveries of approximately 85%. At Primrose, in the steam flood area, a solvent injection pilot commenced in Q4 2021. This pilot consists of nine net wells (five producers and four injectors), targeting SOR and GHG intensity reductions of 45% and solvent recoveries of greater than 70%. - Using Cyclic CO2 injection in Cold Heavy Oil Production with Sand (CHOPS) assets. Produced CO2 is captured/re-injected in the production cycle, which improves viscosity and flow rates, while CO2 remains permanently stored in the reservoir. - Assessing global technologies and solutions to convert natural gas into a hydrogen rich fuel and a valuable co-product, with the goal of reducing carbon content. Hydrogen rich fuel, when burned in boilers, produces less CO2 and yields co-products to use in oil sands extraction and production processes, or to sell to offset costs. We also invest in industry research and technology sharing through the Pathways Alliance.

C-CO9.6a/C-EU9.6a/C-OG9.6a

(C-CO9.6a/C-EU9.6a/C-OG9.6a) Provide details of your organization's investments in low-carbon R&D for your sector activities over the last three years.

Technology area	Stage of development in the reporting year	Average % of total R&D investment over the last 3 years	R&D investment figure in the reporting year (unit currency as selected in C0.4) (optional)	Average % of total R&D investment planned over the next 5 years	Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan
Unable to disaggregate by technology area		22.06	151,000,000	0	At Canadian Natural, we know technology and innovation are keys to success in a lower carbon emissions future. Investing in technology and innovation, as well as continuous improvement projects, is integrated into our projects and budgeting process. We understand that helping to address the challenge of climate change requires significant collaboration between industry and governments, including investing together in the research, development and scaling of new and emerging technologies. Together with our partners, we are investing in developing technologies to create value, enhance performance and reduce emissions today and into the future. We consider current GHG regulations and the regulated carbon price in our project economics to determine the impact of compliance costs on current and future projects. Our focus is ensuring our company remains sustainable in a lower-carbon emissions economy.

					In 2022, we invested $587 million in technology development and deployment, including $151 million in technology development and implementation to reduce GHG emissions. We are a leader in research and development in the Canadian crude oil and natural gas industry. We evaluate and invest in a range of technology projects, such as CCUS, solvent enhanced steam flood and assisted gravity drainage (SAGD), and expanding on uses for bitumen. As we advance innovation, oil and natural gas production provides a foundation to incorporate many valuable opportunities for lower carbon emission products and to support renewable energy. For example, we are co-injecting solvent with steam to reduce the amount of water needed for improving bitumen viscosity, and help recover more crude oil with less steam. Our pilot at Kirby South tested solvent effectiveness to improve oil recovery in a steam assisted gravity drainage (SAGD) process, showing steam-to-oil ratio (SOR) and GHG intensity reductions of 45% through the pilot process, as well as solvent recoveries of approximately 85%. Canadian Natural is now progressing with engineering and design of a commercial-scale solvent pad development at Kirby North, targeting first solvent injection in mid-2024.

C-OG9.7

(C-OG9.7) Disclose the breakeven price (US$/BOE) required for cash neutrality during the reporting year, i.e. where cash flow from operations covers CAPEX and dividends paid/ share buybacks.

0

C-OG9.8

(C-OG9.8) Is your organization involved in the sequestration of CO2?

Yes

C-OG9.8a

(C-OG9.8a) Provide, in metric tons CO2, gross masses of CO2 transferred in and out of the reporting organization (as defined by the consolidation basis).

	CO2 transferred in the reporting year (metric tons CO2)	Types of CO2 transfer
CO2 transferred in	0	Other, please specify No transfers
CO2 transferred out	0	Other, please specify No transfers

C-OG9.8b

(C-OG9.8b) Provide gross masses of CO2 injected and stored for the purposes of CCS during the reporting year according to the injection and storage pathway.

Injection and storage pathway	Injected CO2 in the reporting year (metric tons CO2)	Percentage of injected CO2 intended for long-term (>10,000 year) storage	CO2 leakage in the reporting year during injection (metric tons CO2)	Year in which injection began	Cumulative CO2 injected and stored (metric tons CO2)	Ongoing leakage (average estimated % of stored CO2 per year)	Describe your process for monitoring leakage and any long-term storage of the CO2
CO2 used for enhanced oil recovery (EOR)	11,319	100	0	2004	363,873	0	The Hays EOR project is heavily regulated to ensure there is no CO2 leakage. CNRL conducted a complete geological assessment of the injection reservoir with respect to permanent storage suitability. Operational permits require long-term monitoring of CO2 storage be in place. Leakage risk is mitigated by automated shutdown valves, and other safety mechanisms to limit potential of CO2 discharge. CO2 detection is present in injection well buildings. Pressure transmitters are installed on wellhead tubing and regular reservoir pressure surveys are conducted. The system

							alarms and shuts down under a series of anomalous pressure conditions.
CO2 injected for storage through mineral carbonation	110,652	100	0	2009	434,791	0	Annual area fugitive monitoring program is used to estimate CO2 emissions from the pond

C-OG9.8c

(C-OG9.8c) Provide clarification on any other relevant information pertaining to your activities related to transfer and sequestration of CO2.

CO2 has been injected into wells in the Hays field to stimulate increased production and maintain reservoir pressure since 2004. Since 2009, CO2 sourced from hydrogen production industrial process emissions has been injected into the tailings line at the Horizon mine and upgrader site. This improves tailings settling properties, and a portion of the injected CO2 remains in solution, or precipitates to the bed of the pond as carbonate solids.

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

- 02 - 2022 Pelican (AG0Y) Verification Report.pdf
- 03 b 2022 Kirby North Package.pdf
- 02 - 2022 CHOPS (AG0W) Verification Report.pdf
- 05 b 2022 Albian Package.pdf
- 02 - 2022 Gas (AG0M) Verification Report.pdf
- 03 b 2022 Kirby South Package.pdf
- 02 - Jackfish Final Verification Report.pdf
- 02 - PAW Verification Report.pdf
- 02 - 2022 Peace River Complex Verification Report.pdf

2022 Horizon Package.pdf

02 - 2022 Light Oil (AG0X) Verification Report.pdf

2022 Brintnell Package.pdf

02 - 2022 Wapiti Verification Report.pdf

Page/ section reference

Annual verification reports included for individual facilities in Alberta (Under TIER). Please reference Appendix E for Statement of Verifications for the various facilities.

Relevant standard

Alberta Technology Innovation and Emissions Reduction (TIER)

Proportion of reported emissions verified (%)

81

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

Y

2022 Pierson Verification Report (PwC).pdf

Page/ section reference

Applicable facility (Pierson) verification report is attached. Please refer to section 14 for the positive verification statement.

Relevant standard

Other, please specify

Canadas Federal Output Based Pricing System (OBPS) Regulations and applicable standards

Proportion of reported emissions verified (%)

1

Verification or assurance cycle in place

Biennial process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

Y

PwC_Verification_Report_-_CNRL_North_TangleFlags_2021.pdf

PwC_Verification_Report_-_CNRL_Senlac_Thermal_2021.pdf

11200244-RPT-4-2021 Final Verification Report CNRL SK Aggregate.pdf

PwC_Verification_Report_-_CNRL_Senlac_Thermal_2022.pdf

PwC_Verification_Report_-_CNRL_North_TangleFlags_2022.pdf

Page/ section reference

Please reference the verification statements in the attached Saskatchewan facility and aggregate verification reports (See section 5.1)

Relevant standard

Other, please specify

Management and Reduction of Greenhouse Gases (Baselines, Returns and Verification) Standard for Saskatchewan Canada

Proportion of reported emissions verified (%)

2

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

Y

BC LFO Client Package.pdf

Page/ section reference

Section 4 (Declerations) of "Emission Report Verification Statement and Conflict of Interest Report" on pg 35 of the attached verification report.

Relevant standard

Other, please specify

Greenhouse Gas Industrial Reporting and Control Act (British Columbia, Canada)

Proportion of reported emissions verified (%)

6

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

Y

TIFF AER VOS - 2022.pdf

NCP AER VOS - 2022.pdf

NSP AER VOS - 2022.pdf

Page/ section reference

Please reference "Overall Opinion" section of attached verification reports for applicable facilities

Relevant standard

Other, please specify

UK ETS

Proportion of reported emissions verified (%)

2

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

Y

Signed_Aug 3_PwC Combined Reasonable and Limited Assurance Report.pdf

Page/ section reference

Page 1

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Scope 2 approach

Scope 2 location-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

Y

- 02 - 2022 Pelican (AG0Y) Verification Report.pdf
- 03 b 2022 Kirby North Package.pdf
- 02 - 2022 CHOPS (AG0W) Verification Report.pdf
- 05 b 2022 Albian Package.pdf
- 02 - 2022 Gas (AG0M) Verification Report.pdf
- 03 b 2022 Kirby South Package.pdf
- 02 - Jackfish Final Verification Report.pdf

02 - PAW Verification Report.pdf

02 - 2022 Peace River Complex Verification Report.pdf

2022 Horizon Package.pdf

02 - 2022 Light Oil (AG0X) Verification Report.pdf

2022 Brintnell Package.pdf

02 - 2022 Wapiti Verification Report.pdf

Page/ section reference

All Alberta based facilities have Scope 2 emissions verified as per the attached facility specific verification reports. Please reference Appendix E for Statement of Verifications for the various facilities.

Relevant standard

Alberta Technology Innovation and Emissions Reduction (TIER)

Proportion of reported emissions verified (%)

68

Scope 2 approach

Scope 2 location-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

Y

Signed_Aug 3_PwC Combined Reasonable and Limited Assurance Report.pdf

Page/ section reference

Page 1

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

C10.1c

(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope 3 category

Scope 3: Use of sold products

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

Y

Signed_Aug 3_PwC Combined Reasonable and Limited Assurance Report.pdf

Page/section reference

Entire company Scope 3 emissions verified in attached report from PwC.

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

No, we do not verify any other climate-related information reported in our CDP disclosure

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

Yes

C11.1a

(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.

Alberta TIER - ETS
BC carbon tax
Canada federal fuel charge
Canada federal Output Based Pricing System (OBPS) - ETS
Saskatchewan OBPS - ETS
UK ETS

C11.1b

(C11.1b) Complete the following table for each of the emissions trading schemes you are regulated by.

Alberta TIER - ETS

% of Scope 1 emissions covered by the ETS

81.31

% of Scope 2 emissions covered by the ETS

68.4

Period start date

January 1, 2022

Period end date

December 31, 2022

Allowances allocated

17,966,562

Allowances purchased

1,868,898

Verified Scope 1 emissions in metric tons CO2e

18,899,250

Verified Scope 2 emissions in metric tons CO2e

2,115,422

Details of ownership

Facilities we own and operate

Comment

No comment

Canada federal OBPS - ETS

% of Scope 1 emissions covered by the ETS

0.07

% of Scope 2 emissions covered by the ETS

0

Period start date

January 1, 2022

Period end date

December 31, 2022

Allowances allocated

7,725

Allowances purchased

8,681

Verified Scope 1 emissions in metric tons CO2e

16,406

Verified Scope 2 emissions in metric tons CO2e

0

Details of ownership

Facilities we own and operate

Comment

No comment

Saskatchewan OBPS - ETS

% of Scope 1 emissions covered by the ETS

2.06

% of Scope 2 emissions covered by the ETS

0

Period start date

January 1, 2022

Period end date

December 31, 2022

Allowances allocated

350,075

Allowances purchased

34,072

Verified Scope 1 emissions in metric tons CO2e

479,829

Verified Scope 2 emissions in metric tons CO2e

0

Details of ownership

Facilities we own and operate

Comment

No comment

UK ETS

% of Scope 1 emissions covered by the ETS

2.14

% of Scope 2 emissions covered by the ETS

0

Period start date

January 1, 2022

Period end date

December 31, 2022

Allowances allocated

207,199

Allowances purchased

254,000

Verified Scope 1 emissions in metric tons CO2e

498,135

Verified Scope 2 emissions in metric tons CO2e

0

Details of ownership

Facilities we own and operate

Comment

No comment

C11.1c

(C11.1c) Complete the following table for each of the tax systems you are regulated by.

BC carbon tax

Period start date

January 1, 2022

Period end date

December 31, 2022

% of total Scope 1 emissions covered by tax

3.33

Total cost of tax paid

37,714,022

Comment

No comment

Canada federal fuel charge

Period start date

January 1, 2022

Period end date

December 31, 2022

% of total Scope 1 emissions covered by tax

0.08

Total cost of tax paid

623,523

Comment

No comment

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

In 2022, the carbon price in:

- British Columbia was $45/tonne in Q1 2022 and $50/tonne for the remainder of 2022. It applied to all fuel gas, vented gas, and flared gas at our BC facilities, and to gasoline, diesel, propane and other fuels. The tax is calculated as [(fuel/flare/vent volume x volumetric tax rate)].
- Alberta was $50/tonne and was applied to a portion of emissions from the following facilities: Horizon, Athabasca Oil Sands Project, Primrose/Wolf Lake in situ, Kirby South in situ, Jackfish in situ, Peace River in situ, the Brintnell power generation facility and all Conventional assets. The carbon cost is calculated as: carbon cost = $50/t x [Actual emissions minus emissions allocation].
- Saskatchewan: Provincial pricing applied to a portion of emissions from fuel combustion at all assets in Saskatchewan. The carbon cost is calculated as: carbon cost = $50/t x [Actual emissions minus emissions allocation]

- Manitoba: The federal Output-Based Pricing System applied to a portion of emissions from fuel combustion and flaring at all assets in Manitoba. The carbon cost is calculated as: carbon cost = $50/t x [Actual emissions minus emissions allocation].
- The UK pricing is variable, since the UK exited the EU, it is the market price of the United Kingdom Allowances (UKA) which is the compliance vehicle for the UK Emission Trading System (UK ETS – started Jan 01, 2021) which regulates our offshore North Sea oil production platforms. The UKA ranged from ~£43.20 – £88.15/tonne (CAD$74.73 - $152.73) for the time period of May 19, 2021 to April 30, 2022.

To comply with these systems, our strategy includes: - Using an internal price of carbon and climate policy as a sensitivity to evaluate returns on future emission reduction projects under different potential carbon prices. The internal price varies from $65/t to $170/t, depending on the project's applicability, jurisdiction, operational duration, and implementation timelines.

- Avoiding and minimizing emissions through integrating emissions reductions in project planning and operations, leveraging technology, enhancing performance, investing in research and development (R&D), focusing on continuous improvement through energy and process efficiencies, and considering and developing new business opportunities and trends.
- Mitigating our emissions through purchasing carbon offsets (e.g. soil sequestration, renewable energy) and offsetting emissions (relinquishment of credits or purchase of credits).

We apply this strategy annually in our compliance obligations and in long term planning of our projected emissions, our credit portfolio and our understanding of increased emission stringency.

- Tracking the development of policies and regulations at the international, national, federal and provincial level. For example, in 2022 the Federal government released the Clean Fuel Regulations which apply to producers or importers of liquid fuels (including gasoline, diesel, kerosene and light and heavy fuel oils). Canadian Natural's associated environmental risk management strategies focus on working with legislators and regulators to ensure that any new or revised policies, legislation or regulations properly reflect a balanced approach to sustainable development.

Canadian Natural supports GHG crediting programs in provinces such as the Alberta and British Columbia offsets systems, and similar systems being developed in Saskatchewan as well as with the federal government. We believe these help accelerate GHG reduction opportunities in the broader economy and help spur innovation by giving a financial value to emissions reductions. Canadian Natural has been generating GHG offset credits from the Quest CCS project, for use of CO2 in enhanced oil recovery, for methane reductions from pneumatic device retrofits, for facility electrification in BC, and for engine fuel efficiency at compressor engines at sites in Alberta and British Columbia.

In 2019 Canadian Natural identified an opportunity to reduce operating costs, including carbon tax expense, at a natural gas plant in Northeast British Columbia. A maintenance shutdown provided an opportunity to install improved insulation on the incinerator stack. This reduces heat loss through the stack and therefore less fuel gas is required to maintain the minimum required stack-top temperature. This project reduced emissions by approximately 19,200 tCO2e in 2021, and reduced carbon tax expense by about $840,000 in 2021. The installation was successful and we were able to use a government grant program that provided capital funding for emission reduction projects. This project improved the energy efficiency of the incinerator and thereby reduced fuel gas use, reducing GHG emissions and carbon compliance costs.

C11.2

(C11.2) Has your organization canceled any project-based carbon credits within the reporting year?

Yes

C11.2a

(C11.2a) Provide details of the project-based carbon credits canceled by your organization in the reporting year.

Project type

Other, please specify

Carbon capture and storage

Type of mitigation activity

Emissions reduction

Project description

Quest is a carbon capture and storage project in Alberta Canada integrated with the Scotford Upgrader. Hydrogen manufacturing at Scotford produces a high concentration CO2 stream. This CO2 is captured and compressed to a near critical state before being injected downhole into a saline aquifer several kilometers below the surface. This project generates offset GHG credits.

Credits canceled by your organization from this project in the reporting year (metric tons CO2e)

431,388

Purpose of cancellation

Compliance with a carbon pricing system

Are you able to report the vintage of the credits at cancellation?

Yes

Vintage of credits at cancellation

2021

Were these credits issued to or purchased by your organization?

Issued

Credits issued by which carbon-crediting program

Alberta TIER Emission Offset system

Method(s) the program uses to assess additionality for this project

Consideration of legal requirements
Investment analysis
Barrier analysis
Market penetration assessment
Other, please specify

Additionality is assessed through the Alberta government TIER Technical guidance for the assessment of additionality taking into account the factors listed above.

Approach(es) by which the selected program requires this project to address reversal risk

Monitoring and compensation

Potential sources of leakage the selected program requires this project to have assessed

Other, please specify

Physical escape from saline aquifer in geological reservoir

Provide details of other issues the selected program requires projects to address

Project is subject to third party annual verification in order to be issued credits for that period. Injection well is monitored through various methods including seismic, reservoir temperature and pressure, and continuous real-time CO2 sensors on the surface at the injection wellhead. Project is in a highly regulated jurisdiction ensuring a high quality injection credit is produced.

Comment

No comment

Project type

Other, please specify

Carbon capture and storage

Type of mitigation activity

Emissions reduction

Project description

Quest is a carbon capture and storage project in Alberta Canada integrated with the Scotford Upgrader. Hydrogen manufacturing at Scotford produces a high concentration CO2 stream. This CO2 is captured and compressed to a near critical state before being injected downhole into a saline aquifer several kilometers below the surface. This project generates offset GHG credits.

Credits canceled by your organization from this project in the reporting year (metric tons CO2e)

184,880

Purpose of cancellation

Compliance with a carbon pricing system

Are you able to report the vintage of the credits at cancellation?

Yes

Vintage of credits at cancellation

2021

Were these credits issued to or purchased by your organization?

Purchased

Credits issued by which carbon-crediting program

Alberta TIER Emission Offset system

Method(s) the program uses to assess additionality for this project

Consideration of legal requirements
Investment analysis
Barrier analysis
Market penetration assessment
Other, please specify

Additionality is assessed through the Alberta government TIER Technical guidance for the assessment of additionality taking into account the factors listed above.

Approach(es) by which the selected program requires this project to address reversal risk

Monitoring and compensation

Potential sources of leakage the selected program requires this project to have assessed

Other, please specify

physical escape from geological reservoir

Provide details of other issues the selected program requires projects to address

Project is subject to third party annual verification in order to be issued credits for that period. Injection well is monitored through various methods including seismic, reservoir temperature and pressure, and continuous real-time CO2 sensors on the surface at the injection wellhead. Project is in a highly regulated jurisdiction ensuring a high quality injection credit is produced.

Comment

No comment

C11.3

(C11.3) Does your organization use an internal price on carbon?

Yes

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Type of internal carbon price

Shadow price

How the price is determined

Alignment with the price of a carbon tax

Objective(s) for implementing this internal carbon price

Navigate GHG regulations

Scope(s) covered

Scope 1

Scope 2

Pricing approach used – spatial variance

Differentiated

Pricing approach used – temporal variance

Evolutionary

Indicate how you expect the price to change over time

We expect the price to follow the carbon price schedule in the federal Greenhouse Gas Pollution Pricing Act.

Actual price(s) used – minimum (currency as specified in C0.4 per metric ton CO2e)

45

Actual price(s) used – maximum (currency as specified in C0.4 per metric ton CO2e)

50

Business decision-making processes this internal carbon price is applied to

Capital expenditure
Operations

Mandatory enforcement of this internal carbon price within these business decision-making processes

Yes, for all decision-making processes

Explain how this internal carbon price has contributed to the implementation of your organization's climate commitments and/or climate transition plan

In our NA E&P Alberta operations, we have used the carbon price for GHG offsets credits earned from pneumatic controller retrofits to enhance the project economics and increase the amount of controllers retrofit or removed. This reduced emissions by an estimated 140,000 tonnes in 2021, and another 70,000 tonnes in 2022.

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, other partners in the value chain

C12.1d

(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.

Canadian Natural promotes local and regional business development opportunities through the procurement of goods and services for our operations. Hiring local workers and suppliers is mutually beneficial, leading to long-lasting partnerships, economic development and emissions reductions.
We continue to work closely with many Indigenous communities near our operations in Western Canada to enhance the opportunities for economic participation in oil and natural gas developments. In 2022, we worked with 167 local Indigenous companies and awarded approximately $684 million in contracts to Indigenous businesses and contractors. For example, we have been working with many First Nations and Métis communities in Alberta, Saskatchewan and British Columbia to abandon inactive wells, pipelines and facilities and to reclaim sites and access roads in these communities. For example, in early 2022, Canadian Natural engaged the Aseniwuche Development Corporation to reclaim 24 sites between Edson, AB and Grande Cache, AB, in northern Alberta near our operations. The project is returning former well sites back to essential habitat for wildlife while helping to avoid transportation emissions from contractors travelling many kilometres to complete the projects.

In our conventional and thermal operations, we have been using an area-based approach since our first pilot in 2013 to strategically reclaim large contiguous areas. This program geographically groups projects (well and pipeline abandonments, remediation and reclamation activities), and coordinates people, equipment and technologies. In this way, we are taking sites out of service in a safe and environmentally sound manner, while reducing reclamation costs, our GHG emissions (through reduced travel distances for workers), and reclamation times from three to five years to two to four years. Through the area-based reclamation program we abandoned over 3,100 inactive wells in 2022, company record. The area-based program is an industry-leading approach that has become the go-to model to accelerate the pace of reclamation. The Alberta Energy Regulator expanded this program across industry for closure of inactive sites.

To ensure health, safety and environmental standards are consistently met by all contractors, a pre-qualification process has been adopted to ensure all contractors are pre-screened and made aware of both Canadian Natural and industry's environmental and safety procedures. These procedures were developed and have been implemented across our operations to allow for a risk-based approach to selection, evaluation and ongoing management of contractors. These screening tools (ComplyWorks at our Canadian operations and Achilles FPAL at our International operations) provide an enhanced view of compliance, communication and performance for contractors and suppliers, allowing us to manage compliance at multiple levels. This facilitates information publishing, monitoring of the accuracy of information provided in a supplier's record in various areas (such as Health, Safety and Environmental policy, a preventative maintenance program, equipment inspections, etc.), evaluation of supplier profiles, and industry-

specific supplier information that is subject to assessment and site audit. This improves industry performance and reduces environmental risk within the supply chain.

At our Horizon Oil Sands project, we earlier entered into discussions with Williams Energy (a midstream company) on an opportunity for a Liquids Extraction Project (LEP). Williams had previously developed a similar project at a similar oil sands mining and upgrading facility. Discussions resulted in a commercial agreement on implementation of the LEP at Horizon, with operation of the LEP beginning in 2016. It is currently owned and operated by Inter Pipeline Limited. The LEP processes off-gas from Horizon's upgrading process to recover hydrocarbon liquids (such as ethane and propane). These liquids are then transported off site for use by Inter Pipeline in their midstream business. Prior to the LEP, the off-gas stream had been used as a source of fuel gas by Horizon operations. With the LEP in operation, Horizon no longer uses the off-gas stream for fuel, and has replaced it with pipeline-quality fuel gas, which has a lower GHG intensity per gigajoule than the off-gas stream. The operation of the LEP has reduced GHG emissions at Horizon by approximately 847,000 t CO2e since 2016.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?

No, and we do not plan to introduce climate-related requirements within the next two years

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

External engagement activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

Yes, we engage directly with policy makers

Yes, our membership of/engagement with trade associations could influence policy, law, or regulation that may impact the climate

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?

Yes

Attach commitment or position statement(s)

Canadian Natural - Paris Support and Lobbying Positions.pdf

Describe the process(es) your organization has in place to ensure that your external engagement activities are consistent with your climate commitments and/or climate transition plan

Canadian Natural's multidisciplinary risk management process incorporates climate change risks, including potential policies and regulations. We ensure consistency between our climate change strategy/positions and engagement activities through the following process:
Management Committee (MC) is responsible for identification, assessment and management of climate change risks.
Our GHG Operations Strategy Committee, is a core technical team responsible for climate change strategy and issue prioritization. They oversee our working groups that manage and coordinate GHG reduction and technology projects across the company. They also assess and input on GHG policy and regulation.
MC and the GHG Operations Strategy Committee provide direction to business units on climate-related risk assessment and project implementation. Business units conduct reviews to assess material changes, identify risks, opportunities, and ensure alignment on issues, including climate policy. Reports are shared with MC and the Board as appropriate. Changes/updates are approved by our President.
Representatives from company business units, including the ESG & Corporate Communications department, and Government Affairs, take direction from MC to ensure policy advocacy is consistent with our climate change strategy. This direction is reflected in public policy engagement activities. This includes representatives providing input, advice, and analysis on regulations to policy makers, and regulators.
Industry associations (e.g. the Canadian Association of Petroleum Producers, Explorers and Producers Association of Canada, Offshore Energies UK, etc.) represent the interests of the energy industry and the broader business community. They promote public policy objectives important to us, our shareholders, Indigenous Peoples and other stakeholders. We work together with industry organizations to establish common ground. We recognize participation comes with the understanding that we may not always support every position taken by these organizations or their members .
Canadian Natural believes strong environmental policy, regulation and performance standards, together with innovation and technology, are necessary for an effective approach to GHG emissions management. We work with industry, government, and other stakeholders to maintain a cost and carbon competitive crude oil and natural gas sector. We engage proactively in policy and regulation to effectively manage climate risks and opportunities.

C12.3a

(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?

Specify the policy, law, or regulation on which your organization is engaging with policy makers

Greenhouse Gas Pollution Pricing Act

Category of policy, law, or regulation that may impact the climate

Carbon pricing, taxes, and subsidies

Focus area of policy, law, or regulation that may impact the climate

Carbon taxes

Policy, law, or regulation geographic coverage

National

Country/area/region the policy, law, or regulation applies to

Canada

Your organization's position on the policy, law, or regulation

Support with minor exceptions

Description of engagement with policy makers

Working with industry associations and directly with policy makers and regulators to provide advice and analysis on potential regulations. We work with governments to ensure that new and leading climate policy encourages technological innovation and deployment to achieve cost-effective GHG emissions reductions and energy efficiency while maintaining competitiveness of Canada's upstream oil and gas industry, and ensuring the security of the energy supply.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

Support carbon pricing programs (which may or may not include a carbon tax), if there is allowance for competitiveness impacts on energy-intensive trade-exposed (EITE) sectors, and if a significant portion of revenue is used for developing technologies that will reduce carbon emissions. Propose measures for EITE sectors to minimize competitiveness impact and reduce carbon leakage. For example, we provided feedback on the proposed Federal Government Clean Fuel Regulations; and advocated with provincial and federal governments for equivalency agreements to recognize provincial regulations for federal methane requirements.

Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?

No, we have not evaluated

Specify the policy, law, or regulation on which your organization is engaging with policy makers

Carbon Tax Act, Technology Innovation & Emissions Reduction Regulation, The Management and Reduction of Greenhouse Gases Act & Regulations

Category of policy, law, or regulation that may impact the climate

Carbon pricing, taxes, and subsidies

Focus area of policy, law, or regulation that may impact the climate

Carbon taxes

Policy, law, or regulation geographic coverage

Regional

Country/area/region the policy, law, or regulation applies to

Other, please specify

Select provinces in Canada (Alberta, Saskatchewan, and British Columbia)

Your organization's position on the policy, law, or regulation

Support with minor exceptions

Description of engagement with policy makers

Working with industry associations and directly with policy makers and regulators to provide advice and analysis on potential regulations. We work with governments to ensure that new and leading climate policy encourages technological innovation and deployment to achieve cost-effective GHG emissions reductions and energy efficiency while maintaining competitiveness of Canada's upstream oil and gas industry.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

Support carbon pricing programs (which may or may not include a carbon tax), if there is allowance for competitiveness impacts on energy-intensive trade-exposed (EITE) sectors, and if a significant portion of revenue is used for developing technologies that will reduce carbon emissions. Propose measures for EITE sectors to minimize competitiveness impact and reduce carbon leakage (e.g., performance standards based on benchmarking; offsetting fiscal measures). For example, we provided input on the Alberta Technology Innovation Emissions Reduction (TIER) system to ensure provision for small facilities, and advocated with provincial and federal governments for equivalency agreements to recognize provincial regulations for federal requirements.

Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?

No, we have not evaluated

Specify the policy, law, or regulation on which your organization is engaging with policy makers

Oil and gas sector emissions cap

Category of policy, law, or regulation that may impact the climate

Climate change mitigation

Focus area of policy, law, or regulation that may impact the climate

Climate-related targets

Policy, law, or regulation geographic coverage

National

Country/area/region the policy, law, or regulation applies to

Canada

Your organization's position on the policy, law, or regulation

Support with minor exceptions

Description of engagement with policy makers

Working with industry associations and directly with policy makers and regulators to provide advice and analysis on potential regulations. We work with governments to ensure that new and leading climate policy encourages technological innovation and deployment to achieve cost-effective GHG emissions reductions and energy efficiency while maintaining competitiveness of Canada's upstream oil and gas industry.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

Policy target should consider: early action on emissions reductions, time for existing policies to have an effect, incent investment in innovation and technology development and deployment (including fiscal and regulatory frameworks), and impacts to competitiveness (including the assessment of any similar policy in other jurisdictions)

Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?

No, we have not evaluated

Specify the policy, law, or regulation on which your organization is engaging with policy makers

Canada's Emissions Reductions Plan

Category of policy, law, or regulation that may impact the climate

Climate change mitigation

Focus area of policy, law, or regulation that may impact the climate

Climate-related targets

Policy, law, or regulation geographic coverage

National

Country/area/region the policy, law, or regulation applies to

Canada

Your organization's position on the policy, law, or regulation

Support with minor exceptions

Description of engagement with policy makers

Working with industry associations and directly with policy makers and regulators to provide advice and analysis on potential regulations. We work with governments to ensure that new and leading climate policy encourages technological innovation and deployment to achieve cost-effective GHG emissions reductions and energy efficiency while maintaining competitiveness of Canada's upstream oil and gas industry.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

Plan and associated policy should consider time required to build infrastructure, deploy technology, secure regulatory approvals, and implement economic incentives.

Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?

No, we have not evaluated

Specify the policy, law, or regulation on which your organization is engaging with policy makers

Regulations Respecting Reduction in the Release of Methane and Certain Volatile Organic Compounds (Upstream Oil and Gas Sector)

Category of policy, law, or regulation that may impact the climate

Climate change mitigation

Focus area of policy, law, or regulation that may impact the climate

Emissions – methane

Policy, law, or regulation geographic coverage

National

Country/area/region the policy, law, or regulation applies to

Canada

Your organization's position on the policy, law, or regulation

Support with minor exceptions

Description of engagement with policy makers

Working with industry associations and directly with policy makers and regulators to provide advice and analysis on potential regulations. We work with governments to ensure that new and leading climate policy encourages technological innovation and deployment to achieve cost-effective GHG emissions reductions and energy efficiency while maintaining competitiveness of Canada's upstream oil and gas industry.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

Support an outcome based approach to methane regulation that considers competitiveness, effectiveness, and support for technology development.

Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?

No, we have not evaluated

Specify the policy, law, or regulation on which your organization is engaging with policy makers

Article 6 of Paris Agreement

Category of policy, law, or regulation that may impact the climate

Climate change mitigation

Focus area of policy, law, or regulation that may impact the climate

Other, please specify

Article 6 of the Paris Agreement

Policy, law, or regulation geographic coverage

National

Country/area/region the policy, law, or regulation applies to

Canada

Your organization's position on the policy, law, or regulation

Support with minor exceptions

Description of engagement with policy makers

Working with the Canadian Association of Petroleum Producers and directly with Canadian policy makers and regulators to provide advice on the importance of ITMOs to achieving global GHG reductions.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

Enable Internationally Transferred Mitigation Outcomes (ITMOs) under the Paris Agreement. Production of many Canadian products, including oil and natural gas, are at a lower GHG intensity than many competing suppliers globally, meaning that increased Canadian production would help lower global GHG emissions by displacing higher-intensity production.

Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?

No, we have not evaluated

C12.3b

(C12.3b) Provide details of the trade associations your organization is a member of, or engages with, which are likely to take a position on any policy, law or regulation that may impact the climate.

Trade association

Other, please specify

Pathways Alliance

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

For more than three decades, Canadian Natural has been a safe, effective and efficient producer of crude oil and natural gas, meeting or exceeding regulatory standards. Our commitment to GHG reductions led to co-founding the Pathways Alliance, working together with governments to achieve net zero GHG emissions from oil sands operations by 2050 to help Canada meet its climate goals. Achieving net zero emissions from oil sands operations will require multiple pathways, including increased CO2 capture at oil sands facilities. It will also require advancing other process improvements and technologies such as hydrogen, direct-air capture, fuel switching and electrification projects.

The Pathways vision is anchored by a major CCS system and transportation line connecting oil sands facilities in the Fort McMurray, Christina Lake and Cold Lake regions to a carbon storage hub near Cold Lake. Currently there are more than 200 engineers and technical experts from Pathways Alliance companies advancing engineering and environmental work for the project application, refining carbon capture technology, and engaging Indigenous and other local communities along the proposed pipeline route. The proposed line follows more than 95% of existing rights-of-way. The foundational project targets capture and storage of ~10-12 Mt CO2e/year by 2030. Together with Pathways members, we continue to work collaboratively with governments to help support fiscal and policy frameworks that are required for the project to proceed.

In addition, the Pathways Alliance includes an innovation arm, Canada's Oil Sands Innovation Alliance, which brings industry, government, academia and the wider public to improve measurement, accountability and environmental performance in for greenhouse gases, land, water and tailings.

Funding from the member companies goes towards Pathways Alliance's advocacy that both Ottawa and the Alberta governments identify mechanisms in addition to the Investment Tax Credit and ensure Canadian industry is on equal footing with its competitors to incent CCS investment. Pathways looks forward to further details and working cooperatively in the coming months on enhancements to the Alberta Petrochemical Incentive Program (APIP) and Technology Innovation and Emissions Reduction Program (TIER).

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

0

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

No, we have not evaluated

Trade association

Canadian Association of Petroleum Producers

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

Canadian Natural ensures alignment between climate change strategy, advocacy positions and engagement activities through robust processes and ongoing communications between senior management and core technical teams. We participate on CAPP committees and working groups to ensure new policies encourage technological innovation, energy efficiency, and targeted research and development. We work closely with CAPP to help develop their positions collaboratively and establish common ground.

CAPP, like Canadian Natural, engages in constructive, solutions-focused dialogue with governments and other stakeholders and partners to develop sound policies that achieve global emissions reductions in the most efficient, cost effective way. CAPP's data driven evidence-based analysis and operational expertise informs the development of policy pathways that can lead to further emissions reductions.

This work is guided by CAPP's Climate Policy Principles, of which Canadian Natural aligns:
1) Collaborative and solutions-oriented. Given Canada's climate goals and industry impacts, CAPP will proactively collaborate with governments and stakeholders towards appropriate policy solutions. Policy solutions need to drive improvements in environmental performance, be adaptive and carefully consider environmental, economic, and social outcomes.
2) Efficient, effective and predictable. Climate policy should target reductions where they are most efficient and effective across the entire energy value chain from production to end use, and should fairly consider all sectors and jurisdictions. Climate change policies should achieve emissions reduction at the least cost to Canadians, the economy and industry. Revenues from climate policy should be fully recycled back into the economy to incent innovation, assist transition or reduce other taxes and levies.
3) Technology and innovation focused. Policy should incent technology and innovation to address climate change and capture the opportunity to export solutions.
4) Globally competitive. Canada's climate policies must ensure our resource development is cost and carbon competitive with other jurisdictions, and bring proportionate benefits to Canada.

CAPP, like Canadian Natural, is committed to working with government(s) to meet emissions reduction objectives and the ambition of the Paris Agreement, as a global framework for addressing the risk of climate change.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

No, we have not evaluated

Trade association

Other, please specify

Mining Association of Canada

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

Canadian Natural ensures alignment between climate change strategy, advocacy positions and engagement activities through robust processes and ongoing communications between senior management and core technical teams. Canadian Natural participates actively on MAC committees and working groups to ensure that new policies encourage technological innovation, energy efficiency, and targeted research and development. We work together with industry organizations to establish common ground. We recognize participation comes with the understanding that we may not always support every position taken by these organizations or their members

The Mining Association of Canada (MAC) supports climate action that is consistent with the ambition of the Paris Agreement to limit global warming to well below 2 degrees Celsius (above pre-industrial levels) to ensure the long-term sustainability of our shared planet.

In 2016, MAC and its members released the Principles for Climate Change Policy Design. The Principles were developed to inform the federal government as it drafted the pan-Canadian climate change framework. The document outlines elements of a successful carbon price regime: one that leads to meaningful emissions reductions while simultaneously protecting emissions-intensive and trade-exposed sectors, like the mining industry, and being sensitive to the unique circumstances faced by Canada's remote and northern regions.

MAC's Toward Sustainable Mining (TSM) initiative is an award-winning international performance system that helps mining companies evaluate and manage their environmental and social responsibilities. TSM is the only mining program in the world that requires public reporting of site-level performance, the results of which are independently verified by a third party. Every MAC member company commits to implementing TSM at their Canadian facilities as a condition of membership. MAC's new Guide to Climate Change Adaptation for the Mining Sector supports the new TSM Climate Change Protocol added to the TSM program in 2021. It provides best practice guidance for the mining industry to assess potential future climate changes at mine sites, assess potential impacts of those changes on mine operations and infrastructure, and develop plans to implement appropriate adaptation measures.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

No, we have not evaluated

Trade association

Other, please specify

Offshore Energies UK (OEUK)

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

Canadian Natural ensures alignment between climate change strategy, advocacy positions and engagement activities through robust processes and ongoing communications between senior management and core technical teams. Canadian Natural is working with relevant parties, such as Offshore Energies UK (OEUK), to ensure that new policies encourage technological innovation, energy efficiency, and targeted research and development. We work together with industry organizations to establish common ground. We recognize participation comes with the understanding that we may not always support every position taken by these organizations or their members.

Offshore Energies UK (OEUK) and its members are committed to working collaboratively toward the aims of Roadmap 2035, the pathway set out to lead the way through our energy transition and support the UK in achieving its net zero targets. OEUK works with members to develop proposals for collective action, cost and policy recommendations and potential delivery mechanisms to meet emission reduction targets. Such support is needed to bridge the gap from what is currently technically and economically feasible and the necessary accelerated emissions reduction. This includes an assessment of the options to meet the targets through operational improvement, reduced flaring, addressing emissions from power generation through step-change actions with their associated investments.

OEUK's Identified Priorities for Emissions Reduction are:

- Continued support and recognition for role that UKCS plays in the UK's net zero future. A post-Brexit carbon pricing mechanism that recognises the need for support for step-change decarbonisation of upstream oil and gas activities and the risk of carbon leakage.
- Increase scope for innovation in offshore wind technology to power oil and gas production, through a separate Contract for Difference (CFD) for offshore floating wind. Cross-regulator support and commitment to establishing strategic offshore electricity networks, to support offshore energy integration.
- Develop regulatory model for CCS and commit to support transport and storage and infrastructure development into the 2030s, to ensure that a pipeline of projects is in place to progressively deploy at scale.
- Create effective business models for Industrial CCUS and hydrogen e.g. CFD that supports projects in the near term.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

No, we have not evaluated

Trade association

Other, please specify

Explorers and Producers Association of Canada (EPAC)

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

Canadian Natural ensures alignment between climate change strategy, advocacy positions and engagement activities through robust processes and ongoing communications between senior management and core technical teams. Canadian Natural participates actively on EPAC committees and working groups to ensure that new policies encourage technological innovation, energy efficiency, and targeted research and development. We work together with industry organizations to establish common ground. We recognize participation comes with the understanding that we may not always support every position taken by these organizations or their members.

EPAC is the voice of Canada's entrepreneurial energy producers and advocates on behalf of its members for sound government policy that

promotes a thriving energy sector. The association represents over 170 member oil and gas companies ranging from start-ups to juniors and large producers operating in Canada. EPAC's focus is on non-oil sands and gas development. Their mission is to:

1. Advocate to governments, policy makers and regulators to ensure that the interests of our members are reflected in a fiscal and regulatory framework that encourages investment and supports a prosperous oil and gas industry;
2. Communicate essential industry news, events and information to our members and communicate our Association's views on oil and gas issues to the public, community leaders and the news media; and
3. Educate Canadians about the important contribution of our member companies to ensure Canada's present and future energy needs are met while creating jobs and opportunities in the communities where our members operate.

Canadian Natural is aligned with EPAC's support for government policy that promotes a thriving energy sector while reducing GHG emissions to remain competitive in a lower carbon emissions economy.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

No, we have not evaluated

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication

In mainstream reports

Status

Complete

Attach the document

Y

2022-Annual-Report.pdf

Page/Section reference

Pages 3, 4, 40-43

Content elements

Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

Annual Report, available online at https://www.cnrl.com/content/uploads/2023/03/2022-Annual-Report.pdf

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Publication

In other regulatory filings

Status

Complete

Attach the document

Y

AIF-March-22-2023.pdf

Page/Section reference

Pages 9-17, 36

Content elements

Strategy
Risks & opportunities
Emissions figures
Emission targets

Comment

2023 Annual Information Form available online at https://www.cnrl.com/content/uploads/2023/03/AIF-March-22-2023.pdf

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Publication

In other regulatory filings

Status

Complete

Attach the document

Y

2023-Management-Info-Circular.pdf

Page/Section reference

5-14, 31, A-1 - A-6 B-1-5

Content elements

Governance
Risks & opportunities
Emission targets
Other metrics

Comment

2023 Management Information Circular available online at https://www.cnrl.com/content/uploads/2023/03/2023-Management-Info-Circular.pdf

Publication

In voluntary sustainability report

Status

Underway – previous year attached

Attach the document

Y

2021-Stewardship-Report-to-Stakeholders.pdf

Page/Section reference

4-8, 11, 13-20, 38-50

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

Report to Stakeholders is available online at www.cnrl.com/report-to-stakeholders

Publication

Other, please specify

Corporate website, TCFD Climate Disclosure

Status

Underway – previous year attached

Attach the document

Y

Content-Index_TCFD-Climate-Disclosure-2022_August-4-2022.pdf

Page/Section reference

All

Content elements

Governance

Strategy

Risks & opportunities

Emissions figures

Comment

TCFD Index www.cnrl.com/tcfd-index

Publication

Other, please specify

Technology and Innovation Case Studies

Status

Complete

Attach the document

Y

2022-technology-and-innovation-case-studies.pdf

Page/Section reference

All

Content elements

Strategy
Emissions figures
Other metrics

Comment

Corporate website available at www.cnrl.com/innovation-case-studies

C12.5

(C12.5) Indicate the collaborative frameworks, initiatives and/or commitments related to environmental issues for which you are a signatory/member.

	Environmental collaborative framework, initiative and/or commitment	Describe your organization's role within each framework, initiative and/or commitment
Row 1	Other, please specify Canada's Oil Sands Innovation Alliance	As a founding member of, and one of the largest contributors to Canada's Oil Sands Innovation Alliance (COSIA), the innovation arm of the Pathways Alliance, Canadian Natural has an important role in this collaborative effort. COSIA brings industry, government, academia and the wider public together to improve measurement, accountability and environmental performance in for greenhouse gases, land, water and tailings. COSIA has a proud history of innovation in the oil sands focusing on reducing emissions and improving other areas of environmental performance. The integrated Pathways organization leverages more than a decade of collaborative success within COSIA, which has collaborated on more than 1,000 environmental research and technology

		development projects and invested approximately $2.1 billion. In 2022, Canadian Natural led 45 COSIA projects and participated in another 25. To date, we have shared technologies/innovation valued at $185 MM in tailings, $156 MM in water, $46.5 MM in GHG and $43 MM in reclamation through COSIA.

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues
Row 1	

C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity
Row 1	

C15.3

(C15.3) Does your organization assess the impacts and dependencies of its value chain on biodiversity?

Impacts on biodiversity

Indicate whether your organization undertakes this type of assessment

Dependencies on biodiversity

Indicate whether your organization undertakes this type of assessment

C15.4

(C15.4) Does your organization have activities located in or near to biodiversity- sensitive areas in the reporting year?

C15.5

(C15.5) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?
Row 1	

C15.6

(C15.6) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1		

C15.7

(C15.7) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located

C16. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

No comment

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	President	President

SC. Supply chain module

SC0.0

(SC0.0) If you would like to do so, please provide a separate introduction to this module.

SC0.1

(SC0.1) What is your company's annual revenue for the stated reporting period?

	Annual Revenue
Row 1	

SC1.1

(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.

SC1.2

(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).

SC1.3

(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

Allocation challenges	Please explain what would help you overcome these challenges

SC1.4

(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

SC2.1

(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?

SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services?

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

Please confirm below

I have read and accept the applicable Terms